UNIVERSITY SECRETARIAT

- Board of Governors
- Senate

December 9, 2008

## TO: Members of Undergraduate Council

FROM: Michelle Bennett
Assistant University Secretary

## RE: $\quad$ Notice of Meeting

The next meeting of Undergraduate Council will be held on Tuesday, December 16, 2008 at 2:30 p.m., in the Council Room, Gilmour Hall (GH 111). The items of business to be discussed are outlined on the agenda provided with this meeting notice.

Should you be unable to attend the meeting, please notify the University Secretariat at extension 24337 or e-mail univsec@mcmaster.ca.
e-Attachments

# McMaster University UNDERGRADUATE COUNCIL 

## Tuesday, December 16, 2008 at 2:30 p.m. in the Council Room (GH 111)

## AGENDA

I MINUTES of the meeting of October 28, 2008 (electronic attachment) for approval
II BUSINESS ARISING

III CHAIR'S REMARKS
IV REPORT OF THE UNDERGRADUATE COUNCIL AWARDS COMMITTEE
(electronic attachment) for approval

1) For Approval
i. New Awards and Academic Grants
ii. Changes to Award Terms
iii. New Bursaries
2) For Information
i. Bursary Terms
ii. Awards and Bursaries Removed from Calendar
iii. 2009-2010 Undergraduate Calendar Conditions for Award Categories
iv. 2007-2008 In-Course Award Report
v. Provost’s Honour Roll Recipient List for 2008

## V REPORT OF THE UNDERGRADUATE COUNCIL CURRICULUM AND

 ADMISSIONS COMMITTEE1) For Approval
i.Curriculum Revisions for Inclusion in the 2009-2010 Undergraduate Calendar
ii.Dean's Permission
iii.Revisions to the Undergraduate Calendar General Academic Regulations, Section 3, Petitions for Relief for Missed Term Work and for Deferred Examinations.

## UNDERGRADUATE COUNCIL

Tuesday, October 28, 2008 at 2:30 p.m.

Council Room (Room 111), Gilmour Hall

PRESENT: Dr. P. Smith (Chair), Dr. N. Bontis, Dr. L. Chan, Dr. K. Coley, Mr. R. Levin, Dr. J. Gladstone, Dr. K. Kinder, Dr. J. Reilly, Dr. P. Sutherland, Dr. M. Valeriote, Dr. D. Wright, Mr. N. Bray, Ms E. Poon, Ms R. Stevens, Ms S. Vijenthira, Ms M. Bennett (Assistant University Secretary)<br>BY INVITATION: Ms K. Jowett, Ms P. Kalnins, Mr. A. Kasmani, Mr. S. Minniti, Ms E. Seymour, Ms M. White<br>REGRETS: Dr. L. Wilson, Dr. P. George, Dr. I. Busch-Vishniac, Dr. S. Denburg, Dr. M. MacDonald, Dr. A. Sills, Ms T. Taylor-O’Reilly, Mr. J. Trzeciak, Dr. S. Watt, Dr. P.E. Wood, Mr. D. Lee, Mr. Y. Li, Mr. R. Matthew

## I MINUTES

On a motion duly moved and seconded, the minutes of the meeting of September 16, 2008 were approved.

## II BUSINESS ARISING

There was no business arising.

## III CHAIR'S REMARKS

The Chair thanked everyone for their assistance in the aftermath of the Brandon Hall fire, remarking that McMaster faculty, staff and students as well as students from other universities have all contributed.

## IV REPORT OF THE UNDERGRADUATE COUNCIL AWARDS COMMITTEE (Appendix A)

Dr. M. Valeriote, Chair of the Undergraduate Council Awards Committee, presented the Awards Committee report that approved, for recommendation to Undergraduate Council: i) terms of award for new awards; ii) changes to award terms; ii) terms of award for new bursaries. Dr. Valeriote noted that the Hatch award is a significant award as it is McMaster’s largest undergraduate academic award.

It was duly moved and seconded,
that Undergraduate Council approve the terms of award for new awards and bursaries and changes to award terms, as set out in Appendix A.

The motion was carried.

## V REPORT OF THE UNDERGRADUATE COUNCIL CERTIFICATES AND DIPLOMAS COMMITTEE (Appendix B)

1) Public Relations Program, Elective Courses

Dr. J. Reilly presented the report of the Certificates and Diplomas Committee. At its meeting on October 15, 2008, members of the Undergraduate Council Certificates and Diplomas Committee approved a recommendation from the Centre for Continuing Education for the curriculum of five elective courses in the Public Relations Program. These electives are: Employee Communications, Financial Communications, Issue \& Crisis Communications, Social Media for Public Relations, and Media Analysis.

It was duly moved and seconded,
that Undergraduate Council approve the curriculum of the five elective courses in the Public Relations Program, as outlined in Appendix B.

The motion was carried.

## VI OTHER BUSINESS

There was no other business and the meeting adjourned at 2:45 p.m.

UNIVERSITY SECRETARIAT

- Board of Governors
- Senate


# Report to Undergraduate Council FROM THE <br> Undergraduate Council Awards Committee 

## FOR APPROVAL

## 1. Terms of Award

At its meeting of November 20, 2008, the Undergraduate Council Awards Committee approved, for recommendation to Undergraduate Council: 1) terms of award for new awards 2) changes to award terms; 3) terms of award for new bursaries.
(i) New Awards and Academic Grants

The Alvina Marie Werner Scholarship
The Joyce and Ross Kelly Academic Grant
The Patrick Tan Academic Grant
(ii) Changes to Award Terms

The Biology Achievement Award
(iii) New Bursaries

The Bevan Family First Generation Bursary
The Class of 1958 Bursary
The Class of 1963, $50^{\text {th }}$ Anniversary Bursary
The Ross Hammond Bursary
The MAPS Bursary
The Ivana Baldelli Bursary
(Attachment I)
The Undergraduate Council Awards Committee now recommends,
that Undergraduate Council approve the terms of award for new awards and bursaries and changes to award terms, as set out in Attachment I.

## FOR INFORMATION

## 2. Bursary Terms

At its meeting of November 20, 2008, the Awards Committee received, for information, a report that included three bursary term changes.
(Attachment I)

## 3. Awards and Bursaries Removed From Calendar

Also at the meeting, the Awards Committee received, for information, a report that included four awards and one bursary that will be removed from the 2009-2010 Undergraduate Calendar.

## 4. 2009-2010 Undergraduate Calendar Conditions for Award Categories

At its meeting of November 20, 2008, the Undergraduate Council Awards Committee approved changes to the Conditions for Award Categories in the Undergraduate Calendar.
(Attachment II)
5. 2007-2008 In-Course Award Report

Also at the meeting, the Awards Committee received, for information, a report that included the 2007-2008 in-course and graduand recipients, recipients of awards by application and awards not allocated.
(Attachment III)

## 6. Provost's Honour Roll Recipient List for 2008

Also at the meeting, the Awards Committee received, for information, the Provost's Honour Roll Recipient List for 2008.
(Attachment IV)

## Undergraduate Council: For Approval

December 16, 2008

# OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> To Undergraduate Council <br> From Undergraduate Council Awards Committee <br> December 16, 2008 

## PROPOSED NEW AWARDS FOR APPROVAL

## SECTION E: Awards for Graduating Students

THE ALVINA MARIE WERNER SCHOLARSHIP
Established in 2008 through a bequest by the late Alvina Marie Werner. To be awarded to a graduating student enrolled in a Gerontology or Social Work program who, in the judgment of the Faculty of Social Sciences, demonstrates outstanding academic achievement and interest in pursuing a career in social services in the specific area of gerontology.
Value: \$2,400 (50103)

## SECTION G: Academic Grants for Full-Time Students

## THE JOYCE AND ROSS KELLY ACADEMIC GRANT

Established in 2008 by Joyce and Ross Kelly to provide support for students who wish to pursue their educational goals. To be awarded to a student who has completed Level I with a high Sessional Average, is registered in a Level II Materials Science and Engineering program, and demonstrates financial need.
Value: \$800 (85029)

THE PATRICK TAN ACADEMIC GRANT
Established in 2008 by Dr. Patrick Guong-Ching Tan (B.Eng 1970, M.Eng 1972, LL.D Hon. 2003). Two grants to be awarded to students in a program in Engineering who have a high Sessional Average and demonstrate financial need.
Value: \$1,000 (85030)

## CHANGES TO AWARD TERMS FOR APPROVAL

## SECTION D: Specific Achievement for Full-time and Part-time Students

## THE BIOLOGY ACHIEVEMENT AWARD

Established in 2004 by the Department of Biology. A variable number to be awarded to students registered in Life Science I who, in the judgment of the Department of Biology, have achieved the highest standing in BIOLOGY 1A03 or the highest standing in BIOLOGY 1M03. Value: Book (40113)

## AWARDS REMOVED FROM CALENDAR FOR INFORMATION

## THE ATOMIC ENERGY OF CANADA LIMITED SCHOLARSHIP

THE GREEK COMMUNITY OF BURLINGTON AND DISTRICT SCHOLARSHIP
THE HAWKRIGG FAMILY SCHOLARSHIP IN KINESIOLOGY
THE HELLENIC PRIZE

Value: \$2,500 (30276)
Value: \$250 (40020)
Value: \$7,500 (30255)
Value: \$1,000 (30226)

## PROPOSED NEW BURSARIES FOR APPROVAL

Submitted by the Office of Student Financial Aid \& Scholarships

## THE BEVAN FAMILY FIRST GENERATION BURSARY

Established in 2008 by George A. Bevan, B.A. (Class of '48) and his wife Simone L. Bevan (B.A. U of T). To be granted to students entering any Level I program with a final admission average of 85 percent or greater, and who demonstrate financial need. Preference to be given to students who are the first in their family to attend a post secondary institution and whose parents are not university graduates. (91096)

# OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> To Undergraduate Council <br> From Undergraduate Council Awards Committee <br> December 16, 2008 

## THE CLASS OF 1958 BURSARY

Established by the Class of '58. To be granted to students in Level II or above in the Faculties of Social Sciences, Humanities, Science or the School of Nursing who demonstrate financial need. Preference to students with Cumulative Averages of 7.0 or greater. (91098)

THE CLASS OF 1963, 50TH ANNIVERSARY BURSARY
Established in 2008 by the Class of '63 in honour of their 50th Anniversary. To be granted to students enrolled in any program who demonstrate financial need. (91099)

## THE ROSS HAMMOND BURSARY

Established in 2008 by Kara Hammond, in memory of her husband Ross Hammond, through the generosity of Ross' family and friends. A variable number of bursaries to be granted to students registered in Business I in the DeGroote School of Business. (91097)

THE MAAPS BURSARY MCMASTER ASSOCIATION OF PART-TIME STUDENTS $30^{\text {TH }}$ ANNIVERSARY BURSARY
Established in 2008 by the McMaster Association of Part-time Students (MAPS) to commemorate 30 years of MAPS Board leadership and growth along with the $30^{\text {th }}$ Anniversary of MAPS. To be granted to students currently enrolled on a part-time basis who demonstrate financial need. Preference to be given to students in a diploma or certificate program. Applications will be reviewed by the MAPS Awards Committee.

# CHANGES TO BURSARY TERMS FOR INFORMATION <br> Submitted by the Office of Student Financial Aid \& Scholarships 

## THE LAHREN LAMB MEMORIAL BURSARY (AS)

Established in 2007 by family and friends in loving memory of Lahren Lamb, B.A. (Class of '06), a gifted young artist and graduate of the Honours Art and Multimedia program who did not live to fulfill her potential. She was a truly loved and admired young woman. To be granted to a Level III student enrolled in the School of the Arts who demonstrates financial need.(91083)

THE McMASTER ASSOCIATION OF PART-TIME STUDENTS 20TH ANNIVERSARY BURSARIES (U)
Established in 1999 by the McMaster Association of Part-Time students to commemorate its 20th anniversary. The bursary was further augmented by friends and colleagues of Helen Barton, MAPS' first President and founding member, in recognition of her 27 years of service and retirement as Senior Associate Registrar at McMaster. To be granted to students currently enrolled, on a part-time basis, in a degree, diploma or certificate program, who demonstrate financial need. Applications will be reviewed by the MAPS Awards Committee. (90835)

THE McMASTER ASSOCIATION OF PART-TIME STUDENTS 25TH ANNIVERSARY BURSARIES (U)
Established in 2004 by the McMaster Association of Part-Time Students (MAPS) to commemorate its silver anniversary. To be granted to students currently enrolled, on a part-time basis, in a degree, diploma or certificate program, who demonstrate financial need. Applications will be reviewed by the MAPS Awards Committee. (90988)

THE LVIV POLYTECHNIC STATE UNIVERSITY EXCHANGE PROGRAM BURSARY (EX) (90954)

- Removed from the Undergraduate Calendar


## PROPOSED NEW BURSARIES FOR APPROVAL

## Submitted by the Faculty of Health Sciences

## THE IVANA BALDELLI BURSARY

Established in 2008 by Ivana Baldelli (Class of '70). To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need. Preference will be given to a student attending the Niagara Regional Campus.

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS 2009-2010 UNDERGRADUATE CALENDAR CHANGES <br> To Undergraduate Council December 16, 2008

## CONDITIONS FOR AWARD CATEGORIES

## Awards for Entering Students (A)

The award numbers in this group begin with a " 2 " (e.g. 20056).

1. These awards are provided exclusively for those qualifying for admission as full-time students to Level I of a first baccalaureate degree in the Fall/Winter session.
2. A student who has registered at any post-secondary institution after graduation from secondary school will not be considered for an entrance award.
3. Canadian citizens and permanent residents are eligible for an entrance award regardless of where they complete their secondary school education.
4. Students completing their final year of secondary school in Canada are also eligible. International students studying outside Canada are not eligible for these entrance awards.
5. To be considered for an entrance award, students must obtain a minimum final average of $80 \%$ or equivalent in the secondary school credits required for University admission to their program of study and must apply for admission to the University not more than two years after completion of their secondary school studies diploma.
6. Final admission average for entrance awards is calculated using the prerequisites for program of study plus the next best Grade 12 U or M courses to a total of six final grades.
7. Registration in, or transfer to, another program of study at any time may result in forfeiture, or adjustment in the value, of the award. Students are advised to consult with the Office of Student Financial Aid \& Scholarships and their Faculty Advisors prior to making any changes to their program of study or course load.
8. Students who withdraw or drop below 24 units on or before December 31 will lose their entrance award.
9. Recipients of a renewable entrance award must complete a minimum of 24 units in the Fall/Winter session, obtain a Sessional Average of at least 9.5 with no failures, and register as a full-time student in the subsequent Fall/Winter session in order to retain the next installment of the award.
10. Co-op/Internship students are eligible to retain their entrance award provided they meet the minimum course load requirement for their program of study as defined in the Undergraduate Calendar; however funding will be deferred until they return to full-time study.
11. Once an entrance award is lost, it will not be reinstated.
12. In addition to meeting the General Conditions, entrance award recipients will begin their studies in the next Fall/Winter session. Students wishing to defer the benefits of an award to a later session should apply to the Office of the Registrar (Admissions) for deferral of both admission and scholarship. Approval of applications is not automatic, and deferrals are not normally granted for more than one calendar year.
Students wishing to defer subsequent instalments of renewable entrance awards should apply to the Office of Student Financial Aid \& Scholarships.

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS 2007-08 IN-COURSE AND GRADUAND AWARDS REPORT <br> To Undergraduate Council December 16, 2008

The award numbers in brackets, e.g. (30054), indicate the award category. Award numbers that begin with:
3 = Awards for Full-Time, In-course Student
4 = Specific Achievement Awards for Full-Time and Part-Time Students
$5=$ Awards for Graduating Students
8 = Community Contribution Awards

* (in award name) $=$ Open to second degree students



## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008



## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV | NAME | PROGRAM, LV |
| :---: | :---: | :---: | :---: |
| THE CITY OF HAMILTON ECONOMIC DEVELOPMENT DEPARTMENT |  | GILLIAN THOMPSON | COMMERCE, 2 |
| SCHOLARSHIPS (30064) VALUE: \$775 |  | DAVID THUAN | HONOURS B COMMERCE, 4 |
| MATTHEW BARRACOSA | HONOURS B COMMERCE, 3 | CHRISTOPHER TOMPKINS | COMMERCE, 2 |
| DARCIE MCGILL | BUSINESS I, 1 | SEAN TURNER | COMMERCE, 2 |
| PHILIP OSLIZLOK | BUSINESSI, 1 | CAMERON VADER | COMMERCE, 2 |
| ASHLEY VAN DER ZYDEN | COMMERCE, 2 | ELAINE VAN | COMMERCE, 2 |
| JONATHAN VELDSTRA | HONOURS B COMMERCE, 3 | MONICA VAN VLIET | COMMERCE, 2 |
| AARON WINSHIP | COMMERCE, 2 | JEFFREY WILLOWS | COMMERCE, 2 |
| MYLES YAKSICH | BUSINESSI, 1 | COLIN WILLOX | COMMERCE, 2 |
|  |  | GREGORY YANDT | COMMERCE, 2 |
| THE EDWIN MARWIN DALLEY MEMORIAL SCHOLARSHIPS (30164) |  |  |  |
| VALUE: \$800 |  | THE BRUCE M. HAMILTON AWARD (50081) VALUE: \$1,000 |  |
| JOANNA ANG | HONOURS B COMMERCE, 3 | JACOB DINSMORE | HONOURS B COMMERCE, 4 |
| ALEXANDRA DI SANTE | HONOURS B COMMERCE, 3 |  |  |
| SERENA GOHAL | HONOURS B COMMERCE, 3 | THE HAMILTON PORT AUTHORITY SCHOLARSHIP (30227) |  |
| WEIWEI SONG | COMMERCE, 2 | VALUE: \$1,500 |  |
| OLIVIA STILLE | BUSINESSI, 1 | CHRISTINA WOOD | HONOURS B COMMERCE, 3 |
| ALISA ZORINA | BUSINESSI, 1 |  |  |
|  |  | THE DONALD HART SCHOLAR | 0037) VALUE: \$500 |
| THE EDWARD FRANK DAVIS MEMORIAL AWARD (80060) |  | MEGHAN BILEWITZ | COMMERCE, 2 |
| VALUE: CERTIFICATE |  | BROOKE BOOCOCK | COMMERCE, 2 |
| RUO MA | COMMERCE, 2 |  |  |
|  |  | VALUE. $\$ 7.500$ (30256) |  |
| THE JOHN DEERE LIMITED SCHOLARSHIP (50101) VALUE: \$2,000 |  | VALUE: \$7,500 |  |
| ALISHAH JIWANI | HONOURS B COMMERCE, 4 | MYLES YAKSICH | BUSINESSI, 1 |
| THE DEGROOTE SCHOOL OF BUS | NESS ALUMNI UNDERGRADUATE | THE DAMIAN MIGUEL HEADLEY AWARD (80050) |  |
| SCHOLARSHIP (30309) VALUE: | \$800 | VALUE: CERTIFICATE |  |
| SAM CHAN | BUSINESS I, 1 | WEN ZHOU | COMMERCE, 2 |
| THE DELOITTE \& TOUCHE SCHOLARSHIPS (30268) VALUE: \$1,500 |  | THE DR. HARRY LYMAN HOOKER SCHOLARSHIPS (30043) |  |
| MICHELLE FISHER | HONOURS B COMMERCE, 3 | VALUE: \$1,500 |  |
| JOSHUA GRANT | HONOURS B COMMERCE, 3 | LISA ALLIE | HONOURS B COMMERCE, 3 |
| SIU PAAU | HONOURS B COMMERCE, 3 | MATTHEW BARRACOSA | HONOURS B COMMERCE, 3 |
| DIVYA SAWHNEY | HONOURS B COMMERCE, 3 | SARAH COLMAN | HONOURS B COMMERCE, 3 |
|  |  | STACEY DA COSTA | BUSINESSI, 1 |
| THE EXCHANGE GRANT (86001) | VALUE: \$1,000 | GREGORY DARKEFF | BUSINESS I, 1 |
| ANABEL AVILES | COMMERCE, 2 | STELLA DUONG | HONOURS B COMMERCE, 3 |
| LISA BRONOWICKI | COMMERCE, 2 | RYAN FANTHAM | COMMERCE, 2 |
| MARK CHIARAVALLE | COMMERCE, 2 | TERRI-LYNN FISCHER | COMMERCE, 2 |
| CHANTAL DESROCHERS | COMMERCE, 2 | MENG-YU LIN | COMMERCE, 2 |
| JOSHUA ELLIS | COMMERCE, 2 | EMANUELE LOVOI | BUSINESSI, 1 |
| JOEL FOX | COMMERCE, 2 | ERISA MARA | HONOURS B COMMERCE, 3 |
| NATALIE GASCON | COMMERCE, 2 | EVGENIYA MILYUTINA | HONOURS B COMMERCE, 3 |
| LAUREN GERBER | COMMERCE, 2 | DAN SONG | BUSINESSI, 1 |
| DANIEL GOTLIB | COMMERCE, 2 | YINGXUE TAO | BUSINESS I, 1 |
| ANDRES KRISCH | COMMERCE, 2 | JONATHAN VELDSTRA | HONOURS B COMMERCE, 3 |
| ALEXANDRA MANOR | COMMERCE, 2 | RONG WANG | HONOURS B COMMERCE, 3 |
| LORENA MASON | COMMERCE, 2 | ZIZHOU WANG | BUSINESSI, 1 |
| SARAH MCALLISTER | COMMERCE, 2 | YUQING XIE | BUSINESS I, 1 |
| DANICA MCFARLAN | COMMERCE, 2 | SHENGLIN YANG | HONOURS B COMMERCE, 3 |
| DANIEL-F SILVA | COMMERCE, 2 | YANG YANG | COMMERCE, 2 |
| JHANELLE SIMPSON | COMMERCE, 2 |  |  |
| GURNIHAL SINGH SANDHU | COMMERCE, 2 |  |  |



## ENGINEERING

THE ACI (ONTARIO CHAPTER) SCHOLARSHIP (30215) VALUE: \$500
BARRY FOSTER CIVENG-STR/GEOTEC CO-OP, 3

THE AIR LIQUIDE CANADA INC. SCHOLARSHIPS (30258) VALUE: \$1,500 MARK MIHALJEVIC MECH ENG\&MGMT, 2

THE ANATOMY PRIZE (40088) VALUE: $\$ 1,000$ STUART YOUNG

THE A. H. ATKINSON PRIZE (30001) VALUE: \$200 ALEXANDER TAIT CIVENG-STR/GEOTEC CO-OP, 3

THE AUDCOMP COMPUTER SYSTEMS SCHOLARSHIP (30308)
VALUE: \$2,000
ABHINAV GOYAL ELEC ENG CO-OP, 3

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME PROGRAM, LV |  |  | NAME | PROGRAM, LV |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| THE BENTALL SCHOLARSHIPS (30281) VALUE: \$1,500 |  |  | VIANNA PHILLIPS | MECH ENG\&MGT | CO-OP, 2 |
| JACOB NEASE CHEM ENG\&MGMT, 2 |  |  | XIAOXU ZHANG | MAT/ENG CO-OP |  |
| THE CAE SCHOLARSHIP IN COMPUTING AND SOFTWARE ENGINEERING |  |  | THE NEIL FORSYTH PRIZE* (40067) | VALUE: \$120 |  |
| (30282) VALUE: \$3,400 |  |  | RYAN PHILLIPS | MATLS ENG\&MG | T, 4 |
| KEITH DOMENICUCCI MECHATRON ENG\&MGMT CO-OP, 2 |  |  |  |  |  |
|  |  |  | THE GROUP EIGHT ENGINEERING | MITED, LEE F. EUL | RIZE (30098) |
| THE CRISPIN CALVO SCHOLARSHIPS (30211) VALUE: \$1,700 |  |  | VALUE: \$1,000 |  |  |
| MARK FRASER MATLS ENG\&MGMT, 2 |  |  | NATHAN COX | ELEC ENG, 3 |  |
| THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) |  |  | THE GUPTA FAMILY INTERNATIONAL SCHOLARSHIPS (30311) |  |  |
| PAST PRESIDENT'S PRIZE (30149) | VALUE: \$300 |  | VALUE: \$1,500 |  |  |
| STEPHANIE SHAW | MAT/ENG CO-OP, 3 |  | XINTONG LIU | CHEM ENG\&BIOE | G CO-OP, 2 |
|  |  |  | QINHAO XU | ELEC BIOMED EN | CO-OP, 2 |
| THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION (CISC) AWARD (40116) VALUE: \$2,000 |  |  | XIAOXU ZHANG | MAT/ENG CO-OP |  |
|  |  |  |  |  |  |
| AKEMI MARSHALL | CIV ENG-STRUCTUR/GEOTECH, 3 |  | THE RONALD K. HAM MEMORIAL PRIZE (30128) VALUE: \$125 |  |  |
|  |  |  | STEFFI WOO | MATLS ENG\&SCT | CO-OP, 4 |
| THE CANADIAN SOCIETY FOR CHEMICAL ENGINEERING PRIZE (30016) |  |  |  |  |  |
| VALUE: \$50, MEDAL \& CERTIFICATE |  |  | THE HAMILTON AND DISTRICT HEAVY CONSTRUCTION ASSOCIATION |  |  |
| NICOLE MALTA | CHEM ENG\&BIOENG, 4 |  | SCHOLARSHIPS (30294) VALUE: | 500 |  |
|  |  |  | LESLIE CANTAR | CIV/MGT-GEOTE | TR CO-OP, 3 |
| THE CANADIAN SOCIETY OF CIVIL ENGINEERS (HAMILTON SECTION) |  |  | LIN SONG | CIVENG-STR/GEO | EC CO-OP, 3 |
| PRIZE (30018) VALUE: PLAQUE |  |  |  |  |  |
| KAMALA SHARMA | CIV ENG-STRUCTUR/GEOTECH, 3 |  | THE HEDDEN HALL RESIDENCE SCH | LARSHIP (30198) | VALUE: \$750 |
|  |  |  | GARY PURKIS | ENGINEERING I, 1 |  |
| THE CANADIAN SOCIETY FOR CHEMICAL ENGINEERING (30307) |  |  |  |  |  |
| VALUE: \$500 |  |  | THE DR. HARRY LYMAN HOOKER SCHOLARSHIPS (30043) |  |  |
| HOI-TAI FUNG | ENGINEERING I CO-OP, 1 |  | VALUE: \$1,500 |  |  |
|  |  |  | PRAVEENA ASOKAN | SOFTWARE ENG\& | MGT CO-OP, 3 |
| THE GRACE DOROTHY \& WILLIAM P. CARPENTER AWARD (30284) |  |  | JAMESON BERGSTRA | MECHATRON EN | CO-OP, 3 |
| VALUE: \$1,500 |  |  | MATTHEW CERNICK | MECH ENG\&MGT | CO-OP, 3 |
| MACLEAN GORDON | ENGINEERINGI, 1 |  | ROBERT CLEMENCE | ELEC ENG CO-OP |  |
|  |  |  | ALEXEJ CURCIC | MECH ENG CO-O |  |
| THE CHEMICAL INSTITUTE OF CANADA (HAMILTON SECTION) PRIZES (30023) VALUE: \$150 |  |  | GRAHAM DE CATANZARO | MECH ENG\&MG | CO-OP, 4 |
|  |  |  | ANDREW EVANS | CHEM ENG\&BIOE | G, 4 |
| STUART YOUNG | CHEM ENG\&BIOENG, 2 |  | DORALICE FERREIRA | ELEC BIOMED EN | CO-OP, 3 |
|  |  |  | BENJAMIN GERAGHTY | ENGINEERING I, 1 |  |
| THE DENTON COATES MEMORIAL SCHOLARSHIP (50013) |  |  | SCOTT GOODING | ENGINEERING I C | -OP, 1 |
| VALUE: \$500 |  |  | TENG GUO | ENGINEERING I C | -OP, 1 |
| KATHRYN GRANDFIELD | MATLS ENG-NANOMATLS STRM, 4 |  | HEDAN HAN | COMP ENG CO-O |  |
|  |  |  | HONG HAO | ELEC ENG\&MGT | -OP, 5 |
| THE EDWIN MARWIN DALLEY MEMORIAL SCHOLARSHIPS (30164) |  |  | MOJTABA HODJAT-SHAMAMI | ELEC ENG CO-OP |  |
| VALUE: \$800 |  |  | YONG HUANG | MECH ENG\&MGT | CO-OP, 2 |
| ERIC EDWARDS | ENG PHYS(INT | ERDISCP)\&MGT, 2 | ROHAN JACOB | CHEM ENG\&BIOE | G CO-OP, 3 |
| YE WANG | ELEC ENG CO-OP, 3 |  | YASER JAFAR | ELEC ENG\&MGT | -OP, 4 |
|  |  |  | JASON JASKOLKA | SFTWR ENG(GAM | DES)CO-OP, 3 |
| THE DR. RUDOLF DE BUDA SCHOLARSHIP (50100) |  | VALUE: \$1,900 | YOUSUF JAWAHAR | ELEC BIOMED EN | CO-OP, 3 |
| HAOMIN LI | ELEC ENG, 4 |  | BRANDON KARCHEWSKI | CIV/MGT-GEOTE | TR CO-OP, 2 |
| NAN ZHAO | ELEC ENG, 4 |  | TING LU | MECH ENG\&MG | CO-OP, 4 |
|  |  |  | CAMERON MACLEAN | CHEM ENG\&BIOE | G, 3 |
| THE EXCHANGE GRANT (86001) | VALUE: \$1,000 |  | NICOLE MALTA | CHEM ENG\&BIOE | G, 4 |
| SARAH JEWELL | CIVIL/STRC-G | O\&MGT, 2 | KEVIN MAY | ENG PHYS-INTER | SCPL ENG, 3 |
| BRICK KUNG | MAT ENG\& M | GT CO-OP, 2 | LAMEES NAYEF | CHEM ENG\&SCTY |  |

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV |
| :--- | :--- |
| JACKY NG | SOFTWARE ENG\&MGT CO-OP, 4 |
| MICHAEL POMEROY | MAT/ENG CO-OP, 3 |
| ANNA-KRYSTYNA RZEZNICZAK | CIV ENG-STRUCTUR/GEOTECH, 2 |
| TARALYN SCHWERING | ENGINEERING I, 1 |
| RYAN SCOTT | MECH ENG, 2 |
| MITCHELL SHAUGHNESSY | MECHATRONICS ENG, 3 |
| CE SHI | ELEC ENG\&MGT CO-OP, 3 |
| BRANDON SHIPLO | CHEM ENG CO-OP, 3 |
| LIN SONG | CIVENG-STR/GEOTEC CO-OP, 3 |
| KUNDAN THIND | ELEC BIOMED ENG CO-OP, 3 |
| ADAM TRISCHLER | MECH ENG, 4 |
| DANIEL VOLANTE | MECHATRON ENG CO-OP, 3 |
| MARLYNE WADID | ELEC ENG CO-OP, 3 |
| GUJIN WANG | ENGINEERING ICO-OP, 1 |
| SEAN WEAVER | CHEM ENG\&BIOENG CO-OP, 4 |
| AARON WEDEMIRE | MECH ENG CO-OP, 3 |

THE INCO SCHOLARSHIP IN MATERIALS ENGINEERING (30274)
VALUE: $\$ 1,900$
BENJAMIN DESCLOUDS
THE INTERMETCO LIMITED SCHOLARSHIP (30072) VALUE: \$600 MATTHEW CERNICK MECH ENG\&MGT CO-OP, 3

THE IROQUOIS TROPHY (50028) VALUE: TROPHY PATRICIA SANNUTO MECH ENG\&MGT CO-OP, 5

THE A. I. JOHNSON SCHOLARSHIP (30002) VALUE: \$800 JOCELYNE MOYER MECH ENG\&MGMT, 4

THE DR. RONALD V. JOYCE AWARDS FOR ATHLETES (40117)
VALUE: $\$ 2,500$
NATHAN COX ELEC ENG, 3
THE GARY LAUTENS MEMORIAL SCHOLARSHIP (30212) VALUE: \$4,000 SHARLEEN WEATHERLEY CHEM ENG\&BIOENG CO-OP, 2

THE RAY LAWSON SCHOLARSHIPS (30126) VALUE: \$275 KEVIN CLOET MAT ENG\& MGT CO-OP, 4 LEIGH CONROY ENG PHYS/MGT INTRD CO-OP, 3

THE RONALD E. MATERICK SCHOLARSHIPS (30127) VALUE: \$2,000 JIANBO LI CIVENG-STR/GEOTEC CO-OP, 3 ALI PEIRAVIAN ALEXANDER TAIT NIEL VAN ENGELEN CIVENG-STR/GEOTEC CO-OP, 2 CIVENG-STR/GEOTEC CO-OP, 3 CIV/MGT-GEOTE STR CO-OP, 2

```
THE MATTHEWS HALL RESIDENCE SCHOLARSHIP (30157) VALUE: \$750 AARON HO ENGINEERING ICO-OP, 1
```

THE JOHN MAYBERRY SCHOLARSHIP (30262) VALUE: \$1,000

ROBERT MARTIN
RAMY NASTASI
MECH ENG, 2
MECH ENG\&MGMT, 2

| NAME | PROGRAM, LV |
| :--- | :---: | :--- |
| THE WILLIAM J. MCCALLION SCHOLARSHIPS (60004) | VALUE: \$250 |
| MICHAEL DEBOER | MECH ENG, 2 |

THE F. A. MIRZA SCHOLARSHIP (40100) VALUE: \$250 NIEL VAN ENGELEN CIV/MGT-GEOTE STR CO-OP, 2

THE MOLSON SCHOLARSHIP IN ENVIRONMENTAL STUDIES (30213) VALUE: \$1,100 GREG STORTZ ENG PHYS(NAN\&MICRO)\&SCTY, 4

THE MOTOROLA SOFTWARE ENGINEERING SCHOLARSHIP (30252)
VALUE: \$1,500 KIRAN VARAGUR SOFTWARE ENG\&MGMT, 2

THE P. L. NEWBIGGING SCHOLARSHIP (40072) VALUE: \$375 JESSE GARCIA ENGINEERING I, 1

THE NORTEL NETWORKS SCHOLARSHIPS IN INFORMATION
TECHNOLOGY (30257) VALUE: \$1,000

LIAM CLUBBE ENGINEERING I, 1
KYLE EASTWOOD ENGINEERING I, 1
AARON HO ENGINEERINGICO-OP, 1
STEPHANIE LANGTON ENGINEERING I, 1
CURTIS MCEWAN ENGINEERING I, 1
GARY PURKIS ENGINEERING I, 1
LIAM WALKER ENGINEERING I, 1
THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR
EDUCATION GOLD MEDAL (50005) VALUE: MEDAL
ALEXANDER KOCULYM ELEC BIOMED ENG, 4
ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION UNDERGRADUATE SCHOLARSHIPS (40109) VALUE: $\$ 1,000$ CARLY FORSYTHE CIVIL/STRC-GEO\&MGT, 4 YUAN REN CHEM ENG\&BIOENG, 2

THE F. W. PAULIN SCHOLARSHIP (30052) VALUE: \$1,500 SAHAR KIANI KHALKHAL CIVENG-STR/GEOTEC CO-OP, 3

THE TONY PICKARD MEMORIAL SCHOLARSHIP (30172) VALUE: \$425 JACOB NEASE CHEM ENG\&MGMT, 2

THE PROVOST'S HONOUR ROLL MEDAL (30314) VALUE: MEDAL TONG CUI ENGINEERING I CO-OP, 1
ABHINAV GOYAL ELEC ENG CO-OP, 3 PAUL HEEREMA CIV ENG-STRUCTUR/GEOTECH, 4

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV |  | NAME | PROGRAM, LV |
| :---: | :---: | :---: | :---: | :---: |
| ALEXANDER KOCULYM | ELEC BIOMED | ENG, 4 | LEIGH CONROY |  |
| JACOB NEASE | CHEM ENG\& | GGMT, 2 | KAREN CRUZ | CHEM ENG, 2 |
| GARY PURKIS | ENGINEERING I, 1 |  | JASON DREYER | PROCESS AUTOMATION TECH, 2 |
|  |  |  | AMER EL-KALACHE | MECHATRON ENG\&MGMT CO-OP |
| THE STANLEY ROBERTSON SCHOLARSHIP (30319) |  | VALUE: \$2,500 | HOI-TAI FUNG | ENGINEERING I CO-OP, 1 |
| LEIGH CONROY | ENG PHYS/MGT INTRD CO-OP, 3 |  | MATTHEW GARDNER | ENGINEERING I CO-OP, 1 |
|  |  |  | MIHAIL GEORGIEV | ELEC ENG CO-OP, 2 |
| THE SHEILA SCOTT SCHOLARSHIP FOR BRANDON HALL (30202) |  |  | GREGORY-NEAL GOMES | ENGINEERING I CO-OP, 1 |
| VALUE: \$750 |  |  | EVGENY GORELIK | MECH ENG CO-OP, 2 |
| TONG CUI | ENGINEERING I CO-OP, 1 |  | JONATHAN HEIDA | MECH ENG CO-OP, 2 |
|  |  |  | JEREMY JAKOB | ENGINEERING I CO-OP, 1 |
| THE SHELL CANADA PRIZES IN ENGINEERING AND MANAGEMENT (50049) VALUE: \$300 |  |  | LEAH KESSELMAN | ENGINEERING I CO-OP, 1 |
|  |  |  | KRZYSZTOF KIELAR | MECH ENG\&MGT CO-OP, 4 |
| JOHN BROOKS | ENG PHYS(NAN\&MICRO)\&MGMT, 5 |  | STEVEN KINIO | ENGINEERINGI, 1 |
| JOSEPH LOVE | CIVIL/STRC-G | O\&MGT, 5 | ALEKS KIVI | ENGINEERING I, 1 |
| AARON POTALIVO | MATLS ENG\&MGMT, 5 |  | NICHAPAT KONGWANARAT | ENGINEERING I CO-OP, 1 |
|  |  |  | SIEW KUNG LIM | MECH ENG\&MGMT, 3 |
| THE SHELL CANADA SCHOLARSHIPS IN ENGINEERING AND |  |  | VINCENT LEUNG | CHEM ENG\&BIOENG CO-OP, 4 |
| MANAGEMENT (30137) VALUE: \$1,100 |  |  | JINGZHOU LU | ENGINEERING I, 1 |
| COLIN ELES | SOFTWARE E | G\&MGMT, 4 | DANIELLE MAITLAND | ENGINEERINGI, 1 |
| KELTON FRIEDRICH | MECH ENG\& | GGT CO-OP, 4 | RICHARD MASTRAGOSTINO | CHEM ENG\&BIOENG CO-OP, 4 |
| SEAN MCARTHUR | ELEC ENG\&MGT CO-OP, 4 |  | RYAN MCBRIDE | CHEM ENG\&BIOENG CO-OP, 2 |
|  |  |  | ANDREW MCCOMB | ENGINEERING I, 1 |
| THE SOCIETY OF CHEMICAL INDUSTRY MERIT AWARD (50060) |  |  | STEPHEN MEYER | ENGINEERING I, 1 |
| VALUE: PLAQUE |  |  | KEITH OXBY | CHEM ENG\&MGMT, 2 |
| TANYA KHAN | CHEM ENG\&BIOENG, 5 |  | NISHIT PATEL | ENGINEERING I CO-OP, 1 |
|  |  |  | KATHERINE QUAN | ENGINEERINGI, 1 |
| THE STANTEC CONSULTING LTD. ENGINEERING SCHOLARSHIP (30315) |  |  | JEFFREY RICARD | CIV/MGT-GEOTE STR CO-OP, 3 |
| VALUE: \$2,500 |  |  | LARISSA SCHUDLO | ELEC BIOMED ENG CO-OP, 2 |
| SARAH YOUNG | ENGINEERING I, 1 |  | JOHN SEGGEWISS | CHEM ENG\&MGT CO-OP, 2 |
|  |  |  | VINEET SHARMA | ENGINEERING I CO-OP, 1 |
| THE MARK JOHN STOJCIC SCHOLARSHIP (30242) |  | VALUE: \$1,800 | MARLA SHAVER | ENGINEERING I, 1 |
| KEVIN CLOET | MAT ENG\& | GT CO-OP, 4 | QISHI | ENGINEERINGI, 1 |
| RYAN PHILLIPS | MATLS ENG\& | MGMT, 4 | BYRON SINCLAIR | ENGINEERING I CO-OP, 1 |
| STEPHANIE SHAW | MAT/ENG CO-OP, 3 |  | NIKHIL TAWAKLEY | ENGINEERING I CO-OP, 1 |
|  |  |  | PHILIP TOMINAC | ENGINEERING I, 1 |
| THE TINNERMAN PALNUT ENGINEERED PRODUCTS SCHOLARSHIP IN |  |  | JONATHAN TOMKUN | ELEC BIOMED ENG, 2 |
| MECHANICAL ENGINEERING (30279) VALUE: \$3,000 |  |  | LONG TRUONG | ENGINEERING I, 1 |
| TONG CUI | ENGINEERING I CO-OP, 1 |  | JOSEPH VELOCE | ENGINEERING I, 1 |
|  |  |  | NGAI WONG | ELEC ENG CO-OP, 2 |
| THE UNIVERSITY ACHIEVEMENT AWARD (40118) |  | VALUE: \$800 | BRENDAN WOOD | ENG PHYS(INTERDISCP)\&MGT, 2 |
| MICHAEL DEBOER | MECH ENG, 2 |  | FEIBI XU | ELEC ENG CO-OP, 2 |
|  |  |  | LAURA YOUNG | ENGINEERING I, 1 |
| THE UNIVERSITY (SENATE) SCHOLARSHIPS (30173 |  | VALUE: \$800 | XIN YUAN | ENGINEERINGI, 1 |
| YASEEN ALI | ENGINEERING |  | NANXI ZHA | ELEC BIOMED ENG, 2 |
| EDWARD BRUCE | ENGINEERING |  | DAVID ZHITOMIRSKY | ELEC BIOMED ENG, 2 |
| LESLIE CANTAR | CIV/MGT-GEOTE STR CO-OP, 3 |  |  |  |
| MAGGIE CHEN | ENGINEERING | I CO-OP, 1 | THE UNIVERSITY PRIZES FOR SP | ACHIEVEMENT* (40052) |
| NATHAN CHENG | ENG PHYS-IN | ERDISCPL ENG, 2 | VALUE: \$150 |  |
| ANTHONY CHIARELLI | ENGINEERIN | I CO-OP, 1 | RYAN MCBRIDE | CHEM ENG\&BIOENG CO-OP, 2 |

TOTAL NO. OF AWARDS FOR FACULTY = ENGIN: 183


## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008



| McMaster <br> University | OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008 |  |  |
| :---: | :---: | :---: | :---: |
| NAME | PROGRAM, LV | NAME | PROGRAM, LV |
| RAN YAN | HON B HTH SCl, 2 | MICHAEL CHIU | HON B HTH SCl, 2 |
|  |  | DAVID CHOI | HON B HTH SCl, 1 |
| THE RETIRED TEACHERS OF ONTARIO HAMILTON/HALDIMAND |  | MICHAEL CORBO | HON B HTH SCl, 2 |
| DISTRICT PRIZE IN GERONTOLOGY (40047) VALUE: \$200 |  | MARY CORDUKES | HON B HTH SCl, 2 |
| BEVERLEY PREATER | HON B HTH SCI, 1 | MARIE CORONEOS | HON B HTH SCl, 2 |
|  |  | MARIA CUSIMANO | HON B HTH SCI, 1 |
| THE STANLEY ROBERTSON SCHOLARS | SHIP (30319) VALUE: \$2,500 | SARAH DONALDSON | HON B HTH SCl, 1 |
| JENNIFER GAO | HON B HTH SCI, 2 | ROBYN FALLEN | HON B HTH SCI, 2 |
|  |  | SARAH FARR | HON B HTH SCI, 1 |
| THE SATURN OF HAMILTON EAST AC | HIEVEMENT AWARD (80020) | WEN FU | HON B HTH SCl, 2 |
| VALUE: CERTIFICATE |  | JENNIFER GAO | HON B HTH SCl, 2 |
| KAREN HO | HON B HTH SCI, 4 | LU GAO | HON B HTH SCl, 1 |
| XIN WANG | HON B HTH SCI, 2 | ZHAOWEI GONG | HON B HTH SCl, 2 |
|  |  | SINDU GOVINDAPILLAI | HON B HTH SCl, 2 |
| THE HILDA SAVAGE MEMORIAL SCHJOSEPH MATHEW | OLARSHIP (30166) VALUE: \$500 | SUNAYNA GUPTA | HON B HTH SCl, 2 |
|  | HON B HTH SCI, 2 | JAMES HARRIS | HON B HTH SCI, 2 |
|  |  | MICHAEL HERMAN | HON B HTH SCl, 1 |
| THE SHEILA SCOTT SCHOLARSHIP FOR WALLINGFORD HALL (30158) |  | VIVIAN HO | HON B HTH SCl, 2 |
| VALUE: \$750 |  | JONATHAN HSU | HON B HTH SCI, 1 |
| SOO-JIN KIM | HON B HTH SCI, 2 | SARA IMRAN | HON B HTH SCl, 2 |
|  |  | ALI IQBAL | HON B HTH SCI, 2 |
| THE SOMERVILLE SCHOLARSHIPS (30169) VALUE: \$800 |  | INGA ISUPOV | HON B HTH SCI, 1 |
| KARIM TAHA | HON B HTH SCI, 2 | SEEMA JAIN | HON B HTH SCl, 1 |
| MARK ZHOU | HON B HTH SCl, 2 | ALLAN JIANG | HON B HTH SCI, 1 |
|  |  | JINGYU JIN | HON B HTH SCl, 2 |
| THE MARNIE SPEARS SCHOLARSHIPYU KIT LI | (30217) VALUE: \$1,200 | DEBORAH KAHAN | HON B HTH SCl, 2 |
|  | HON B HTH SCI, 3 | SONIKA KAINTH | HON B HTH SCl, 1 |
|  |  | MINESH KAPADIA | HON B HTH SCl, 2 |
| THE MABEL STOAKLEY SCHOLARSHIPCHRISTINE IBRAHIM | (30103) VALUE: \$500 | ALVIN KENG | HON B HTH SCI, 1 |
|  | HON B HTH SCI, 2 | MOHAMMED KHAN | HON B HTH SCl, 2 |
|  |  | SOO-JIN KIM | HON B HTH SCl, 2 |
| THE STOBO SCHOLARSHIP (30170) | VALUE: \$325 | AARON LAU | HON B HTH SCI, 1 |
| JENNIFER TRAN | HON B HTH SCI, 3 | bonNie Lee | HON B HTH SCl, 2 |
|  |  | STEPHANIE LOW | HON B HTH SCI, 2 |
| THE MICHAEL THOMSON MEMORIAL BOOK PRIZE (40035) |  | STEPHANIE MA | HON B HTH SCI, 1 |
| VALUE: \$50 |  | CHRISTINA MARTORELLI | HON B HTH SCl, 2 |
| PAUL HOWATT | HON B HTH SCI, 4 | JOSEPH MATHEW | HON B HTH SCl, 2 |
|  |  | ANDRE MATTELIANO | HON B HTH SCl, 2 |
| THE ROGER TRULL AWARD (80053) | VALUE: CERTIFICATE | HANNA MENG | HON B HTH SCl, 1 |
| WILLIAM CHAN | HON B HTH SCI, 3 | CYNTHIA MIN | HON B HTH SCl, 1 |
|  |  | SOHEIL MOHAMMADI KHOJAST | HON B HTH SCI, 1 |
| THE UNIVERSITY (SENATE) SCHOLARSHIPS (30173) VALUE: \$800 |  | DANIEL MOK | HON B HTH SCI, 1 |
| ALEEM ADATIA | HON B HTH SCI, 2 | SOHAIB MUNIR | HON B HTH SCI, 1 |
| NOOR ALOLABI | HON B HTH SCI, 2 | NADIA ORYEMA | HON B HTH SCI, 3 |
| ANGELA ASSAL | HON B HTH SCI, 2 | BEVERLEY PREATER | HON B HTH SCl, 1 |
| KAREN BAMBERGER | HON B HTH SCl, 1 | HELEN QIAN | HON B HTH SCl, 1 |
| ALEXANDER BILBILY | HON B HTH SCI, 2 | NISCHAL RANGANATH | HON B HTH SCI, 1 |
| VICTORIA BLAIS | HON B HTH SCl, 2 | MARY SALIB | HON B HTH SCl, 2 |
| LAURA CANCELLIERE | HON B HTH SCl, 1 | HABON SAMATER | HON B HTH SCl, 2 |
| MARIO CAPITANO | HON B HTH SCI, 2 | ASHWIN SANKAR | HON B HTH SCI, 2 |
| CHRYSTAL CHAN | HON B HTH SCl, 1 | KARAN SHAH | HON B HTH SCl, 2 |
| MICHAEL CHAN | HON B HTH SCl, 2 | SAMEER SHAIKH | HON B HTH SCl, 2 |
| ANDREW CHEUNG | HON B HTH SCI, 2 | CAROLINE SHENOUDA | HON B HTH SCI, 2 |
| JANICE CHEUNG | HON B HTH SCl, 1 | AALLA SIDAHMED | HON B HTH SCI, 2 |

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV | NAME | PROGRAM, LV |
| :---: | :---: | :---: | :---: |
| JENNIFER SIEMON | HON B HTH SCI, 2 | THE T. RUSSELL WILKINS MEMORIA | SCHOLARSHIPS (30178) |
| PARKASH SINGH | HON B HTH SCI, 2 | VALUE: \$4,600 |  |
| MARC SUCCI | HON B HTH SCI, 2 | TYLER LAW | HON B HTH SCI, 3 |
| ALICE SY | HON B HTH SCI, 2 | KATRINA PIGGOTT | HON B HTH SCI, 3 |
| BIANCA TOMSA | HON B HTH SCI, 2 |  |  |
| JESSICA TRUONG | HON B HTH SCI, 1 | THE WOODSTOCK HALL RESIDENCE | SCHOLARSHIP (30160) |
| ANDREW TSE | HON B HTH SCI, 1 | VALUE: \$750 |  |
| DAVID TSOULIS | HON B HTH SCI, 2 | ABIRAMI VIJENTHIRA | HON B HTH SCI, 1 |
| CASSANDRA UY | HON B HTH SCI, 1 |  |  |
| LAURA VANCE | HON B HTH SCI, 2 | THE YATES SCHOLARSHIPS (30171) | VALUE: \$800 |
| YULIYA VELYKOREDKO | HON B HTH SCI, 2 | MICHAEL CHING | HON B HTH SCl, 1 |
| ABIRAMI VIJENTHIRA | HON B HTH SCI, 1 | FADY EBRAHIM | HON B HTH SCI, 1 |
| KALYANI VIMALESAN | HON B HTH SCI, 2 | CURTIS HADDEN | HON B HTH SCl, 1 |
| XIN WANG | HON B HTH SCl, 2 | NICOLE KRAUS | HON B HTH SCl, 1 |
| DARREN WEAVER | HON B HTH SCI, 1 | KWUN WAI DAVID LEE | HON B HTH SCI, 1 |
| ALVIN WONG | HON B HTH SCl, 2 | BEN MCCUTCHEN | HON B HTH SCI, 2 |
| RAN YAN | HON B HTH SCI, 2 | TOBIAS MEISZINGER | HON B HTH SCI, 3 |
| MARCO YEUNG | HON B HTH SCI, 2 | JANE MENG | HON B HTH SCI, 1 |
| PEINI YIN | HON B HTH SCI, 2 | AMANDA MICHAEL | HON B HTH SCI, 1 |
| STANISLAVA ZAHANOVA | HON B HTH SCI, 2 | HAN SHAO | HON B HTH SCI, 1 |
| JEFFREY ZUCCATO | HON B HTH SCI, 1 | KAYLIE STEWART | HON B HTH SCl, 2 |
| THE UNIVERSITY PRIZES FOR SPECIAL ACHIEVEMENT* (40052) |  | THE MARGUERITE Z. YATES SCHOLARSHIP (30167) VALUE: \$225 |  |
| VALUE: \$150 |  | MARISSA BONYUN | HON B HTH SCI, 3 |
| ERIN CALDER | MIDWIFERY, 1 | CRYSTAL CHEUNG | HON B HTH SCI, 3 |
| JANIS DAVIDSON | MIDWIFERY, 1 |  |  |
| ANDREA KIROU-MAURO | HON B HTH SCI, 3 | THE ZOOM MEDIA AWARD (80029) | VALUE: CERTIFICATE |
| YU KIT LI | HON B HTH SCI, 3 | CHRISTINE IBRAHIM | HON B HTH SCI, 2 |
|  |  | KRISTIN STAWIARSKI | HON B HTH SCl, 2 |
|  |  | WILLIAM TO | HON B HTH SCl, 2 |
|  |  | YULIYA VELYKOREDKO | HON B HTH SCI, 2 |

TOTAL NO. OF AWARDS FOR FACULTY = H. SCI: 266

## HUMANITIES

THE A. G. ALEXANDER SCHOLARSHIPS (30174) VALUE: \$5,500 JACOB MORGAN H LING COGN SCI\&PHILOS, 2 NICOLE NG MELISSA VERHEY

THE ALUMNI ASSOCIATION SCHOLARSHIP (60000) VALUE: \$375 DAVID WALLACE-HARE

H CLASSICS-B, 2
THE AMBASSADOR OF SPAIN BOOK PRIZE (50002) VALUE: BOOK JEIMEE FORONDA-PAREDES

H HISPANIC\&SOC, 4
THE MAQBOOL AZIZ MEMORIAL SCHOLARSHIP (40105) VALUE: \$425 FIONA TO

H COMP LIT\&ENGLISH, 2

THE LAURA BALDWIN SCHOLARSHIP (30313) VALUE: \$500 CHRISTINE MISCIONE STEFANIE ZAGORAC

H ENGLISH, 3
H ENGLISH\&HISTORY, 4

THE BANK OF MONTREAL HUMANITIES MULTIMEDIA SCHOLARSHIPS (30259) VALUE: $\$ 1,000$

| XIAOJIE CHEN | H ART\&MMEDIA, 3 |
| :--- | :--- |
| CHAD FULLERTON | H CMST\&MMEDIA, 3 |
| TAMARA GAJANOVIC | H MMEDIA\&THTR\&FLM, 3 |
| MATTHEW MAZUREK | H MMEDIA\&PSYCH, 2 |
| WHITNEY MCMULLEN | H CMST(CULTR)\&MMEDIA, 3 |
| LEAH PEREZ | H MMEDIA\&ECON, 2 |

THE WILLIAM AND LIDA BARNS MEMORIAL PRIZE IN HISTORY (50050) VALUE: $\$ 150$ DIANE WALES H HISTORY, 4

THE MARION BATES BOOK PRIZE (50034) VALUE: \$85 LAUREL PETTY H ENGLISH\&HISTORY, 4

THE LOUISE E. BETTGER SCHOLARSHIPS IN MUSIC (30097) VALUE: \$450 NAIRI APKARIAN H ENGLISH\&MUSIC, 2

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008



## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME PROGRAM, LV |  | NAME | PROGRAM, LV |  |
| :---: | :---: | :---: | :---: | :---: |
| THE EUROPEAN HISTORY PRIZE (50017) VALUE: \$100 |  | CHRISTINE TODD | H HISTORY, 2 |  |
| DANA SHERWOOD | H CSCT \& HISTORY, 4 |  |  |  |
|  |  | THE H. B. GREENING BOOK PRIZE (30062) | 0062) VALUE: \$ | 100 |
| THE EXCHANGE GRANT (86001) V | VALUE: \$1,000 | NORMAN MCCABE | H MUSIC, 2 |  |
| KAYLA-WRAY AMY | HON FRENCH, 2 |  |  |  |
| JAMIE BARTON | H LINGUIST COGNITIVE SCI, 2 | THE AMELIA HALL GOLD MEDAL (50003) VALUE: \$ |  |  |
| JORDAN COLLVER | H HISTORY, 2 | ELAINE WONG | H COMP LIT\&THTR\&FL, 4 |  |
| SCOTT HARPER | H CMST, 2 |  |  |  |
| KIRSTEN IPSEN | ENGLISH, 2 | THE DR. HARRY LYMAN HOOKER SCHOLARSHIPS (30043) |  |  |
| AVISHKA JUTA | H ENGLISH, 2 | VALUE: \$1,500 |  |  |
| DANIELLE KITCHINGMAN-ROY | HON FRENCH, 2 | MOHAMMAD ATCHIA | FRENCH, 2 |  |
| SARAH MARINELLI | H CMST, 2 | ALLISON BENDUS | H PHILOS, 3 |  |
| JACOB MORGAN | H LING COGN SCI\&PHILOS, 2 | JEREMY BUESINK | H ENGLISH, 2 |  |
| DARIA NELIOUBINA | H ART HIST\&HISTORY, 2 | ANDREW BUZNY | H ENGLISH\&RELI | ST, 3 |
| NICOLE NG | H LINGUISTICS, 2 | EVAN CAMPBELL | H MUSIC, 2 |  |
| KYLE O'BRIEN | H HISTORY, 2 | JENNA CASUCCIO | H HISPANIC\&ITAL | LIAN, 3 |
| CAROLYNE OUELLETTE | H ENGLISH\&FRENCH, 2 | RENEE CHAPUT | H ENGLISH\&HIST | ORY, 4 |
| VICTORIA PARRELL | H CMST, 2 | KATHERINE COOK | H HISTORY\&ANT | HROP, 3 |
| FRANCINE PHILLIPS-SHELDON | H ENGLISH\&HISTORY, 2 | CHELSEA DOLSON | H LINGUIST COG | NITIVE SCI |
| GABRIELLA PIRRAGLIA | H CMST\&CSCT, 2 | SHARRON GIDDINGS | MUSIC I, 1 |  |
| AMANDA RAPONI | H MUSIC, 2 | SARAH GOLDBERG | H HISTORY, 3 |  |
| NICOLE RATIS | H FRENCH\&SOCIOL, 2 | DANIEL GRUBB | H HISTORY\&POL | SCI, 3 |
| MICHAEL SARATSIOTIS | ENGLISH, 2 | MADDIE HAGUE | H ART HIST\&ANT | HROP, 3 |
| COREY SLAVNIK | H MMEDIA\&THTR\&FLM, 2 | SIDNEY HARKEMA | H HISTORY\&GEO | G, 2 |
| MELISSA VERHEY | H CLASSICS \& FRENCH, 2 | MEREDITH HEYLAND | H ENGLISH\&THTR | R\&FLM, 4 |
|  |  | PIOTR JANKOWSKI | H LINGUIST COG | NITIVE SCI |
| THE FRENCH GOVERNMENT BOOK PRIZE (40017) VALUE: BOOK |  | ALEXANDRA KIRSH | H ART\&ART HIST |  |
| PIOTR JANKOWSKI | H LINGUIST COGNITIVE SCI, 3 | JAY MISUK | H LINGUISTICS, 3 |  |
|  |  | ZEINA NSAIR | HUMANITIES, 2 |  |
| THE FRENCH SCHOLARSHIP (30327) | VALUE: \$1,000 | DAVID PRIDHAM | HUMANITIES I, 1 |  |
| DERSIM BARWARI | H FRENCH\&POL SCI, 2 | NICOLE QUINTELA | H LINGUIST COG | NITIVE SCI |
|  |  | JESSICA SANGES | H LINGUISTICS, 3 |  |
| THE MERRILL FRANCIS GAGE SCHOLARSHIPS (30110) VALUE: \$450 |  | ROBIN SPURR | H PEACE ST\&ANT | HROP, 4 |
| EMILY DALGLEISH | H MUSIC, 2 | RYAN TOPP | H MUSIC, 2 |  |
| ASHLEY THEYSEN | H MUSIC, 3 | MEGAN VINCENT | HON FRENCH, 3 |  |
|  |  | RICCARDO VINCI | H MMEDIA\&THT | R\&FLM, 3 |
| THE SAMUEL GELLER MEMORIAL BO | OOK PRIZE (30261) VALUE: \$425 | CATHERINE WALKER | H HISTORY\&POL | SCI, 3 |
| CATHERINE WALKER | H HISTORY\&POL SCI, 3 | D'ARCY WILSON | H HISTORY\&PHIL | OS, 3 |
|  |  | ALANNA YOUNG | H ART, 3 |  |
| THE GWEN GEORGE MEDAL (60011) VALUE: \$400 |  |  |  |  |
| JEAN LONGFIELD | H ART HIST\&HISTORY, 3 | THE BERTRAM OSMER HOOPER SCHOLARSHIP (30161) |  | VALUE: |
|  |  | LIANA BRENT | H ART HISTORY\& | CLASSICS, |
| THE GOVERNOR GENERAL'S ACADEMIC MEDAL (50022) |  | THE HUGHES SCHOLARSH | VALUE: \$200 |  |
| VALUE: MEDAL |  | SARAH MOLENAAR | H MUSIC, 3 |  |
| LAUREN COWL | H PHILOS\&POL SCI, 4 |  |  |  |
|  |  | THE HUMANITIES MEDALS | CIAL ACHIEVEMEN | T (50026) |
| THE DAPHNE ETHERINGTON GRAHAM MEMORIAL SCHOLARSHIP IN |  | VALUE: MEDAL |  |  |
| ENGLISH (30034) VALUE: \$1,000 |  | SUSAN-CAROLLE BLACK | HON FRENCH, 4 |  |
| JACQUELINE DELANGE | H ENGLISH, 3 | JANET GODDARD | H MUSIC, 4 |  |
| THE DAPHNE ETHERINGTON GRAHAM MEMORIAL SCHOLARSHIP IN |  | THE INTER NATIONES (BONN) BOOK PRIZE* (40024) |  | VALUE: |
| HISTORY (30231) VALUE: \$1,000 |  | NICOLE NG | H LINGUISTICS, 2 |  |
| VICTORIA CAMPBELL | H HISTORY, 3 |  |  |  |
| JILLIAN DAVIS | H HISTORY, 3 |  |  |  |

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008



| OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report <br> To Undergraduate Council Awards Committee November 20, 2008 |  |
| :---: | :---: |
| NAME PROGRAM, LV | NAME PROGRAM, LV |
| THE ROBERT NIXON SCHOLARSHIP (30203) VALUE: \$575 | THE ROTARY CLUB OF HAMILTON A.M. COMMUNITY CONTRIBUTION |
| ALAYNA KOLODZIECHUK H HISTORY\&PHILOS, 3 | AWARD (80042) VALUE: CERTIFICATE |
|  | DANIELLE KITCHINGMAN-ROY HON FRENCH, 2 |
| THE CONNIE O'SHAUGHNESSY MEMORIAL PRIZE* (40009) |  |
| VALUE: \$500 | THE E. T. SALMON SCHOLARSHIP (30204) VALUE: \$2,000 |
| ELAINE MARION ART HIST, 3 | DARIA NELIOUBINA H ART HIST\&HISTORY, 2 |
|  | AARON RATHBONE H CLASSICS-A\&HIST, 3 |
| THE GLADYS BALLANTYNE PARKER PRIZE (30060) VALUE: \$50 |  |
| RACHEL FORBES HON CLASSICS, 2 | THE LARRY SAYERS PRIZE IN EAST ASIAN HISTORY* (40030) VALUE: \$275 |
| THE IRENE PEARCE SCHOLARSHIP (30222) VALUE: \$800 | ERICA JOSSE H HISTORY, 4 |
| EMILY ISAAK MUSIC I, 1 |  |
|  | THE SCHOOL OF ARTS SCHOLARSHIP IN MUSIC (30216) VALUE: \$950 |
| THE BRIAN POCKNELL MEMORIAL SCHOLARSHIP (30302) LAURA RICHARDSONVALUE: \$500 M MUSIC, 2 |  |
|  |  |
| DERSIM BARWARI H FRENCH\&POL SCI, 2 | THE SHEILA SCOTT SCHOLARSHIP IN ENGLISH (30136) VALUE: \$550 |
| LAURA CARRINGTON-PHILLI HON FRENCH, 2 | ANDREW BUZNY H ENGLISH\&RELIG ST, 3 |
| MELISSA VERHEY H CLASSICS \& FRENCH, 2 |  |
|  | THE LOUIS J. SHEIN SCHOLARSHIP (30189) VALUE: \$375 |
| THE POLITICAL SCIENCE PRIZE (50042) VALUE: \$200 | RENEE CHAPUT H ENGLISH\&HISTORY, 4 |
| SARAH LAFRENIERE H HISTORY\&POL SCI, 4 | JOVAN DJURDJEVIC H FRENCH\&POL SCI, 3 |
| THE PROVOST'S HONOUR ROLL MEDAL (30314) VALUE: MEDAL THE PATRICIA L. SMYE MEMORIAL SCHOLARSHIP (30118) VALUE: \$375 |  |
| DAVID WALLACE-HARE H CLASSICS-B, 2 | KIRSTEN IPSEN ENGLISH, 2 <br> LEAL STANBURY ENGLISH, 2 |
|  |  |
| THE DR. JOHN A. PYLYPIUK SCHOLARSHIP (30039) VALUE: \$700 |  |
| REBECCA HICKS H HISTORY, 2 | THE LORNA AND DAVID SOMERS AWARD (80031) VALUE: CERTIFICATE |
|  | KATHRYN STIEL H PHILOS, 3 |
| THE RAND MEMORIAL PRIZE OF CLASS '98 (40045) VALUE: \$250 |  |
| SARAH EL-HAMZAWI HENGLISH, 3 | THE SONS OF ITALY OF ONTARIO SCHOLARSHIP (30141) VALUE: \$500 |
|  | JENNA CASUCCIO H HISPANIC\&ITALIAN, 3 |
| THE GORDON RAYMOND AWARD (80011) VALUE: CERTIFICATE |  |
| ELAINE MARION ART HIST, 3 | THE ANNE STEIN MEMORIAL PRIZE (40003) VALUE: \$125 |
|  | RHOBI JACOBS ENGLISH\&SOC WORK, 3 |
| THE SHARON REEVES SCHOLARSHIP (30135) VALUE: \$425 |  |
| PHILIP ATTWELL | THE LEONA ALLERSTON RYAN AND GORDON HENRY STEVENS |
| H MUSIC, 3 | MEMORIAL SCHOLARSHIP (30229) VALUE: \$525 |
| THE ELLA JULIA REYNOLDS SCHOLARSHIPS (30044) VALUE: \$1,000 | EVAN CAMPBELL H MUSIC, 2 |
| GENEVIEVE FULLAN H ENGLISH, 3 |  |
| ALLISON WARD H ENGLISH\&HISTORY, 3 | THE MARIE L. STOCK SCHOLARSHIP (30104) VALUE: \$450 |
|  | KAREN WEBB H FRENCH\&HISTORY, 3 |
| THE GLADYS RICHARDS SCHOLARSHIPS (30288) VALUE: \$2,000 |  |
| ALEXANDER KWIECIEN H ENGLISH, 3 | THE ADAM SUDAR PRINTMAKING AWARD (80054) VALUE: CERTIFICATE |
| HUI ZHONG WONG H ENGLISH\&HISTORY, 3 | ALANNA YOUNG H ART, 3 |
| THE ABRAHAM ROSENBERG MEMORIAL PRIZE (50095) VALUE: \$225 | THE SWISS MINISTER TO CANADA BOOK PRIZES (40051) VALUE: BOOK |
| CATHERINE SANDWELL H PHILOS, 4 | JOVAN DJURDJEVIC H FRENCH\&POL SCI, 3 |
|  | BREDA HIGGINS H ITALIAN\&LINGUIST, 3 |
| THE MORRIS AND SARAH ROSENHEAD MEMORIAL PRIZE (40033) |  |
| VALUE: \$125 | THE JUANITA LEBARRE SYMINGTON SCHOLARSHIP (30092) |
| CATHERINE ZAGAR H | VALUE: \$750 |
|  | TIMOTHY GREENING H ART, 3 |

McMaster
University

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS

2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV | NAME | PROGRAM, LV |
| :---: | :---: | :---: | :---: |
| THE THEATRE \& FILM STUDIES BOOK PRIZE (40014) VALUE: BOOK |  | LAURA KENNEDY | HUMANITIES I, 1 |
| CARLY POKORADI | HUMANITIES I, 1 | NETTA KHAYUTIN | H PHILOS\&RELIG ST, 4 |
|  |  | SINAE KIM | H MUSIC, 2 |
| THE GRAHAM RONALD TOOP SCHOLARSHIP (30190) VALUE: \$500 |  | IAN KOLESNIKOFF | H ENGLISH\&PEACE ST, 3 |
| ALLISON BENDUS | H PHILOS, 3 | KAtherine kucemba | H MUSIC, 3 |
| MELANIE SHIELDS | H PHILOS, 3 | ELLE MACLACHLAN | HUMANITIES I, 1 |
|  |  | SARAH MARINELLI | H CMST, 2 |
| THE JOHN TOTH MEMORIAL PRIZE* (40028) VALUE: \$50 |  | NADIA MIOR | H LINGUISTICS, 3 |
| KAREN LEE | HON CLASSICS, 3 | SARAH MOLENAAR | H MUSIC, 3 |
|  |  | ERIN MOREL | MUSIC I, 1 |
| THE JOHN H. TRUEMAN PRIZE (50067) VALUE: \$250 |  | JACOB MORGAN | H LING COGN SCI\&PHILOS, 2 |
| DIANA MOSER | H HISTORY, 4 | JESSICA MOTA | H ENGLISH\&FRENCH, 3 |
|  |  | JACQUELINE NYHOUT | H LINGUIST COGNITIVE SCI, 3 |
| THE JOHN H. TRUEMAN SCHOLARSH | IP* (40104) VALUE: \$250 | MEGAN PARKER | H LINGUISTICS, 2 |
| DANNY CAPLAN | H HISTORY\&MUSIC, 3 | KELSEY PHILLIPS | H ART\&ART HIST, 3 |
|  |  | JEFFREY POORT | HON CLASSICS, 2 |
| THE UNIVERSITY ACHIEVEMENT AWARD (40118) VALUE: \$800 |  | REBECCA RATHBONE | HON CLASSICS, 2 |
| ZUZANNA CHOCIEJ | H PHILOS\&SOCIOL, 2 | THEODORA ROMAN | H ART\&MMEDIA, 2 |
| MARK HEARNS | HUMANITIES I, 1 | CARRIE RUDOLPH | H ENGLISH\&THTR\&FLM, 2 |
| MARCELLA JAGER | H CSCT \& PEACE ST, 4 | AMANDA SCOTT | H HISTORY, 2 |
| MIHAELA KONDAN | H LINGUISTICS, 3 | MICHAEL SHERMAN | HUMANITIES I, 1 |
| NOLAN POLLOCK | H MUSIC, 2 | LAURA SIMON | H ART HIST\&SOC, 2 |
| VERA ROCCA | H HISTORY\&POL SCI, 4 | ANDREW THIES | H MUSIC, 3 |
| CARMEN STERMANN GALBRAIT | H LINGUISTICS, 2 | OLIVIA VALTAS | H CMST\&ENGLISH, 2 |
| DAVID WALLACE-HARE | H CLASSICS-B, 2 | MELISSA VERHEY | H CLASSICS \& FRENCH, 2 |
|  |  | ERIN WALL | HUMANITIES I, 1 |
| THE UNIVERSITY (SENATE) SCHOLARSHIPS (30173) VALUE: \$800 |  | DEREK WATSON | HUMANITIES I, 1 |
| JENNIFER ALONSO | HUMANITIES I, 1 | EMILY WITTMER | HUMANITIES I, 1 |
| NAIRI APKARIAN | H ENGLISH\&MUSIC, 2 | CATHERINE ZAGAR | HUMANITIES I, 1 |
| DIANA APOSTOLIDES | H PEACE ST\&POL SCI, 3 |  |  |
| ELIZABETH ARVANITIS | H MUSIC, 3 | THE UNIVERSITY SCHOLARSHIPS (60003) VALUE: \$250 |  |
| COLLEEN BAIN | H CMST(PERF)\&THTR, 4 | DEBRA COBURN | H CLASSICS-A\&HIST, 4 |
| SARAH BARDWELL | H ART\&CSCT, 4 | SHEILA COOK | HUMANITIES I, 1 |
| ADAM BELOVARI | H ART HIST, 2 | BONNIE HACHEY | HUMANITIES I, 1 |
| ZUZANNA BLASZKIEWICZ | H CMST(CULTR/MASS), 3 | MARCELLA JAGER | H CSCT \& PEACE ST, 4 |
| SANDRA BOURANOVA | H LINGUIST COGNITIVE SCI, 2 | MIHAELA KONDAN | H LINGUISTICS, 3 |
| LIANA BRENT | H ART HISTORY\&CLASSICS, 2 | JEAN LONGFIELD | H ART HIST\&HISTORY, 3 |
| MARIA CALANDRINO | HUMANITIES I, 1 | KATHLEEN SZOKE | H ENGLISH, 3 |
| SARAH CASUCCIO | H HISTORY, 2 |  |  |
| AMANDA CHONG | HUMANITIES I, 1 | THE UNIVERSITY PRIZES FOR SPECIAL ACHIEVEMENT* (40052) |  |
| VANESSA COTE | H CMST, 2 | VALUE: \$150 |  |
| AMANDA COULTHARD | HUMANITIES I, 1 | ALLISON GARRETT | H ART, 4 |
| EMILY DALGLEISH | H MUSIC, 2 | CALEN HENRY | H JAPAN ST\&MMEDIA, 4 |
| ADAM DELLA VALLE | HUMANITIESI, 1 |  |  |
| JOVAN DJURDJEVIC | H FRENCH\&POL SCI, 3 | THE VAREY SCHOLARSHIP (30151) | VALUE: \$275 |
| FALINA DOVICK | H ENGLISH, 3 | Rebecca rathbone | HON CLASSICS, 2 |
| JAMES DYMOND | H MUSIC, 3 |  |  |
| JEREMY FORSYTH | HUMANITIES I, 1 | THE F. W. WATERS SCHOLARSHIP IN PHILOSOPHY (30197) |  |
| SARAH HACHEY | MUSIC I, 1 | VALUE: \$750 |  |
| COLIN HASTINGS | H PEACE ST\&PHILOS, 2 | D'ARCY WILSON | H HISTORY\&PHILOS, 3 |
| VICTORIA HAYKIN | HUMANITIES I, 1 |  |  |
| LIANA HENKEL | H MUSIC, 3 | THE F. W. WATERS SCHOLARSHIP IN PHILOSOPHY FOR PART-TIME |  |
| CAITLYN HICKS | H CSCT \& ENGLISH, 3 | STUDENTS (60008) VALUE: \$250 |  |
| KATIE JENSEN | HUMANITIES, 2 | SHANNON BUCKLEY | H PEACE ST\&PHILOS, 3 |



## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV | NAME | PROGRAM, LV |
| :---: | :---: | :---: | :---: |
| THE CORELENE HELEN TOSTEVIN SCHOLARSHIPS (40083) |  | JIA LI | NURSING, 1 |
| VALUE: \$250 |  | JANCELLE LINAY | NURSING, 2 |
| HEATHER ALM | NURSING (POST RN), 3 | ERIN MOHR | NURSING, 2 |
| MARIE BIGELOW | NURSING (POST RN), 3 | EMMANUEL OWUSU | NURSING, 2 |
| LOUISE KOYANAGI | NURSING (POST RN), 3 | LORETTA PIZON | NURSING (ACCELERATED), 3 |
| DIANA MCDOUGALL | NURSING (POST RN), 4 | VANESSA PUPEK | NURSING, 3 |
| MARTINA MYSICKA | NURSING (POST RN), 4 | KRISTINA SKOKO | NURSING, 1 |
|  |  | TRACY SMITH | NURSING (ACCELERATED), 3 |
| THE UNIVERSITY (SENATE) SCHOLARSHIPS (30173) VALUE: \$800 |  | SUSAN TAM | NURSING, 3 |
| STEPHANIE ABU-JAZAR | NURSING, 2 | KAITLYN VISSER | NURSING, 1 |
| KIRSTEN BILDFELL | NURSING, 1 |  |  |
| NATALIE CHILDS | NURSING (ACCELERATED), 3 | THE UNIVERSITY SCHOLARS | 003) VALUE: \$250 |
| ARIAN CRUZ | NURSING (ACCELERATED), 3 | KAREN VANSCOY | NURSING, 3 |
| CHRIS EDWIN | NURSING, 1 |  |  |
| GRIZEL FAJARDO | NURSING, 2 | THE UNIVERSITY PRIZES FO | L ACHIEVEMENT* (40052) |
| ADAM GESICKI | NURSING, 1 | VALUE: \$150 |  |
| CHRISTINA HILDERING | NURSING, 1 | CHELSEA MACDOUGALL | NURSING, 3 |
| RACHEL HORDYK | NURSING, 2 | ANDREA PANG | NURSING, 3 |
| JEAN HUYNH | NURSING, 2 |  |  |
| ROSEMARY ILNISKY | NURSING (ACCELERATED), 3 | THE LILLIAN AND MANUEL | HOLARSHIP (30101) |
| SONJA KHOSLA | NURSING, 1 | VALUE: \$1,800 |  |
| TRICIA KING | NURSING(POST PN)-CONESTO, 2 | JESSICA FINCH | NURSING-MOHAWK, |

TOTAL NO. OF AWARDS FOR FACULTY = NURS: 70

## SCIENCE

THE ACHIEVEMENT AWARDS OF EXCELLENCE* (40085) VALUE: \$800 REBECCA MCDERMOTT H BIOLOGY\&PSYCH, 3 LEENA SHAHBAZ H SCIENCE (LIFE SCI), 4

THE W. K. ALLAN MEMORIAL SCHOLARSHIP (30221) VALUE: $\$ 1,100$ RAYMOND PERKINS H MATH\&STAT, 3

THE CAMERON D. ALLEN BOOK PRIZE (40115) VALUE: \$200 HEATHER MCLEOD H EARTH\&ENV-HYDRO, 4

THE ALUMNI CANADIAN GEOGRAPHY PRIZE (40001) VALUE: \$300 NILAY SHAH H BIOCHEM(MOL BIO), 2

THE HERBERT S. ARMSTRONG MEMORIAL FUND SCHOLARSHIP (30234) VALUE: \$100 HARRIS SWITZMAN H EARTH\&ENV SCI, 4

THE AUBURN INDUSTRIAL SERVICES COMMUNITY CONTRIBUTION AWARD (80037) VALUE: CERTIFICATE

KIRANDEEP BHULLAR H BIOCHEM, 3
THE CHARLES MURRAY BALL SCHOLARSHIPS IN EARTH SCIENCES
$\begin{array}{ll}\text { (30182) VALUE: } \$ 2,300 & \\ \text { KENDRA LANDONI } & \text { H EARTH\&ENV SCI, } 3 \\ \text { EMILY NICHOLAS } & \text { H EARTH\&ENV-HYDRO, } 3 \\ \text { STACEY PUCKERING } & \text { H EARTH\&ENV-GEOSCI, } 3 \\ \text { HARRIS SWITZMAN } & \text { H EARTH\&ENV SCI, } 4\end{array}$

THE J. DOUGLAS BANKIER MEMORIAL SCHOLARSHIP (30076) VALUE: \$375 ZHIHUI LIU H MATH\&STAT(STATS), 3

THE BATES RESIDENCE SCHOLARSHIP (30155) VALUE: \$750 EMILY GOEBEL H BIOCHEM(COOP)B\&G, 4

THE BEAUTY COUNSELORS OF CANADA SCHOLARSHIP (30008) VALUE: \$350 MICHELLE LEE

SCIENCE 1, 1
THE J.P. BICKELL FOUNDATION MINING SCHOLARSHIPS (30291) VALUE: \$2,667

KINSIE CLARK H GEOSCIENCE, 3
VICTORIA TSCHIRHART H EARTH\&ENV SCI, 3
SARA UNDERHAY H EARTH\&ENV SCI, 3
THE BIOLOGY ACHIEVEMENT AWARDS (40113) VALUE: BOOK
TALLULAH ANDREWS SCIENCE 1, 1

DANIEL BALK SCIENCE 1,1
ANNE BARBEAU SCIENCE 1,1
KATALINA CHAN SCIENCE 1, 1
SHAAN DHINDSA SCIENCE 1,1
MARY GEDYE SCIENCE 1,1
SIMON HUANG SCIENCE 1,1
BRIAN KING SCIENCE 1,1
JULIA KOLESNIK SCIENCE 1, 1

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008



## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008



## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008



| THE ALEC JOHN ROYSTON MACMILLAN MEMORIAL COMMUNITY |  |
| :--- | :---: |
| CONTRIBUTION AWARD (80012) | VALUE: CERTIFICATE |
| HEATHER MCGREGOR | SCIENCE 1,1 |


| THE WILLIAM J. MCCALLION SCHOLARSHIPS (60004) VALUE: \$250 |  |
| :--- | :--- |
| DANIELA MARGANI | MATH\&STATS I, 1 |
| CHRISTOPHER PELLINI | H BIOLOGY, 3 |

THE ESTHER MCCANDLESS MEMORIAL PRIZE (50016) VALUE: \$300 RACHEL DECATANZARO H BIOLOGY(BIODIV), 4

THE A. B. MCLAY SCHOLARSHIP IN PHYSICS (30186) VALUE: \$500 KYLE NUCCIARELLI H PHYSICS(ASTRO), 2

THE BOYD MCLAY SCHOLARHSIP IN PHYSICS (30011) VALUE: \$575 COREY TREEN

H PHYSICS, 3
THE BILL PRESTWICH SCHOLARSHIP IN MEDICAL AND HEALTH PHYSICS
(30300) VALUE: $\$ 600$

HILLGAN MA
SCIENCE 1, 1
THE PROVOST'S HONOUR ROLL MEDAL (30314) VALUE: MEDAL TALLULAH ANDREWS SCIENCE 1,1 ELIZABETH HALL H PSYCH (CORE), 4 MATTHEW KENNEDY H BIOLOGY, 2 KRISTEN KRYSKO H BIOLOGY\&PSYCH, 4 EMMA MAZUREK H PHYSICS, 4 QUENTIN SHAO H MATH\&STAT(APMATH), 2 ERIC SIU H BIOLOGY\&PSYCH, 4

THE PSYCHOLOGY SOCIETY PRIZES (30123) VALUE: \$70 BAILEY LORV H PSYCH(BEH NEURSC), 3 REBECCA MCDERMOTT H BIOLOGY\&PSYCH, 3

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME PROGRAM, LV | NAME | PROGRAM, LV |
| :---: | :---: | :---: |
| THE LLOYD REEDS PRIZE (50033) VALUE: \$100 | DUC NGUYEN | H CHEM(SYN\&STRUCT), 4 |
| HOLLY HYNES H EARTH\&ENV-GEOCHEM, 4 |  |  |
| JANINA PLACH H EARTH\&ENV-HYDRO, 4 | THE SOUTH ONTARIO ECONOMIC DEVELOPMENT COUNCIL |  |
|  | SCHOLARSHIP (30142) VALUE: \$2,000 |  |
| THE HERBERT A. RICKER SCHOLARSHIPS (30065) VALUE: \$2,000 | CASSANDRA BANTING | H EARTH\&ENV-HYDRO, 3 |
| FAN FEI H CHEM(BIOLOGICAL), 2 | JESSICA SLOMKA | H EARTH\&ENV-GEOSCI, 4 |
| MATTHEW KENNEDY H BIOLOGY, 2 |  |  |
| SANDRA RABI H CHEM(PHYS\&ANALY), 3 | THE S. L. SQUIRE SCHOLARSHIPS (30132) VALUE: \$850 |  |
| SUGANTH SUPPIAH H PSYCH(BEH NEURSC), 3 | LAURA CHIARELLI | MATH\&STATS $\mathrm{I}, 1$ |
| RYAN WALKER H BIOLOGY, 3 | WEI DENG | MATH\&STATS $\mathrm{I}, 1$ |
| THE ROTARY CLUB OF ANCASTER COMMUNITY CONTRIBUTION | THE SWISS MINISTER TO CANADA BOOK PRIZES (40051) VALUE: BOOK |  |
| AWARD (80044) VALUE: CERTIFICATE | ERICA FORSBERG | H CHEM(COOP), 5 |
| HARRIS SWITZMAN H EARTH\&ENV SCI, 4 |  |  |
|  | THE HUGH R. THOMPSON MEMORIAL PRIZE (30069) VALUE: \$250 |  |
| THE ROTARY CLUB OF HAMILTON SCHOLARSHIP (30168)VALUE: $\$ 575$ | KATE STEPHENSON | H EARTH\&ENV SCI, 2 |
|  |  |  |
| TALLULAH ANDREWS | THE DR. R. A. THOMPSON PRIZE IN MATHEMATICS (30040) |  |
| SCIENCE 1, 1 | VALUE: \$300 |  |
| THE ROTARY CLUB OF HAMILTON COMMUNITY CONTRIBUTION | PAUL O'HARA | H BIOLOGY\&MATH, 3 |
| AWARD (80043) VALUE: CERTIFICATE |  |  |
| BARTOSZ ORZEL | THE STEPHEN F. H. THRELKELD AWARD (80026) VALUE: CERTIFICATE |  |
| H BIOL/PHARM(COOP), 4 | AMIIRAH AUJNARAIN | H BIOLOGY\&PSYCH, 3 |
| THE DR. SINA SAZGAR MEMORIAL SCHOLARSHIP (30263) |  |  |
| VALUE: \$1,000 | THE UNIVERSITY ACHIEVEMENT AWARD (40118) VALUE: \$800 |  |
| JEFFREY EMBERSON H PHYSICS(ASTRO), 2 | DANIELA MARGANI | MATH\&STATS $\mathrm{I}, 1$ |
| SCOTT GERAEDTS H PHYSICS, 2 |  |  |
|  | THE UNIVERSITY (SENATE) SCHOLARSHIPS (30173) VALUE: \$800 |  |
| THE SCIENCE ALUMNI SCHOLARSHIPS (30278) VALUE: \$500 | RAMI ABU-ZEIDAN | H PSYCH(BEH NEURSC), 2 |
| FAN FEI H CHEM(BIOLOGICAL), 2 | ALANNA ADLEMAN | H PSYCH,NEUROSCI\&BEHAV, 2 |
| SCOTT GERAEDTS | GIANCARLO AGUECI | SCIENCE 1, 1 |
|  | TALLULAH ANDREWS | SCIENCE 1, 1H BIOL(MICROBIO\&BIOTECH), 2 |
| THE SCIENCE CLASS OF '97 LEGACY AWARD (80030) | NIRAN ARGINTARU |  |
| VALUE: CERTIFICATE | SALMAN AZIZ | H BIOCHEM, 2 |
| H BIOLOGY\&PSYCH, 4 | LISA BAKER | MEDICAL RADIATION SCI, 1 |
|  | BRITTANY BATTE | H BIOLOGY, 2 |
| THE SHEILA SCOTT SCHOLARSHIP FOR WALLINGFORD HALL (30158) | LUKAS BEBJAK | H BIOCHEM(MOL BIO), 2 |
| VALUE: \$750 | KIRSTEN BELL | H BIology, 2 |
| JIA-HUEY LIN H BIOCHEM(B\&G ENG), 2 | SALEEMA BHAIDANI | SCIENCE 1, 1 |
|  | NATASHA BHALLA | H SCIENCE (LIFE SCI), 2 |
| THE MARGARET A. SERVICE BOOK PRIZE (40059) VALUE: \$120 | AJAPAL BHANGU | H BIOCHEM(B\&G ENG), 2 |
| JULIA KOLESNIK SCIENCE 1,1 | RAHUL BHAYANI | SCIENCE 1, 1 |
| ARYAN MOGHADDASI SCIENCE 1,1 | RUSSELL BLACKPORT | H PHYSICS (ORIGINS SPEC), 2 |
|  | HELENA BUDI HARTONO | MEDICAL RADIATION SCI, 1 |
| VALUE: \$200 | KRISTIN BURTON | H KINESIOL, 2 |
| SCIENCE I, 1 | ROSE CALVIERI | H PSYCH,NEUROSCI\&BEHAV, 2 |
|  | CARMEN CHAN | H KINESIOL, 2 |
| THE GERALD AND VERNA SIMPSON MEMORIAL SCHOLARSHIP (30059) | CHRISTY CHAN | MEDICAL RADIATION SCI, 1 |
| VALUE: $\$ 600$ | JOSHUA CHAN | H BIOCHEM(MOL BIO), 2 |
| JEFFREY EMBERSON | KATALINA CHAN | SCIENCE 1, 1 |
|  | SARAH CHAUVIN | SCIENCE 1, 1 |
| THE SOCIETY OF CHEMICAL INDUSTRY MERIT AWARD (50060) | SAVIRONI CHET | H MATH\&STAT, 2 |
| VALUE: PLAQUE | JAMIE CHEUNG NANCY CHOU | MED RAD SC-RADIOGR, 2 |
| DINA ABOUTOUK H BIOCHEM(B\&G ENG), 4 |  | H MATH\&STAT(STATS), 2 |

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV | NAME | PROGRAM, LV |
| :---: | :---: | :---: | :---: |
| JUSTIN CHOW | SCIENCE 1, 1 | WILSON LEE | SCIENCE 1, 1 |
| CARLYE CIRONE | H BIOCHEM, 2 | JENNIFER LI | H BIOLOGY (PHYSIOLOGY), 2 |
| WENDY COMBA | H PSYCH,NEUROSCI\&BEHAV, 2 | ANDY LIU | H BIOCHEM(B\&G ENG), 2 |
| BENJAMIN CONNOLLY | H LIFE SCIENCE (ORIGINS), 2 | MATTHEW LUBANOVIC | SCIENCE 1, 1 |
| MEGAN COVERT | H KINESIOL, 2 | ALLISON MACDONALD | SCIENCE 1, 1 |
| ROBERT D'ORTENZIO | SCIENCE 1, 1 | HALEY MAGEE | H KINESIOL, 2 |
| SHAAN DHINDSA | SCIENCE 1, 1 | GEORGE MANDO | H KINESIOL, 2 |
| MEGHNA DUA | SCIENCE 1, 1 | HOVHANNES MARTIROSYAN | H BIOCHEM(MOL BIO), 2 |
| ARETHA ESDON | H BIOCHEM(MOL BIO), 2 | SARICA MAY | H MATHEMATICAL SCIENCE, 2 |
| VANESSA FOSTER | H MATH\&STAT(APMATH), 2 | ARYAN MOGHADDASI | SCIENCE 1, 1 |
| RYAN FREDERIKS | SCIENCE 1, 1 | VANESSA MONTEIRO | MEDICAL RADIATION SCI, 1 |
| BENJAMIN FREGEAU | SCIENCE 1, 1 | MATTHEW NACCARATO | H KINESIOL, 2 |
| JESSICA FU | MEDICAL RADIATION SCI, 1 | KYLE NUCCIARELLI | H PHYSICS(ASTRO), 2 |
| MUHAMMAD FURQAN | H BIOCHEM(B\&G ENG), 2 | LISA ORTIGOZA | MEDICAL RADIATION SCI, 1 |
| ARPITA GANTAYET | H BIOCHEM(B\&G ENG), 2 | STEPHEN OSTRANDER | H MATH\&STAT(APMATH), 2 |
| JENNA GILLEN | H KINESIOL, 2 | BONIFACE OYE-ADENIRAN | H MATH\&STAT(MATH), 2 |
| JOSH GOLDSTEIN | H BIOCHEM, 2 | CORY OZIMOK | SCIENCE 1, 1 |
| DIVYA GUMBER | H BIOLOGY\&PSYCH, 2 | JUSTIN PANG | SCIENCE 1, 1 |
| JOANNE HAMMILL | H BIOCHEM(B\&G ENG), 2 | BRYCE POIRIER | H BIOLOGY, 2 |
| TRINA HARA | H LIFE SCIENCE, 2 | TAHIRA PREMJI | MED RAD SC-RAD TH, 2 |
| XIULAN HE | SCIENCE 1, 1 | JEFFREY PRICE | SCIENCE 1, 1 |
| MICHAEL HEWAK | SCIENCE 1, 1 | SRINITHI RAGHAVAN | H MATH\&STAT(APMATH), 2 |
| SARAH HILL | H KINESIOL, 2 | ANKIT RASTOGI | SCIENCE 1, 1 |
| KARMAN HO | SCIENCE 1, 1 | KAITLYNN RIGG | SCIENCE 1, 1 |
| KATERINA HO-TAI | SCIENCE 1, 1 | VICTOR ROGOZOVSKY | H BIOCHEM(B\&G ENG), 2 |
| YIJUN HU | H BIOCHEM(B\&G ENG), 2 | CHARLES SCHANDL | H PSYCH(BEH NEURSC), 2 |
| SIMON HUANG | SCIENCE 1, 1 | ALEXANDRA SEICHTER | SCIENCE 1, 1 |
| SALIMAH ISMAIL | H MATH\&STAT(STATS), 2 | NILAY SHAH | H BIOCHEM(MOL BIO), 2 |
| CHRISTINE JEBAKUMAR | H LIFE SCIENCE, 2 | PARTH SHAH | SCIENCE 1, 1 |
| JANUVI JEGATHESWARAN | H BIOCHEM(MOL BIO), 2 | QUENTIN SHAO | H MATH\&STAT(APMATH), 2 |
| SEAN JEWELL | SCIENCE 1, 1 | SHAZLI SHETHWALA | H BIOLOGY(GENETIC), 2 |
| MAYANK JHA | H BIOCHEM, 2 | CONSTANTIN SHUSTER | H BIOCHEM(B\&G ENG), 2 |
| XIAO-YI JI | SCIENCE 1, 1 | ASAD SIDDIQUI | SCIENCE 1, 1 |
| RINOC JOHNSON | H MATH\&STAT(MATH), 2 | NARENDRA SINGH | SCIENCE 1, 1 |
| NIKHIL KALRA | H LIFE SCIENCE, 2 | EVAN SINUKOFF | H PHYSICS, 2 |
| SEAN KANG | H BIOCHEM, 2 | MONICA SOBALA DROZDOWSKI | H BIOLOGY (PHYSIOLOGY), 2 |
| CARL KARICHIAN | SCIENCE 1, 1 | ANDREW SRIPALAN | SCIENCE 1, 1 |
| JENNIFER KENT | H BIOCHEM(B\&G ENG), 2 | DIANE TAIT | MEDICAL RADIATION SCI, 1 |
| SABAH KHAN | SCIENCE 1, 1 | RYAN TAM | H KINESIOL, 2 |
| ADITI KHANDELWAL | H LIFE SCIENCE, 2 | MADIHA TAUQIR | H BIOLOGY (PHYSIOLOGY), 2 |
| SMRITI KHOSLA | H BIOCHEM(MOL BIO), 2 | CLIFFORD TAYLOR | SCIENCE 1, 1 |
| PRIYA KHULLAR | H LIFE SCIENCE, 2 | ALIA TEHREEM | SCIENCE 1, 1 |
| LAURA KIEFT | H MATH\&STAT(MATH), 2 | KAYLA THEEUWEN | H KINESIOL, 2 |
| HYE KIM | H BIOCHEM, 2 | KRISTEN TONUS | H BIOLOGY\&PSYCH, 2 |
| BRIAN KING | SCIENCE 1, 1 | JANELLE VAN KESSEL | H KINESIOL, 2 |
| QUINN KLASSEN | H KINESIOL, 2 | BRIAN VINH | SCIENCE 1, 1 |
| JULIA KOLESNIK | SCIENCE 1, 1 | PARAMVIR VIRDI | H MED\&HTHPH, 2 |
| JOSHUA KONG | H BIOCHEM, 2 | LAUREN WALLAR | H BIOCHEM(MOL BIO), 2 |
| DENNIS KWONG | H BIOCHEM(MOL BIO), 2 | JENNY WAN | MEDICAL RADIATION SCI, 1 |
| MICHAEL LACASSE | SCIENCE 1, 1 | KRISTOPHER WAN | SCIENCE 1, 1 |
| KRISTEN LAMBERT | H MOL BIOL, 2 | LEO WAN | H KINESIOL, 2 |
| JOYCE LAU | H BIOCHEM(MOL BIO), 2 | JENNIFER WEEKS | H PSYCH(BEH NEURSC), 2 |
| MICHELLE LEE | SCIENCE 1, 1 | JAMES WEI | H BIOCHEM(MOL BIO), 2 |
| STANLEY LEE | H BIOCHEM, 2 | CARLY WILLEMSMA | H BIOCHEM(MOL BIO), 2 |

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008



THE UNIVERSITY PRIZES FOR SPECIAL ACHIEVEMENT* (40052) VALUE: \$150

H PHYSICS, 3

| ADAM ATKINSON | H PHYSICS, 3 |
| :--- | :--- |
| MARTIN GERBER | H PHYSICS, 3 |

THE VALLEY CITY MANUFACTURING CO. LTD. SCHOLARSHIPS (30205)
VALUE: $\$ 1,575$
MATTHEW GLADMAN H LIFE SCIENCE, 2
GRACE TONG
SCIENCE 1, 1
NAME PROGRAM, LV
信 ALUE: \$700

PARAMVIR VIRDI H MED\&HTHPH, 2

THE THOMAS E. WILLEY SCHOLARSHIP (40082) VALUE: \$375 IVANA POSTIC H BIOCHEM(MOL BIO), 3

THE EMANUEL WILLIAMS SCHOLARSHIP IN PHYSICS (30049)
VALUE: \$1,200 DARIUS BAYEGAN H MATH\&PHYSICS, 2

THE GLADYS A. YOUNG SCHOLARSHIP (30206) VALUE: \$1,600 ULVIYA ABDULKARIMOVA H MATH\&STAT(STATS), 2

TOTAL NO. OF AWARDS FOR FACULTY = SCI: 403

## SOCIAL SCIENCES

| THE ACHIEVEMENT AWARDS OF EXCELLENCE* (40085) VALUE: \$800 | THE NANCY CAR MEMORIAL SCHOLARSHIP IN KINESIOLOGY (30277) |
| :---: | :---: |
| SALINA CHASE SOCIOL, 3 | Value: \$400 |
| MARY LANDRY H SOCIOL, 2 | ERICA ZEMAN H KINESIOL, 3 |
| NANCY ROWE-HENRY SOC SCI I, 1 |  |
| JOCELIN VAN DOORNIK H KINESIOL, 3 | THE ELVA CARROL AWARD (80028) VALUE: CERTIFICATE |
|  | LEAH HENDERSON H KINESIOL, 4 |
| THE CAMERON D. ALLEN BOOK PRIZE (40115) VALUE: \$200 |  |
| KATHERINE WHALEN H GEOG, 4 | THE HUGH CLARK SCHOLARSHIP (30068) VALUE: \$1,950 |
|  | LAURA COOPER HECON, 3 |
| THE ANTHROPOLOGY PRIZE (50004) VALUE: \$100 |  |
| WENDY BURGESS ANTHROP, 3 | THE EDWIN MARWIN DALLEY MEMORIAL SCHOLARSHIPS (30164) |
|  | VALUE: \$800 |
| THE EDGAR R. ASHALL SCHOLARSHIP (30162) VALUE: \$200 | JEFFREY AXISA H GEOG(GIS\&ANALY), 4 |
| NAAZISH CHOPRA SOC SCI I, 1 | ELIZABETH CARTER KINESIOL I, 1 |
|  | DAVID DI DIODATO SOC SCII, 1 |
| THE ATKINSON CHARITABLE FOUNDATION COMMUNITY | MELANIE DICKSON H RELIG ST, 3 |
| CONTRIBUTION AWARD (80022) VALUE: CERTIFICATE | SCOTT DURNO SOCIAL SCIENCES, 3 |
| STEPHANIE WILL H KINESIOL, 3 | LAUREN DYCK H KINESIOL, 3 |
|  | ROBYN KOOISTRA ANTHROP\&SOC WORK, 3 |
| THE BARBARA AND RONALD BAYNE GERONTOLOGY INTERNSHIP | ELIZABETH MCGARVIE H GEOG, 3 |
| AWARD* (40106) VALUE: \$450 | CRISTINA MERLA HON GERONTOLGY, 3 |
| TAMARA GERMANI H GERONTOL\&RELIGST, 2 | WARDHA NAIM HECON, 2 |
| MELISSA MASON HON GERONTOLGY, 4 | LEAH VANOS H KINESIOL, 3 |
| THE LEONE BETTY BLACKWELL MEMORIAL BOOK PRIZE (50096) | THE AUDREY DIEMERT MEMORIAL BOOK PRIZE (60005) |
| VALUE: \$85 | VALUE: \$100 |
| KRYSTAL CAMERON H ANTHROP, 4 | ROBYN JOSSUL H RELIG ST, 4 |
|  | THE EXCHANGE GRANT (86001) VALUE: \$1,000 |
|  | AMIKA BAHRI H KINESIOL, 2 |
|  | JULIA BRAININ H SOCIOL, 2 |
|  | JANINE BUISMAN H KINESIOL, 2 |
|  | HEATHER CAMERON H POL SCI, 2 |

## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV |
| :--- | :--- |
| BROOKE CAMPLIN | POL SCI\&SOC WORK, 2 |
| MARTHA COE | H KINESIOL, 2 |
| KATHLEEN GRACE | H CMST\&LABR ST, 2 |
| ALISON LELIEVRE | H KINESIOL, 2 |
| KATARINA MITAR | H GEOG, 2 |
| DANIEL ROWE | H ANTHROP, 4 |
| BIANCA SALENTYN | H POL SCI, 2 |
| TRACY WATSON | H PSYCH, 2 |
| KATHERINE WEERSINK | H CMST\&SOCIOL, 2 |

THE FACULTY OF SOCIAL SCIENCES INQUIRY AWARD (40091) VALUE: $\$ 500$

ALISHA PORTOLESE SOC SCII, 1

THE R. LOUIS GENTILCORE PRIZE (40062) VALUE: \$550 ALYSSA KUSZCZAK H GEOG(URB SO GEO), 4

THE J. E. L. GRAHAM MEDAL (50029) VALUE: MEDAL LINDA CORMICK H RELIG ST, 4

THE DAMIAN MIGUEL HEADLEY AWARD (80050)
VALUE: CERTIFICATE JOCELIN VAN DOORNIK H KINESIOL, 3

THE ROSE HILL SCHOLARSHIPS (30130) VALUE: \$1,200 JEFFREY WATSON H KINESIOL, 2

THE DR. THOMAS HOBLEY PRIZE (30042) VALUE: \$300 LAURA COOPER HECON, 3

THE DR. HARRY LYMAN HOOKER SCHOLARSHIPS (30043)
VALUE: $\$ 1,500$ FARAH ABDULSATAR KINESIOLI, 1
KATELYN ANDREW SOC SCII, 1

LIN BAO
CASSANDRA BOWDEN
JAMIE BRUCE
FARES BUGSHAN
ALYSSA COSTA
MARIA CROME
GRAHAM DALSEG
KUNAL DESAI
DUANE DRON
PAUL DURKIN
JOSHUA EMBERSON
KERRI FRANZ SHANNON HAMAR CHELSEA HOWLAND JENNEY JOSIPOVIC KERRI-LYN KING PO-LUN KO GREGORY KUJBIDA COREY LIPMAN ALANNA LLOYD

SOC SCII, 1
H SOCIOL, 3
H KINESIOL, 3
H ECON\&PSYCH, 3
H SOCIOL, 2
H KINESIOL, 3
H KINESIOL, 3
ECON, 3
H POL SCI, 2
H GEOG, 2
H ECON, 2
H GEOG, 3
H SOCIOL, 2
HON GERONTOLGY, 3
SOCIOL\&SOC WORK, 3
H PSYCH, 3
H CMST(MASS)\&POLSC, 3
H KINESIOL, 3
H PSYCH, 3
H KINESIOL, 3

| NAME | PROGRAM, LV |
| :---: | :---: |
| SUSAN LOI | H KINESIOL, 3 |
| ALISON MACGREGOR | H KINESIOL, 3 |
| CONNOR MASSIMO | H KINESIOL, 3 |
| HEATHER MCCARREL | H KINESIOL, 3 |
| JESSICA MCEWAN | H KINESIOL, 3 |
| REHANA MERU | H KINESIOL, 3 |
| ALICIA MIDWINTER | H SOCIOL, 3 |
| DINA MILIVOJEVIC | H POL SCI, 3 |
| MARGARET MURRAY | SOCIOL\&SOC WORK, 3 |
| STEPHANIE NAIRN | H POL SCI\&SOCIOL, 3 |
| ASHLEY ONDEJKO | H KINESIOL, 3 |
| MARIE-PIER PICARD | H KINESIOL, 3 |
| HEATHER PRESTON | H KINESIOL, 3 |
| AMANDA RIOUX | H SOCIOL, 3 |
| LAURA ROBERTSHAW | SOC SCI I, 1 |
| LORI ROBERTSON | HEALTHST \& SOCWORK, 4 |
| ANGELA RODRIGUES | H RELIG ST, 4 |
| LIANNE SHARVIT | H POL SCI, 2 |
| LAURA SHAVER | H KINESIOL, 2 |
| JESSICA SMITH | H PSYCH, 3 |
| HEATHER STEVENS | SOCIOL\&SOC WORK, 4 |
| STEPHANIE THOMAS | H ECON, 3 |
| SAYAKA TIESSEN | H KINESIOL, 3 |
| MEAGHAN VALANT | SOCIOL, 2 |
| LISA VANDENBERK | H KINESIOL, 3 |
| JENNIFER VASSEUR | ANTHROP, 3 |
| MEREDITH VEZINA | SOCIAL SCIENCES, 2 |
| RORY WASSERMAN | H PSYCH B.A(COGN\&PERC), 3 |
| JAMIE WESTON | SOCIOL, 2 |
| LAURA WRIGHT | H SOCIOL, 3 |

THE WILLIAM D. G. HUNTER PRIZE (40080) VALUE: \$500 TREVOR GORDON HECON, 4

THE HURD MEDAL (50027) VALUE: MEDAL
NOORA DABBAGH HECON, 4
MICHAEL KOTTELENBERG H ECON, 4
THE JAMES A. JOHNSON COMMUNITY CONTRIBUTION AWARD (80023)
VALUE: CERTIFICATE

| SILVIA DIMITROVA | H POL SCI, 3 |
| :--- | :--- |
| CATHERINE VANNER | H POL SCI, 4 |

THE FRANK E. JONES PRIZE (50020) VALUE: \$100 ASHLEA SGRO H HEALTHST\&SOCIOL, 4

THE DR. JEAN JONES MEMORIAL SCHOLARSHIP* (50099) VALUE: \$800

ASHLEY HOUGH HEALTHST \& SOCWORK, 4
THE DR. RONALD V. JOYCE AWARDS FOR ATHLETES (40117)
VALUE: \$2,500
CHERYL DRUCHOK H KINESIOL, 3
JENNIFER HOLT H KINESIOL, 3


## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS <br> 2007-2008 In-course and Graduand Awards Report To Undergraduate Council Awards Committee November 20, 2008

| NAME | PROGRAM, LV | NAME | PROGRAM, LV |
| :---: | :---: | :---: | :---: |
| THE E. B. RYAN SCHOLARSHIP* (40092) VALUE: \$400 |  | THE UNIVERSITY (SENATE) SCHOLARSHIPS (30173) |  |
| MARNI SALKOVITCH | HON GERONTOLGY, 4 | ZAINAB AFROZ | SOC SCII, 1 |
|  |  | TEGAN BODNAR | SOC SCII, 1 |
| THE SATURN OF HAMILTON EAST ACHIEVEMENT AWARD (80020) |  | DUNCAN BOOTHBY | KINESIOLI, 1 |
| VALUE: CERTIFICATE |  | JULIA BRAININ | H SOCIOL, 2 |
| BIBI KHAN | H PSYCH, 3 | KRISTINA BRAND | H ECON, 3 |
|  |  | KELLY BROWN | SOC SCII, 1 |
| THE LARRY SEFTON SCHOLARSHIPS* (40097) VALUE: \$500 |  | JANINE BUISMAN | H KINESIOL, 2 |
| SARAH ANTANAITIS | H LABR ST\&POL SCI, 3 | JESSICA CAPPELLETTO | KINESIOLI, 1 |
| KATHLEEN GRACE | H CMST\&LABR ST, 2 | DANIELLE CENTANNI | H GEOG, 2 |
| GARY MURPHY | H LABR ST, 3 | YOOSUN CHOI | KINESIOL I, 1 |
|  |  | NAAZISH CHOPRA | SOC SCII, 1 |
| THE RICHARD SLOBODIN PRIZE (50046) VALUE: \$100 |  | SAMANTHA CHUNG | KINESIOLI, 1 |
| ANNA KATA | H ANTHROP\&PSYCH, 4 | ELIZABETH COATES | H SOCIOL, 2 |
|  |  | SOPHIA DA SILVA | H KINESIOL, 2 |
| THE PATRICIA L. SMYE MEMORIAL SCHOLARSHIP (30118) |  | JESSICA DENSMORE | SOCIOL, 2 |
| VALUE: \$375 |  | KATHLEEN DEVLIN | SOC SCII, 1 |
| AGATA ZUREK | PSYCH, 2 | KATHLEEN DI SEBASTIANO | H KINESIOL, 3 |
|  |  | JOSEPH DIFALCO | H ECON, 3 |
| THE SOCIAL WORK PRIZE (40050) | VALUE: \$100 | LAURA DONNAN | H PSYCH, 4 |
| ROBYN KOOISTRA | ANTHROP\&SOC WORK, 3 | PAMELA DRESSLER | SOCIOL\&SOC WORK, 3 |
|  |  | CHERYL DRUCHOK | H KINESIOL, 3 |
| THE SOCIOLOGY PRIZE (50051) | VALUE: \$100 | BARBARA FENESI | H PSYCH, 2 |
| DEAN MCALLISTER | SOCIOL, 3 | MELANIE FERRIER | SOCIAL SCIENCES, 2 |
| STARSHA MORTENSEN | SOCIOL, 3 | JOSEPH FILICE | SOC SCII, 1 |
|  |  | DANIEL GARCIA | KINESIOLI, 1 |
| THE SOUTH ONTARIO ECONOMIC DEVELOPMENT COUNCIL |  | ADELA GHERGA | H KINESIOL, 2 |
| SCHOLARSHIP (30142) VALUE: \$2,000 |  | ANNA GIAMMARCO | SOC SCII, 1 |
| ERIC MILES | H GEOG, 3 | KENNETH GIBSON | SOC SCI I, 1 |
|  |  | JESSICA GILLESPIE | H KINESIOL, 3 |
| THE SPORT COACHING PRIZE (40112) VALUE: \$500 |  | KATHLEEN GRACE | H CMST\&LABR ST, 2 |
| MEGHANN SPENCER | H KINESIOL, 3 | VICTORIA GRAY | H SOCIOL, 2 |
| THE ANNE STEIN MEMORIAL PRIZE | Z** (60001) VALUE: \$125 | SARAH HALLER | SOC SCII, 1 |
| BRIAN AMARELO | RELIG ST\&SOC WORK, 4 | MACKENZIE HORNER | H GEOG, 2 |
|  |  | BIN HU | H KINESIOL, 2 |
| THE T.H.B. SYMONS PRIZE IN CANADIAN STUDIES (40122) |  | JULIANNE JANSSENS | H KINESIOL, 3 |
| VALUE: \$650 |  | DYLAN KELLY | KINESIOL I, 1 |
| DINA MILIVOJEVIC | H POL SCI, 3 | SAHIL KOPPIKAR | KINESIOL I, 1 |
| STEPHANIE NAIRN | H POL SCI\&SOCIOL, 3 | CARLY KREISZ | H KINESIOL, 3 |
|  |  | LAUREN KUTCHER | H PSYCH, 2 |
| $\begin{array}{ccc}\text { THE KENNETH W. TAYLOR BOOK PRIZE* (40029) } \\ \text { RACHATAR NILAVONGSE } & \text { H } \\ \text { R ECON, } 4\end{array}$ |  | LUCAS LEBLANC | H KINESIOL, 3 |
|  |  | KATHLEEN LEE | H PSYCH, 2 |
| RACHATAR NILAVONGSE | H ECON, 4 | SEUNG-YONG LEE | H ECON, 2 |
| THE THOMAS TRUMAN MEMORIAL PRIZE (40068) VALUE: $\mathbf{7 5}$ |  | YOUN LEE | GERONTOLOGY, 2 |
| SILVIA DIMITROVA | H POL SCI, 3 | LAUREN MORLEY | KINESIOLI, 1 |
| REHANNA RAZACK | H POL SCI, 3 | ANTHONY NACCARATO | KINESIOLI, 1 |
|  |  | AMAR NEGANDHI | H KINESIOL, 3 |
| THE UNIVERSITY ACHIEVEMENT AWARD (40118) VALUE: \$800 |  | SARAH O'SULLIVAN | H ANTHROP, 2 |
| PEGGI BENNICI | H SOCIOL, 4 | ALIA ORTH | SOCIOL, 2 |
| JOANNE FRIESEN | SOCIOL\&SOC WORK, 2 | SYLVIA PANCZYK | SOC SCII, 1 |
| BARBARA KIRKHAM | H PSYCH, 3 | JESSICA PATTERSON | KINESIOL I, 1 |
| KENYON-ENG MAN | H KINESIOL, 4 | EMILY PENNER | H ECON, 2 |
| GARY MURPHY | H LABR ST, 3 | ALANA PENNY | H POL SCI, 2 |
| SERENA SCATTOLON | H GEOG\&ENVIRO ST, 2 | MELANIE PETO | H ECON, 2 |



TOTAL NO. OF AWARDS IN 2007/08 = 1,697

| McMaster <br> University | OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS 2007-08 AWARDS BY APPLICATION REPORT <br> To Undergraduate Council December 16, 2008 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AWARD | \# | VALUE | TOTAL APPS REC'D | NOT ELIGIBLE | NOT SELECTED | AWARDED |
| COMMUNITY CONTRIBUTION |  | \$0 | 59 | 0 | 0 | 59 |
| AWARDS FOR GRADUATING STUDENTS |  |  |  |  |  |  |
| B. MACKINNON MEMORIAL | 50061 | \$800 | 0 |  |  | 0 |
| J.R. MCCARTHY SCHP. | 50030 | \$700 | 1 |  |  | 1 |
| C. MACNEILL PRIZE | 50011 | \$175 | 9 | 1 | 7 | 1 |
| MUFF GRAD SCHP. | 50084 | \$1,000 | 4 |  | 2 | 2 |
| TOTAL |  |  | 14 | 1 | 9 | 4 |
| AWARDS FOR IN-COURSE STUDENTS |  |  |  |  |  |  |
| ACCENTURE INC. SCHP. | 30248 | \$850 | 2 |  | 2 | 0 |
| BRIEN,J.STAPLES SCHP. | 30091 | \$350 | 11 |  | 10 | 1 |
| G. GEORGE AWD. | 30240 | \$4,500 | 40 | 16 | 23 | 1 |
| INTER-RESIDENCE COUNCIL | 30228 | \$400 | 8 | 1 | 5 | 2 |
| JOYCE "AMAZING" GRACE | 30295 | \$2,500 | 23 | 4 | 16 | 3 |
| G. LAUTENS MEMORIAL | 30212 | \$4,000 | 2 |  | 1 | 1 |
| MUFF IC AWARD | 30270 | \$1,800 | 12 |  | 5 | 7 |
| MOSGROVE,E. SCHP. | 30047 | \$1,500 | 9 |  | 8 | 1 |
| ROBERTSON, STANLEY SCHOL | 30319 | \$2,500 | 30 | 4 | 24 | 2 |
| SPEARS,M. SCHP. | 30217 | \$1,200 | 31 | 2 | 28 | 1 |
| M.STOAKLEY SCHP. | 30103 | \$500 | 30 | 17 | 12 | 1 |
| TOTAL |  |  | 198 | 44 | 134 | 20 |

## AWARDS FOR PART-TIME STUDENTS

| G. GEORGE MEDAL $60011 \quad \$ 400$ | 1 |  |  | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| TOTAL | 1 |  |  | 1 |

AWARDS FOR FULL \& PART-TIME STUDENTS

| ACHIEVEMENT-EXCEL.* | 40085 | \$800 | 7 |  |  | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| JOYCE AWARDS FOR ATHLETES | 40117 | \$2,500 | 16 | 2 | 7 | 7 |
| J.D. MCNIE ACH. EXCELLENCE | 40107 | \$800 | 1 | 1 |  | 0 |
| O'SHAUGHNESSY PRIZE* | 40009 | \$500 | 2 |  |  | 2 |
| TOTAL |  |  | 26 | 3 | 7 | 16 |

TRAVEL \& EXCHANGE SCHOLARSHIPS

| ALEXANDER,A.G. SCHP. | 30174 | \$5,500 | 14 |  | 11 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ARTS \& SCI EXPERIENTIAL | 30290 | \$1,000 | 1 |  |  | 1 |
| BEALE-LINCOLN-HALL | 30236 | \$2,200 | 12 |  | 11 | 1 |
| CIM INTERNATIONAL TRAVEL | 30316 | \$1,000 | 5 |  | 4 | 1 |
| CLASS'37 TRAVEL A\&S | 30175 | \$1,300 | 1 |  |  | 1 |
| J. DUNBAR TRAVEL SCHP. | 30177 | \$3,675 | 1 |  |  | 1 |
| ELMAN, CLARA I. TRAVEL SCHL | 30317 | \$1,000 | 2 |  | 1 | 1 |
| G. ERASMI TRAVEL TO ITALY | 30292 | \$900 | 2 |  | 1 | 1 |
| J.P. EVANS TRAVEL SCHP. | 30193 | \$1,500 | 3 |  | 2 | 1 |
| LING \& LANG TRAVEL | 30188 | \$925 | 5 |  | 4 | 1 |
| SALMON,E.T. TRAVEL | 30204 | \$2,000 | 4 |  | 2 | 2 |
| WHIDDEN,H.P. TRAVEL | 30176 | \$1,000 | 1 |  |  | 1 |
| T.R. WILKINS TRAVEL | 30178 | \$4,600 | 10 | 1 | 6 | 3 |
| TOTAL |  |  | 61 | 1 | 42 | 18 |
| TOTAL FOR ALL APPLICATIONS |  |  | 359 | 49 | 192 | 118 |

- $14 \%$ of applicants were not eligible
- $38 \%$ of eligible applicants received an award


## OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS 2007-08 IN-COURSE AND GRADUAND AWARDS NOT ALLOCATED <br> To Undergraduate Council <br> December 16, 2008

University

| \# NOT |  |  |  |
| :---: | :---: | :---: | :---: |
| AWARD NAME | VALUE | AWARDED | COMMENTS (NEC = No eligible candidate) |
| AWARD STATUS = 'A' (Allocate) |  |  |  |
| 30248 ACCENTURE INC. SCHP. | \$850 | 3 | 3 Awards by application; 2 applications - NEC (in management information systems) |
| 30076 J.D. BANKIER MEMORIAL | \$375 | 1 | 2 Awards, 1 NEC due to grades (S.A. < 9.5) |
| 50085 BINKLEY MEDAL | \$350 | 1 | 1 Award, NEC; Award term changes required |
| 40126 BOULTER, GARTH MEM AWARD | \$1,000 | 1 | 3 Awards, 1 NEC (in judgment of Midwifery) |
| 40006 CITIZEN GROUP PRIZE* | \$500 | 1 | 1 Award, NEC (in judgment of Social Work) |
| 30322 CLASS OF '38 AMELIA HALL | \$1,500 | 1 | 2 awards, 1 NEC (in judgment of the School of the Arts) |
| 30027 CLASS OF '50 HONS.ECON.SCHP. | \$800 | 1 | 1 Award, NEC (in judgment of Economics) |
| 40110 CONSUL GENERAL OF ITALY* | \$150 | 1 | 1 Award, NEC; (in judgment of Ling.\& Lang) term changes required |
| 30177 J. DUNBAR TRAVEL SCHP. | \$3,675 | 2 | 3 Awards by application for summer travel, 2 NEC, received only 1 application |
| 30317 ELMAN, CLARA I. TRAVEL SC | \$1,000 | 2 | 3 Awards by application for travel, 2 applications - 1 NEC (in judgment of Nursing) |
| 30292 G. ERASMI TRAVEL TO ITALY | \$900 | 2 | 3 Awards by application for travel, 2 applications - 1 NEC (in judgment of Human.) |
| 30193 J.P. EVANS TRAVEL SCHP. | \$1,500 | 1 | 2 Awards by application for travel; 3 applications - 2 NEC ( 1 received higher valued award; 1 terms not met) |
| 30054 FREEMAN SCHP IN FRENCH | \$1,000 | 1 | 1 Award, NEC (in judgment of Humanities) |
| 30063 HAM.CHEM.ASSOC.PRIZE | \$140 | 1 | 1 Award, NEC - 3 eligible but have higher valued scholarships |
| 30070 ITCA COMMUNITY INVOLV | \$125 | 1 | 1 Award, NEC, term changes required |
| 40041 KINESIOLOGY PRIZE | \$100 | 2 | 2 Awards, NEC (in judgment of Kinesiology) |
| 50048 R. LANDES PRIZE | \$100 | 1 | 1 Award, NEC (in judgment of Anthropology) |
| 30212 G. LAUTENS MEMORIAL | \$4,000 | 3 | 4 Awards by application; 2 applications - 1 NEC per selection committee |
| 50061 B. MACKINNON MEMORIAL | \$800 | 3 | 3 Awards by application; No applications received |
| 30010 MACMILLAN,B. PRIZE | \$150 | 1 | 1 Award, NEC (in judgment of Sociology) |
| 30100 MARKS,L. SCHP. | \$800 | 3 | 3 Awards, NEC (in judgment of Sociology) |
| 50030 J. R. MCCARTHY SCHP. | \$700 | 1 | 2 Awards by application; 1 application |
| 40107 J.D. MCNIE ACH. EXCELLENCE | \$800 | 1 | 1 Award by application; 1 NEC - did not meet terms |
| 40060 MOFFAT FAMILY PRIZES | \$150 | 2 | 2 Awards, NEC, courses not offered |
| 40061 J.F.MOORE PRIZE | \$125 | 1 | 1 Award, NEC, course not offered |
| 50040 NEWBIGGING,P.L. PRIZE | \$100 | 2 | 4 Awards, 2 NEC due to grades (C.A. < 8.0) |
| 30257 NORTEL NETWORK SCHP | \$1,000 | 3 | 10 Awards, 3 NEC - students have higher valued awards |
| 40009 O'SHAUGHNESSY PRIZE* | \$500 | 2 | 4 Awards by application; 2 applications |
| 40109 ONT.PROF.ENG. UNDERGRAD S | \$1,000 | 2 | 4 Awards, 2 NEC (in judgment of Engineering) |
| 30118 SMYE, P.L. MEMORIAL | \$375 | 1 | 4 Awards, 1 NEC - BA Psych. due to grades (S.A. < 9.5) |
| 30142 SOED COUNCIL SCHP. | \$2,000 | 1 | 4 Awards, 1 NEC - nomination had higher valued award |
| 40035 THOMSON,M. MEMORIAL BOOK | \$50 | 1 | 2 Awards, 1 NEC - Russian courses not offered |
| 40073 WEEKES,R. SCHP* | \$800 | 1 | 1 Award, NEC, 1 nominee not eligible (in judgment of Economics) |
| 30176 WHIDDEN, H.P. TRAVEL | \$1,000 | 2 | 3 Awards by application for summer travel; 1 application |

34

| AWARD STATUS = 'S' (Insufficient Funds) |  |
| :--- | ---: |
| 30276 ATOMIC ENERGY OF CANADA | $\$ 2,500$ |
| 40020 GREEK COM.BURLINGTON | $\$ 250$ |
| 30226 HELLENIC PRIZE | $\$ 1,000$ |
| 30298 MERRIAM SCHOOL OF MUSIC | $\$ 1,000$ |

End of agreement. Remove from 2009/10 Undergraduate Calendar End of agreement. Remove from 2009/10 Undergraduate Calendar End of agreement. Remove from 2009/10 Undergraduate Calendar End of agreement. Renewed for 2008/09

Trust fund issue. Resolved and will be awarded in 2008/09

Awarded every other year. To be awarded in 2008/09

## AWARD STATUS = 'T' (Temporarily Inactive) <br> 50000 BLACK, A. MEMORIAL PRIZE* $\$ 200$ <br> 30225 A.SHALOM TRAVEL \$725

## 2

* Open to second degree students

Q:\UC_UCAC\2008\UC_200709 Not Awarded.docx

OFFICE OF STUDENT FINANCIAL AID \& SCHOLARSHIPS 2007-08 PROVOST'S HONOUR ROLL MEDAL RECIPIENTS

To Undergraduate Council
December 16, 2008


## Report to Undergraduate Council FROM THE <br> Undergraduate Council Curriculum and Admissions Committee

## FOR APPROVAL

(I) Curriculum Revisions for Inclusion in the 2009-2010 Undergraduate Calendar

At its meetings of December 1, December 3 and December 4, 2008, the Undergraduate Council Curriculum and Admissions Committee approved, for recommendation to Undergraduate Council, curriculum revisions for inclusion in the 2009-2010 Undergraduate Calendar, as outlined in the following attachments:

| Arts and Science Program | (Attachment I) <br> Faculty of Business <br> Faculty of Engineering |
| :--- | :--- |
| Faculty of Humanities | (Attachment II) |
| Faculty of Science | (Attachment IV) |
| Faculty of Social Sciences | (Attachment V) |
| Faculty of Health Sciences | (Attachment VI) |
| Bachelor of Health Sciences (Honours) | (Attachment VII) |
| Clinical Behavioural Sciences | (Attachment VIII) |
| Undergraduate Nursing Education Program | (Attachment VIII) |
| Physician Assistant Program | (Attachment VIII) |
| Undergraduate Medical Education Program | (Attachment IX) |

The Undergraduate Council Curriculum and Admissions Committee now recommends,
that Undergraduate Council approve curriculum revisions for inclusion in the 20092010 Undergraduate Calendar, as outlined in Attachments I to IX.
(II) Dean's Permission

At its meetings of December 4, 2008, the Undergraduate Council Curriculum and Admissions Committee approved, for recommendation to Undergraduate Council, a recommendation that all Faculties, the Director of the Arts \& Science Program and the Director of the Indigenous Studies Program, be required to submit, for information, to the April meeting of Undergraduate Council, a list of the Dean's Permission courses for that academic year, with a one line explanation of why the course was offered on Dean's Permission.

The Undergraduate Council Curriculum and Admissions Committee now recommends,
that Undergraduate Council approve the recommendation that all Faculties, the Director of the Arts \& Science Program and the Director of the Indigenous Studies Program, be required to submit, for information, to the April meeting of Undergraduate Council, a list of the Dean's Permission courses for that academic year, with a one line explanation of why the course was offered on Dean's Permission.
(III) Revisions to the Undergraduate Calendar General Academic Regulations, Section 3 Petitions for Relief for Missed Term Work and for Deferred Examinations

At its meetings of December 3, 2008, the Undergraduate Council Curriculum and Admissions Committee approved revisions to Section 3, Petitions for Relief for Missed Term Work and for Deferred Examinations, of the General Academic Regulations in the Undergraduate Calendar.

Procedure 2 (5), Petitions for Deferred Examinations will state:
Deferred examinations are written during the next official University deferred examination period. Default of the deferred examination will result in a fail for that examination except in the case of exceptional eircumstances.

Procedure 3 will be removed from the calendar. Procedure 3 currently states:

1. A student who cannot write a deferred examination on the scheduled date may submit a Petition for Special Consideration to the Faculty office. The petition must be based on compelling medical, personal or family reasons.
2. A committee of Associate Deans or delegates will consider petitions from students registered in any undergraduate program. The steps in this procedure will be consistent with those used to consider a student's eligibility for a deferred examination.

The Undergraduate Council Curriculum and Admissions Committee now recommends,
that Undergraduate Council approve the revisions to Section 3, Petitions for Relief for Missed Term Work and for Deferred Examinations, of the General Academic Regulations, for inclusion in the 2009-2010 Undergraduate Calendar.

December 16, 2008

## Arts \& Science Undergraduate Curriculum Changes - November 2008

## Current Calendar:

## ARTS\&SCI 4C06 THESIS

This course consists of original research under the supervision of a McMaster faculty member. Proposal deadline is March 1; information package is available in the Program office.

## ARTS\&SCI 4C12 THESIS

The same as ARTS\&SCI 4C06 but based on more extensive research.

## Proposed revision:

## ARTS\&SCI 4C06/09/12 THESIS

Original research supervised by a McMaster faculty member. The proposal deadline is March 1 ; an information package is available in the Program office. The number of units will depend on the anticipated research workload. The choice of topic, supervisor and number of units require the Director's approval.

## Current Calendar:

## ARTS\&SCI 4A06 INDIVIDUAL STUDY

This course consists of study under the supervision of a McMaster faculty member. Proposal deadline is March 1; information package is available in the Program office.

## ARTS\&SCI 4A12 INDIVIDUAL STUDY

The same as ARTS\&SCI 4A06 but based on more extensive study.

## Proposed revision:

## ARTS\&SCI 4A06/09/12 INDIVIDUAL STUDY

Study under the supervision of a McMaster faculty member. The proposal deadline is March 1; an information package is available in the Program office. The number of units will depend on the anticipated workload. The choice of topic, supervisor and number of units require the Director's approval.

Report of the Undergraduate Curriculum and Calendar Committee DeGroote School of Business<br>November 27, 2008

I Change in Course Title (one)
From: COMMERCE 4KD3 DATABASE DESIGN AND IMPLEMENTATION
To: COMMERCE 4KD3 DATABASE DESIGN, MANAGEMENT AND APPLICATIONS
II Cancellation of Courses (two)
Removal of the following course(s) from the U.G. Calendar

1) COMMERCE 4KE3 SECOND GENERATION INTERNET AND BUSINESS
2) COMMERCE 2S03 COMMUNICATION, THINKING AND GROUP SKILLS

III New Courses (eight)

## 1) COMMERCE $3 S 03$ MANAGEMENT SKILLS DEVELOPMENT

The purpose of this course is to provide the necessary cognitive and behavioural skills that students need to develop themselves as competent managers. Acquisition and practice of personal, interpersonal, and group skills will be the main focus of this course. The course will allow the students to learn to apply the knowledge gained in second year courses to business and management contexts and become more competent participants in COMMERCE 4PA3.

Pre-requisite: Commerce 2BC3 and registration in a Commerce Program.
This requires a change in course code as follows:

## From: COMMERCE 3BC3 HUMAN RESOURCE MANAGEMENT AND LABOUR RELATIONS

## To: COMMERCE 2BC3 HUMAN RESOURCE MANAGEMENT AND LABOUR RELATIONS

## 2) COMMERCE 4FM3 PERSONAL FINANCIAL PLANNING AND ADVISING

This course integrates other courses taken to prepare for the CFP (Certified Financial Planner) exam, which is set by the Financial Planners Standards Council. Students will demonstrate their understanding of all the concepts, including the ethical consideration of managing a financial planning practice by preparing a major financial planning project.

Pre-requisite: COMMERCE 4FL3 or 4FP3 (or 4FX3 if taken in 2004/05 or 2005/06), and registration in any Commerce or Engineering and Management Program. (B. Com. Students - see Note 6 above.)

## 3) COMMERCE 4FQ3 WORKING CAPITAL MANAGEMENT

This course examines the various components of working capital, how they interact with one another, and how they affect firm liquidity, default risk and shareholder wealth. The course will build on the principles of financial management taught in earlier courses, and will apply the principles and concepts of financial theory to problems and decisions associated with short-term (working) capital. The objective will be to use working capital optimally and ultimately to maximize shareholder wealth.

Pre-requisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management Program. (B. Com. Students - see Note 6 above.)

## 4) COMMERCE 4FR3 INSURANCE AND RISK MANAGEMENT

This course looks at risk exposures and how these risks are addressed. Risk management is a life-long process that involves five steps: identification, evaluation, control, financing and monitoring. Risks can be managed with control techniques or can be financed using insurance. The course covers different types of insurance, including life, health and disability, home, property and automobile insurance, and includes methods of calculating insurance needs.

Pre-requisite: COMMERCE 2FA3 and registration in any Commerce or Engineering and Management Program. (B. Com. Students - see Note 6 above.)

## 5) COMMERCE 4FS3 PENSION, RETIREMENT AND ESTATE PLANNING

This course examines the issues that affect financial needs at retirement - in particular, inflation and taxation. Various vehicles for saving for retirement are considered, including both private and employer-sponsored pension plans. The course also examines methods of accessing savings at retirement. Estate planning looks at ways to ensure that estate assets are distributed both in accordance with the wishes of the testator and the needs of the beneficiaries.

Pre-requisite: COMMERCE 2FA3 and registration in any Commerce or Engineering and Management Program. (B. Com. Students - see Note 6 above.)

## 6) COMMERCE 4FT3 REAL ESTATE FINANCE AND INVESTMENT

This course is intended for students who wish to enhance their skills in real estate finance and investment. The course introduces students to the risks and rewards that arise in investing in and financing both residential and commercial real estate. Concepts and techniques introduced in the course are intended to provide students with preparation for a variety of careers in the real estate industry. These include investing, financing, appraising, consulting, managing real estate portfolios, leasing, managing property, analyzing site locations, and managing corporate. This
material is also relevant to individuals who want to better understand real estate for their own personal investment and financing decisions.

Pre-requisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management Program. (B. Com. Students - see Note 6 above.)

## 7) COMMERCE 4FU3 BEHAVIOURAL FINANCE: THE PSYCHOLOGY OF MARKETS

The purpose of this course is to introduce the student to the new field of behavioural finance. Whereas in the past it was believed that instances of investor irrationality cancelled themselves out, rendering markets perfectly efficient, because of advances in behavioural finance this view is being increasingly called into question. New work in this area has major implications for financial decision makers.

Pre-requisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management Program. (B. Com. Students - see Note 6 above.)

## 8) COMMERCE 4KX3 SPECIAL TOPICS IN INFORMATION SYSTEMS

Various topics in information systems are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of course offering.

Pre-requisite: Commerce 2KA3 and registration in any Commerce or Engineering and Management Program. (B. Com. Students - see Note 6 above.)

## IV New Minor

A new minor in Information Systems (IS) will be offered for Non-Commerce Students. The School of Business will admit a maximum of 30 students.

## Notes:

1. Applications for admission (forms available from the Academic Programs Office) must be submitted to the Academic Programs Office by April 30.
2. Students seeking the Minor must have completed, with a minimum grade of B-, one of COMP SCI 1BA3, COMP SCI 1MA3, COMP SCI 1TA3, ECON 1B03, or ECON 1BB3.
3. The Minor is not open to students registered in Commerce, or Engineering and Management, or Business Informatics.

## Minor in Information Systems requirements:

## 24 Units total

3 units from COMP SCI* 1BA3, 1MA3, 1TA3
3 units from Econ* 1B03, 1BB3
3 units from Philosophy* 2N03
6 units from COMMERCE 2KA3, 3KA3
9 units from COMMERCE 4KD3, 4KF3, 4KH3, 4KX3
COMP SCI 1BA3: Introduction to Computing and Computer Use for Business
COMP SCI 1MA3: Computer Based Problem Solving
COMP SCI 1TA3: Elementary Computing and Computer Use
ECON 1B03: Introductory Microeconomics
ECON 1BB3: Introductory Macroeconomics
PHILOS 2N03/COMMERCE 2SB3: Business Ethics
COMMERCE 2KA3: Information Systems in Business
COMMERCE 3KA3: Systems Analysis and Design
COMMERCE 4KD3: Database design, management and applications
COMMERCE 4KF3: Project Management
COMMERCE 4KH3: Management Issues in Electronic Business
COMMERCE 4KX3: Special Topics in Information Systems
*Already obtained consent from these departments

## V Limits for Minors

Minors are also offered in the areas of Accounting and Finance (in addition to Information Systems). The Faculty will maintain a standard limit of 30 students in each minor.

## FACULTY OF ENGINEERING

# UNDERGRADUATE CURRICULUM REPORT TO UNDERGRADUATE COUNCIL 

FOR THE 2009-10 CALENDAR

NOVEMBER 2008

## TABLE OF CONTENTS

The following Report includes revisions to programs and substantive changes to courses. Minor editorial revisions such as changes in course title, course description or prerequisite have been made in the calendar copy of all departments and are available in the Office of the Associate Dean.
SUMMARY ..... 3
FACULTY OF ENGINEERING (General) ..... 5
CHEMICAL ENGINEERING ..... 5
CIVIL ENGINEERING ..... 7
COMPUTING AND SOFTWARE ..... 7
ELECTRICAL AND COMPUTER ENGINEERING ..... 10
ENGINEERING PHYSICS ..... 13
ENGINEERING AND MANAGEMENT ..... 15
ENGINEERING \& SOCIETY ..... 15
MATERIAL SCIENCE AND ENGINEERING ..... 16
MECHANICAL ENGINEERING ..... 18
BACHELOR OF TECHNOLOGY ..... 19

## FACULTY OF ENGINEERING REPORT TO UNDERGRADUATE COUNCIL SUMMARY OF MAJOR CURRICULUM CHANGES FOR 2009-10

1. FACULTY OF ENGINEERING (General)

- One deleted courses:

ENGINEER 2C03 ELECTRICITY, THERMOPHYSICS AND ENERGY

- Three new courses:

ENGINEER 4K01 ENGINEERING REPORT FOR EXCHANGE STUDENTS ENGINEER 4LO0 INTRODUCTION TO THE OVERSEAS WORKPLACE ENGINEER 4T04 MATERIALS DESIGN AND MANUFACTURING

## 2. CHEMICAL ENGINEERING

- Revision of program requirements
- One new course:

CHEM ENG 2103 MEASUREMENTS
3. CIVIL ENGINEERING

- No changes


## 4. COMPUTING AND SOFTWARE

- Revision of program requirements
- Course units change
- Three deleted courses:

COMP SCI 2003 OBJECT ORIENTED PROGRAMMING
COMP SCI 3DA3 DATA STRUCTURES AND ALGORITHMS
COMP SCI 3SH3 OPERATING SYSTEM CONCEPTS

- Five courses:

COMP SCI 2C03 DATA STRUCTURES AND ALGORITHMS
COMP SCI 3GC3 COMPUTER GRAPHICS
COMP SCI 4TI3 FUNDAMENTALS OF IMAGE PROCESSING
MECHTRON 4MM0 COURSE WORK IN REAL TIME SYSTEMS
MECHTRON 4MO0 COURSE WORK IN ROBOTICS

## 5. ELECTRICAL AND COMPUTER ENGINEERING

- Revision of program requirements
- Course units change
- One course deletion:

ELEC ENG 3CK3 MATHEMATICS FOR LINEAR SYSTEMS

- Four new courses:

ELEC ENG 3CL4 INTRODUCTION TO CONTROL SYSTEMS
ELEC ENG 3TP3 SIGNALS AND SYSTEMS (OFFERED 2009-2010 ONLY)
ELEC ENG 4EL4 INTRODUCTION TO NANOTECHNOLOGY
ELEC ENG 4TM4 DIGITAL COMMUNICATIONS II

## 6. ENGINEERING PHYSICS

- Revision of program requirements
- Course units change
- One new course:

ENG PHYS 4X03 NTRODUCTION TO PHOTOVOLTAICS

- One course deletion:

ENG PHYS 3A03 APPLICATIONS OF PHOTONICS

## 7. ENGINEERING AND MANAGEMENT

- No changes

8. ENGINEERING AND SOCIETY

- Revision of program requirements
- One new course: ENGCOCTY 4Y03 SOCIETY CAPSTONE DESIGN
- One deleted course:

ENGSOCTY 4Z03 THE SOCIAL CONTROL OF TECHNOLOGY
9. MATERIALS SCIENCE AND ENGINEERING

- Revision of program requirements
- Course units change
- One new course:

MATLS 4N03HYDROGE, SOLAR AND NUCLEAR MATERIALS

- One deleted courses:

MATLS 4J04 MATERIALS SELECTION IN DESIGN AND MANUFACTURING
10. MECHANICAL ENGINEERING

- Revision of programs
- Two new courses:

MECH ENG 4004 SUSTAINABLE ENERGY SYSTEMS MECH ENG 4W03 THERMODYNAMICS OF ENERGY SYSTEMS
11. BACHELOR OF TECHNOLOGY

- Revision of programs
- Change in course code
- Fourteen new courses
- Five deleted course:

ENR TECH 3SG3 SYNCHRONOUS GENERATORS AND INDUCTION MACHINES
ENG TECH 2EE0 FOUR MONTH CO-OP EXPERIENCE I
ENG TECH 3EE0 FOUR MONTH CO-OP EXPERIENCE II
ENG TECH 4EE0 FOUR MONTH CO-OP EXPERIENCE III
GEN TECH 4PS3 POWER SYSTEMS SAFETY -RULES AND REGULATIONS

## $\rightarrow \ggg$ FACULTY OF ENGINEERING (General)

## NEW COURSES:

## ENGINEER 4K01 ENGINEERING REPORT FOR EXCHANGE STUDETS

Exchange students prepare a written report and make an oral presentation on an engineering problem encountered during summer work experience. Written and oral communications and substantive
content are assessed.
One seminar/lecture; one term.
Prerequisites: permission of instructor.

## ENGINEER 4L00 INTRODUCTION TO THE OVERSEAS WORKPLACE

Short seminars intended to prepare outgoing exchange students for placements overseas. Topics include, work place professionalism, and report writing.
one seminar/lecture; one term.
Prerequisites: permission of instructor .

## ENGINEER 4T04 MATERIALS SELECTION IN DESIGN AND MANUFACTURING

Materials selection charts, materials selection with mechanical constraints, coupled materials and processing/fabrication routes, effect of shape on materials selection, design of hybrid materials, eco-selection. Three lectures, one tutorial (one hour); first term
Prerequisite: ENGINEER 2P04 or MECH ENG 2P04; and CHEM ENG 2A04 or MECH ENG 3R03
Antirequisite: MATLS 4J04

## COURSE DELETIONS: <br> ENGINEER 2C03 ELECTRICITY, THERMOPHYSICS AND ENERGY

## CHEMICAL ENGINEERING

## PROGRAM REVISIONS:

```
Chemical Engineering
LEVEL II: }36\mathrm{ UNITS
15 18 units CHEM ENG 2A04, 2D04, 2F04, 2G03, 2I03
6 \text { units CHEM 1AA3, 2A03}
3 units CHEM 1AA3
6 units MATH 2M03, 2MM3
3 units STATS 3N03
6 \text { units approved complementary studies electives}
```


## Chemical Engineering and Management

LEVEL IV: 35-39 UNITS
$4-7$ units CHEM ENG 2103, 3P04
3 units from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
12 units COMMERCE 2BA3, 3FA3, 3MC3, 4QA3
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
3 units CHEM 2A03
3-6 units CHEM 2E03; or both CHEM 2OA3 and 2OB3
3 units from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 3103
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

## Chemical Engineering and Bioengineering

Level III: 37-40 units

```
24 units BIOLOGY 2EE3, CHEM ENG 3D03, 3G04, 3K04, 3L02, 3M04, 3O04
3 units CHEM 2AO3-
3 units CHEM ENG 2103
3-6 units CHEM 2E03; or both CHEM 2OA3 and 2OB3
3units BIOCHEM 2EE3
3 units approved complementary studies electives
```

Level IV: 37 Units
22 units CHEM ENG 3BK3, 3BM3, 3E04, 3P04, 4L02, 4LL3, 4T03
3 units BIOCHEM 3G03
3 units from ENGINEER 4A03, 4H03
6 units CHEM 3103 , CHEM ENG 3003 -
6 units from CHEM ENG 3Q03, CHEM 3I03, CHEMBIO 2A03
3 units approved complementary studies electives
LEVELV:38-39 UNTTS (2008-2009 ONLY)
11 units CHEM ENG 4N04, 4T03, 4W04
12 units from CHEM ENG 4B03, 4C03, 4E03, 4G03, 4K03, 4M03, 4X03, 4Z03
3 units ENGINEER 4U03
6 units approved technical electives from biosciences or bioengineering
3 units approved complementary studies olectives
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering
Level V: 38-39 units (EFFECTIVE 2009-2010)
8 units CHEM ENG 4N04, 4W04
12 units from CHEM ENG 4B03, 4C03, 4E03, 4G03, 4K03, 4M03, 4X03, 4Z03
3 units ENGINEER 4U03
6 units approved technical electives from biosciences or bioengineering
3 units approved complementary studies electives
6-7 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

## NEW COURSE:

## CHEM ENG 2103 MEASUREMENTS

Operational characteristics of physical and chemical sensors, statistics of sampling and analysis, measurement error, and data acquisition theory. Measurement of pressure, temperature, flow, strain and voltage. Technical writing and communication.
Two lectures, one lab (three hours); second term
Prerequisite: Registration in Level II of any Chemical Engineering program; or permission of the Department

## CIVIL ENGINEERING

## NO CHANGES

## - $\rangle$ -

## COMPUTING AND SOFTWARE

## PROGRAM REVISIONS:

```
Honours Business Informatics
LEVEL II: }30\mathrm{ UNITS
15 units COMP SCI 2C03, 2CS3, 2ME3, 2MJ3, 2O03, 2SC3
9 units COMMERCE 2AA3, 2AB3, 2FA3
3 units STATS 2D03
3 units Electives
LEVEL III: }30\mathrm{ UNITS
18 units COMP SCI 3CN3, 3DB3, 3EA3, 3IS3 3GC3, 3MH3, 3SR3
12 units COMMERCE 2BA3, 2MA3, 3FA3, 4QA3
LEVELIV: }30\mathrm{ UNITS
96 units COMP SCI 4AR3, 4HC3, 4WW3 from COMP SCI 4CD3, 4HC3, 4WW3
3 units COMMERCE 3BC3
6 units from COMMERCE 4BK3, 4QB3, 4KF3, 4KH3
9 12 units from COMP SCI 2CA3, 2MF3, or Levels III and IV Computer Science
3units Electives
```


## Honours Computer Science

```
Level II: 30 UNits
21 units COMP SCI 2C03, 2CA3, 2CS3, 2ME3, 2MF3, 2MJ3, 2O03, 2SC3
3 units STATS 2D03
6 units Electives
Level III: 30 UNITS
2421 units COMP SCI 3CN3, 3DA3, 3DB3, 3EA3, 3GC3, 3IS3, 3MH3, 3MI3, 3SR3
3 units from Levels III and IV Computer Science
6 units Electives
Level IV: 30 Units
2118 units COMP SCI 4CD3, 4HC3, 4MN3, 4TB3, 4WW3, 4ZP6
36 units from COMP SCI 4AR3, 4E03, 4O03, 4TC3, 4TE3 Levels III and IV Computer Science
6 units Electives
```


## Minor in Computer Science

```
REQUIREMENTS
24 units total
6 units COMP SCI 1FC3, 1MD3
12 units from COMP SCI 2C03, 2CA3, 2ME3, 2MF3, 2MJ3, 2O03, 2SC3
6 units from Levels III,-and IV Computer Science
```


## Honours Computer Science as a Second Degree

Admission
Completion of a Bachelor's degree in a discipline other than computer science with a Cumulative
Average of least 7.0 from a recognized university; completion of MATH 1Z04, MATH 1ZZ5 and a grade of at least C+ in each of COMP SCI 1FC3, 1MD3 or equivalent. As Second Degree candidates, applicants must first apply for admission to the University, through the Office of the Registrar (Admissions) indicating they wish to apply for the Honours Computer Science B.A.Sc. as a Second Degree programme.

Note
If a student in the programme has previously taken a required course (or its equivalent), he/she does not have to re-take the
course. However, if the credit from that course has been used for a previous degree, the student will be required to take another course with the required number of units. A student is admitted to Level III of this programme.

## LEVEL III: 30 UNITS

27 units COMP SCI 2C03, 2CA3, 2ME3, 2MF3, 2MJ3, 2SC3, 3DB3, 3GC3, 3MH3
3 units STATS 2D03

## LEVEL IV: 30 UNITS

24 units COMP SCI 3CN3, 3EA3, 3MI3, 3SR3, 4CD3, 4HC3, 4MN3, 4TB3
6 units from Levels III and IV Computer Science

## Software Engineering

LEVEL II: 3435 UNITS
6 units MATH 2M03, 2MM3 2Z03, 2ZZ3
2223 units SFWR ENG 2AA4, 2C03, 2DA3 4, 2DM3, 2FA3, 2MX3, 2S03
3 units STATS 3 Y03
3 units approved complementary studies electives

## Software Engineering and Management

Level II: 3738 Units
6 units COMMERCE 2AA3, 2MA3
3 units ECON 1BB3
6 units MATH 2M03, 2MM3 2Z03, 2ZZ3
2223 units SFWR ENG 2AA4, 2C03, 2DA3 4, 2DM3, 2FA3, 2MX3, 2S03

## Software Engineering and Society

## Software Engineering and International Studies

Level II: 3738 UNits
6 units MATH $2 \mathrm{M} 03,2 \mathrm{MM} 3 \quad$ 2Z03, 2ZZ3
2223 units SFWR ENG 2AA4, 2C03, 2DA3 4, 2DM3, 2FA3, 2MX3, 2S03
Society:
6 units ENGSOCTY 2X03, 2Y03
3 units Engineering and Society focus electives
International Studies:
9 units ANTHROP 1A03, ENGSOCTY 2X03, 2Y03
Level III: 35 UNITS
26 units SFWR ENG 3A04, 3BB4, 3DX3, 3F03, 3GA3, 3RA3, 3S03, 3X03
SOCIETY:
3 units ENGSOCTY 3 Y03
6 units Engineering and Society focus electives; or ENGINEER 3PM3
International Studies:
3-6 units POL SCI 2A06, 2XX3, RELIG ST 1B06
3 units ENGINEER 3PM3
3-6 units International Studies focus electives

## Software Engineering (Game Design)

Level II: 3738 units
6 units MATH 2M03, 2MM3 2Z03, 2ZZ3
6 units ENGINEER 2GA3, 2GB3
2223 units SFWR ENG 2AA4, 2C03, 2DA3-4, 2DM3, 2FA3, 2MX3, 2S03
3 units approved technical electives from List C

## Software Engineering (Embedded Systems)

Level II: 3738 UNITS
2223 units SFWR ENG 2AA4, 2C03, 2DA3 4, 2DM3, 2FA3, 2MX3, 2S03
6 units ENGINEER 2MM3, 3N03
6 units MATH 2M03, 2MM3 2Z03, 2ZZ3

## COURSE UNITS CHANGE:

## SFWR ENG 2DA34 DIGITAL SYSTEM PRINCIPLES AND LOGIC CO-DESIGN FOR SOFTWARE ENGINEERING

## NEW COURSES:

## COMP SCI 2C03 DATA STRUCTURES AND ALGORITHMS

Searching, sorting, dynamic programming, greedy algorithms, abstract data structures, balanced trees, hashing, graphs, design principles, complexity, organization of libraries.
Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 2DM3 or COMP SCI 1FC3; and SFWR ENG 2 S03 or COMP SCI 2SC3
Antirequisite: COMP ENG 2SI4, COMP SCI 2MD3, 3DA3, ELEC ENG 2SI4, SFWR ENG 2C04, 2C03

## COMP SCI 3GC3 COMPUTER GRAPHICS

Mathematical foundations, the graphics pipeline, geometrical transformations, 3D visualization, clipping, illumination and shading models, and the impact of graphics on society.
Three lectures, one tutorial (two hours every other week); first term
Prerequisite: Registration in Computer Science
Cross-list: SFWR ENG 3GC3

## COMP SCI 4TI3 FUNDAMENTALS OF IMAGE PROCESSING

Discrete-time signals and systems, digital filter design, photons to pixels, linear filtering, edge-detection, nonlinear filtering, multi-scale transforms, motion estimation.
Three lectures; first term
Prerequisite: Registration in Level III or above of a program offered by the Department of Computing and Software

## MECHTRON 4MMO COURSE WORK IN REAL TIME SYSTEMS

Students complete an independent course project in the area of real time systems design with the focus on Mechatronics applications.
One lab (three hours per week); first term
Prerequisite: Permission of the Department of Computing and Software

## MECHTRON 4MOO COURSE WORK IN ROBOTICS

Students complete an independent course project in the area of robotics with the focus on Mechatronics applications.
One lab (three hours per week); first term
Prerequisite: Permission of the Department of Computing and Software

## COURSE DELETIONS: <br> COMP SCI 2003 OBJECT ORIENTED PROGRAMMING <br> COMP SCI 3DA3 DATA STRUCTURES AND ALGORITHMS <br> COMP SCI 3SH3 OPERATING SYSTEM CONCEPTS

## ELECTRICAL AND COMPUTER ENGINEERING

## REVISION OF PROGRAMS:

Computer Engineering<br>Level II: 3736 units<br>16 units COMP ENG 2DI4, 2DP4, 2SH4, 2SI4<br>17 units ELEC ENG 2CI5, 2CJ4, 2EI5, 2FH3<br>43 units MATH-2P04-2Z03<br>LEVEL III: 3738 UNITS<br>11 units COMP ENG 3DQ4, 3DR4, 3SK3<br>1920 units ELEC ENG 3CK3-3CL4, 3EJ4, 3TP4, 3TQ4, 3TR4<br>4 units SFWR ENG 3K04<br>3 units approved complementary studies electives

## Computer Engineering and Management

Level III: 3738 units
12 units COMMERCE 2AB3, 2BA3, 2FA3, 2MA3
12 13units ELEC ENG 2EI5, 3GK3, 3TP4, 3TQ4
8 units COMP ENG 2DI4, 2DP4
1 unit ENGN MGT 3AA1
4 units SFWR ENG 3K04
Level IV: 39 units (2008-2009 ONLY)
8 units ELEC ENG 3EJ4, 3TR4
8 units COMP ENG 3DQ4, 3DR4
9 units COMMERCE 3 BG3, ЗFA3, ЗMG3
4 units SFWR ENG 3 K04
3 units STATS 3 Y03
1 unit ENGN MGT 4A01
3 units from ENGINEER 4A03, 4H03
3 units Commerce electives selected from Level III or IV Commerce
Level IV: 39 units (EFFECTIVE 2009-2010)
12 units ELEC ENG 3CL4, 3EJ4, 3TP4, 3TR4
8 units COMP ENG 3DQ4, 3DR4
9 units COMMERCE 3BC3, 3FA3, 3MC3
3 units STATS 3 Y03
1 unit ENGN MGT 4A01
3 units from ENGINEER 4A03, 4H03
3 units Commerce electives selected from Level III or IV Commerce

## Computer Engineering and Society

## Computer Engineering and International Studies

Level III: 33-39 units
7 units COMP ENG 2DP4, 3SK3
1213 units ELEC ENG 2EI5,3CK3-3TP4, 3TQ4
4 units SFWR ENG 3K04
Society:
6 units ENGSOCTY 3Y03, 3Z03
6 units Engineering and Society focus electives; or ENGINEER 3PM3
International Studies:
3-6 units from POL SCI 2A06, 2XX3, RELIG ST 1B06
3 units ENGINEER 3PM3
6-9 3-6 units International Studies focus electives
LEVELIV: 32-35 UNITS (2008-2009 ONLY)
8 units COMP ENG 3DQ4, 3DR4
12 units ELEC ENG 3EJ4, 3TQ4, 3TR4-
3 units ENGINEER4B03
LEvEL IV: 32-35 units (EFFECTIVE 2009-2010)
8 units COMP ENG 3DQ4, 3DR4

12 units ELEC ENG 3EJ4, 3TP4 3CL4, 3TR4
3 units ENGINEER 4B03
Society:
3 units ENGSOCTY 3X03
6-9 units Engineering and Society focus electives
International Studies:
63 units ENGINEER 3PM3, ENGSOCTY 3X03
3-6-9 units International Studies focus electives
3 units International Studies focus electives

## Electrical Engineering

Level III: 3738 units
7units COMP ENG 2DP4, 3SK3
2728 units ELEC ENG-3CK3, 3CL4 3EJ4, 3FK4, 3PI4, 3TP4, 3TQ4, 3TR4
3 units approved complementary studies electives
Electrical and Biomedical Engineering
Level II: 3938 units
14 units ELEC ENG 2CI5, 2CJ4, 2EI5
812 units COMP ENG 2DI4, 2SH4, 2SI4
86 units MATH 2P04, 2Q04 2Z03, 2ZZ3
3 units BIOLOGY 1A03
3 units CHEM 1AA3
3 units approved complementary studies electives
LEVEL III: 40 UNITS 2009-2010 ONLY
20 units ELEC ENG 2FH3, 3BA3, 3BB3, 3CL4, 3EJ4, 3TP3
8 units COMP ENG 2DI4, 2DP4
6 units CHEM 2OA3, 2OB3
6 units HTH SCI 2L03, 2LL3
LEVEL III: 40 UNITS (EFFECTIVE 2010-2011)
2021 units ELEC ENG 2FH3, 3BA3, 3BB3, 3CK3, 3CL4, 3EJ4, 3TP4
84 units COMP ENG 2DI4, 2DP4
6 units CHEM 2OA3, 2OB3
6 units HTH SCI 2L03, 2LL3
3 units approved complementary studies electives
Electrical Engineering and Management
LEVEL III: 4037 UNITS
12 units COMMERCE 2AB3, 2BA3, 2FA3, 2MA3
11 units COMP ENG 2DI4, 2DP4, 3SK3
1213 units ELEC ENG 2EI5, 3CK3, 3TP4 3TQ4
1 unit ENGN MGT 3AA1
4 units SFWR ENG 3 KO4
LEVELIV: 39 UNHTS (2008-2009ONLY)
9 units COMMERCE $3 B 63,3 F A 3,3 M G 3$
16 units ELEC ENG 3EJ4, 3FK4, 3P14, 3TR4
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
4 units SFWR ENG 3K04
3 units STATS 3 YO3-
3 units Commerce electives selected from Level III or IV Commerce
LEVEL IV: 39 UNITS(EFFECTIVE 2009-2010)
9 units COMMERCE 3BC3, 3FA3, 3MC3
20 units ELEC ENG 3CL4 3EJ4, 3FK4, 3PI4, 3TP4, 3TR4
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
3 units STATS 3 Y03
3 units Commerce electives selected from Level III or IV Commerce

## Electrical Engineering and Society

## Electrical Engineering and International Studies

Level III: 32-44 35-38 UNITS

```
7 units COMP ENG 2DP4, 3SK3
1516 units ELEC ENG 2EI5, 2FH3, 3CK3, 3TP4, 3TQ4
4 units SFWR ENG 3K04
SOCIETY:
6 units ENGSOCTY 3Y03, 3Z03
6-9 units Engineering and Society focus electives; or ENGINEER 3PM3
INTERNATIONAL STUDIES:
3-6 units POL SCI 2A06, 2XX3, RELIG ST 1B06
3 units ENGINEER 3PM3
3-6 units International Studies focus electives
LEVEL IV: 32-35 UNITS
20 units ELEC ENG 3CL4 3EJ4, 3FK4, 3PI4, 3TP4, 3TR4
3 units ENGINEER 4B03
Society:
3 units ENGSOCTY 3X03
9 \text { units Engineering and Society focus electives}
INTERNATIONAL STUDIES:
6 3 units ENGINEER 3PM3, ENGSOCTY 3X03
3-6-9 units International Studies focus electives
COURSE UNIT CHANGE:
COMP ENG 4OJ3 4 RESEARCH PROJECT
COMP ENG 4TN3 }4\mathrm{ IMAGE PROCESSING
ELEC ENG 4EM3 4 PHOTONIC DEVICES AND SYSTEMS
ELEC ENG 4OJ3 4 RESEARCH PROJECT
```


## NEW COURSES:

## ELEC ENG 3CL4 INTRODUCTION TO CONTROL SYSTEMS

Modeling of control systems in the continuous-time domain; state space representations; model linearization; performance of control systems in time and frequency; stability; control design. Three lectures, one tutorial, one lab every other week; second term Prerequisite: ELEC ENG 3TP4 OR ELEC ENG 3TP3 OR ELEC ENG 3CK3

## ELEC ENG 3TP3 SIGNALS AND SYSTEMS (OFFERED 2009-2010 ONLY)

Fourier transforms, properties; Laplace transforms and inversion; input-output relations of linear systems; discrete time systems.
Two lectures, one tutorial, one lab every other week; second first term
Prerequisite: ELEC ENG 2CJ4 and registration the Electrical and Biomedical Engineering program
Antirequisite: MECH ENG 4R03 OR EE3TP4

## ELEC ENG 4EL4 INTRODUCTION TO NANOTECHNOLOGY

Theory and hands-on laboratory experience in nanoelectronics, nanophontonics and nanomechatronics. Topics include nanomaterials, nanogrowth, self-assembly, nanoimprint lithography, nanomanipulation, nanopackaging and reliability. Three lectures, one tutorial, one lab every other week; second term Prerequisite: COMP ENG 4EK4

## ELEC ENG 4TM4 DIGITAL COMMUNICATIONS II

This course continues the study of modern communications systems following course EE 4TK4. Topics include wireless communcations systems, multiple antenna systems, channel models, and error control coding.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 4TK4

## COURSE DELETION: <br> ELEC ENG 3CK3 MATHEMATICS FOR LINEAR SYSTEMS

## ENGINEERING PHYSICS

## PROGRAM REVISIONS:



I Stream ENG PHYS 4L04, 4MD4 4MD3, 4S04 4S03; 12-14 units of approved Level III or IV technical electives M Stream ENG PHYS 4F03, 4MD4 4MD3, 4Z03; 14-16 units of approved Level III or IV technical electives

N Stream ENG PHYS 4D03, 4ES3, 4L04, 4NE3; 11-13 10-12 units of approved Level III or IV technical electives
P Stream ELEC ENG 3FK4, 3TR4; ENG PHYS 4K03, 4S04 4S03; 9-11 units of approved Level III or IV technical electives

## Engineering Physics and Management



| 3 units | COMMERCE 4PA3 |
| :--- | :--- |
| 3 units | ENGN MGT 5B03 |

10 units ENG PHYS 4A06, 4U04
23-24 21-23 units Stream specific:
I Stream ENG PHYS 4L04, 4MD4 4MD3, 4S04 4S03; 11-12 units of approved Level III or IV technical electives
M Stream ENG PHYS 4F03, 4MD4 4MD3, 4Z03; 13-14 units of approved Level III or IV technical electives
N Stream ENG PHYS 4D03, 4ES3, 4L04, 4NE3; 10-11 9-10 units of approved Level III or IV technical electives P Stream ELEC ENG 3FK4, 3TR4; ENG PHYS 4K03, 4S04 4S03; 8-9 units of approved Level III or IV technical electives

## Engineering Physics and Society

## Engineering Physics and International Studies

Level IV: 34 UNits
3 units ENGINEER 4B03
13 units Stream specific:
I Stream ENG PHYS 3D03, 3E03, 3PN4; 3 units from ENG PHYS 3A03 3G03, 3ES3, 3MD3
M Stream ENG PHYS 3E03, 3MD3, 3PN4; 3 units approved Level III or IV technical electives
N Stream ENG PHYS 3D03, 3ES3, 3O04; 3 units approved Level III or IV technical electives
P Stream ENG PHYS 3A03쿵03, 3G03, 3PN4; 3 units approved Level III or IV technical electives
Society:
9 units ENGSOCTY 3X03, 3Z03, 4Z03 4Y03
9 units Engineering and Society focus electives
International Studies:
96 units ENGINEER 3PM3, 4SE3, ENGSOCTY 3X03, 4Y03
912 units International Studies focus electives
LEVEL V: 36-38 UNITS (2008-2009 ONLY)
6 units ENG PHYS 4A06
24-26 units Stream specific:
I Stream ENG PHYS 4L04, 4MD4, 4S04; 12-14 units of approved Level III or IV technical electives

- M Stream ENG PHYS 4F03, 4MD4, 4Z03; 14-16 units of approved Levol III or IV technical electives

N Stream ENG PHYS 4D03, 4ES3, 4L-04, 4NE3; 11-13 units of approved Level III or IV technical electives
P Stream ELEC ENG 3FK4, 3TR4; ENG PHYS 4K03, 4S04; 9-11 units of approved Level III or IV technical electives

```
SOGIETY: ENGSOGTY 4X03, 4Z03
```

6 units ENGSOIES:
INTERNATIONAL STUDIES:
6 units ENGINEER 4SE3, ENGSOGTY $4 \times 03$
LEVEL V: 37-39 35-38 UNITS
10 units ENG PHYS 4A06, 4U04
24-26 22-25 units Stream specific:
I Stream ENG PHYS 4L04, 4MD4 4MD3, 4S04 4S03; 12-14 units of approved Level III or IV technical electives
M Stream ENG PHYS 4F03, 4MD4 4MD3, 4Z03; 14-16 units of approved Level III or IV technical electives
N Stream ENG PHYS 4D03, 4ES3, 4L04, 4NE3; 11-13 10-12 units of approved Level III or IV technical electives
P Stream ELEC ENG 3FK4, 3TR4; ENG PHYS 4K03, 4S04 4S03; 9-11 units of approved Level III or IV technical electives
Society:
3 units ENGSOCTY 4X03
International Studies:
3 UNITS
ENGSOCTY 4X03

## COURSE UNITS CHANGE:

ENG PHYS 4MD4 4MD3 ADVANCED MATERIALS AND NEXT-GENERATION DEVICES
ENG PHYS 4S04-4S03 LASERS AND ELECTRO-OPTICS
NEW COURSE:

ENG PHYS 4X03 INTRODUCTION TO PHOTOVOLTAICS
A review of photovoltaic devices including solar cell operation, characterization, manufacturing, economics, and current and next generation technologies. .
Three lectures; first term
Prerequisite: One of Eng Phys 3PN4, Phys 3BA3, Elec Eng 2EI5, OR MATLS 3Q03

COURSE DELETIONS:
ENG PHYS 3A03 APPLICATIONS OF PHOTONICS

# ENGINEERING AND MANAGEMENT 

NO CHANGES

## $\bullet \bullet \bullet$

## ENGINEERING AND SOCIETY

## PROGRAM REVISIONS:

Engineering and Society is a program option for most Engineering programs(excludes Chemical Engineering and Bioengineering, Electrical Biomedical Engineering, Software Engineering (Game Design), Software Engineering (Embedded Systems). The new course (ENGSOCTY 4YO3) and the deleted course (ENGSOCTY 4Z03) has been updated in all of Engineering and Society programs. As well, an already existing course ENGINEER 3P03 (was only available for Engineering and International Studies programs) is now an option as a focus elective for Engineering and Society programs in level III.

## NEW COURSE:

## ENGSOCTY 4Y03 SOCIETY CAPSTONE DESIGN

In multi-disciplinary teams, students will complete a capstone design project that incorporates holistic design, social sustainability, community resilience and aesthetic elements.
Two lectures; Two hour design studio; second term
Prerequisite: Registration in Level V of Engineering and Society or Engineering and International Studies.

COURSE DELETIONS:
ENGSOCTY 4Z03 THE SOCIAL CONTROL OF TECHNOLOGY
-***

## MATERIALS SCIENCE AND ENGINEERING

## REVISION OF PROGRAMS:

## Materials Engineering

Level III: (Materials Engineering Stream) 36-38 units
21 units MATLS 3B03, 3C04, 3E04, 3F03, 3M03, 3T04

3 units MATH 3103
9-11 units from CHEM 2E03, CHEM ENG 3004, 3003, MATLS 3Q03, 4D03, 4P03 approved Level III or IV technical
electives, which must include CHEM ENG 3004 if not completed
3 units approved complementary studies electives
Level IV: (Materials Engineering Stream) 36-37 38-39 units
3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
8 units MATLS 4JO4, 4L04, ENGINEER 4T04
4 units6units from MATLS 4K04, 4Z04 4K06, 4Z06
3 units STATS 3Y03
3 units approved complementary studies electives
9-10 units approved Level III or IV technical electives, which must include CHEM ENG 3004 if not completed

## Materials Engineering - Nanomaterials Stream

Level III: 36-37 UNITs
24 units MATLS 3B03, 3C04, 3E04, 3F03, 3M03, 3Q03, 3T04
3 units MATH 3103
3 units STATS 3 Y03
3-4 units from CHEM 2E03, CHEM ENG 3004, 3Q03, 4Z03, MATLS-4003, 4P03 approved Level III or IV technical electives, which must include CHEM ENG 3004 if not completed
3 units approved complementary studies electives
Level IV: 36-37 38-39 units
3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
11 units MATLS 4F03, 4JO4, 4L04, ENGINEER 4T04
4 units- 6 units from MATLS 4K04, 4Z04-4K06, 4Z06
3 units from MATLS 4G03, 4H03
6-7 units approved Level III or IV technical electives which must include CHEM ENG 3004 if not completed
3 units approved complementary studies electives

## Materials Engineering and Management

Level V: (Materials Engineering Stream) 36-3738-39 units
6 units COMMERCE 4PA3, 4QA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
8 units MATLS 4J04, 4L04, ENGINEER 4T04
4 units 6units from MATLS 4K04, 4Z04 4K06, 4Z06
6 units Commerce electives selected from Level III or IV Commerce
6-7 units approved technical electives

## Materials Engineering and Management - Nanomaterials Stream

LEVEL V: 36-37 38-39 UNITS
6 units COMMERCE 4PA3, 4QA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
11 units MATLS 4F03, 4J04, 4L04, ENGINEER 4T04
4 units 6units from MATLS 4K04, 4Z04 4K06, 4Z06
6 units Commerce electives selected from Level III or IV Commerce
3-4 units approved Level III or IV technical electives (MATLS 4G03, 4H03 are recommended if offered.)

## Materials Engineering and Society

Materials Engineering and International Studies
Level IV: (Materials Engineering Stream) 32-36 units
4 units CHEM ENG 3004
10 units MATLS 3B03, 3E04, 3M03
6-7 units approved Level III or IV technical electives
Society:
6 units ENGSOCTY 3X03, 3Z03
6-9 units Engineering and Society focus electives
International Studies:

```
6 3 units ENGNEEER 3PM3, ENGSOCTY 3X03
6-9 units International Studies focus electives
Level V: (Materials Engineering Stream) 33-37 35-39 units
6 \text { units ENGINEER 4B03, 4J03}
8 units MATLS 4J04, 4L04, ENGINEER 4T04
4units 6units from MATLS 4K04, 4Z04 4K06, 4Z06
6-7 units approved technical electives
SOCIETY:
6 units ENGSOCTY 4X03, 4Z03 4Y03
3-6 units Engineering and Society focus electives
INTERNATIONAL STUDIES:
6 units ENGINEER 4SC3, ENGSOCTY 4X03, 4Y03
3-6 units International Studies focus electives
Materials Engineering and Society - Nanomaterials Stream
Materials Engineering and
International Studies - Nanomaterials Stream
LEVEL IV: 32-36 UNITS
4 units CHEM ENG 3O04
13 units MATLS 3B03, 3E04, 3M03, 3Q03
3-4 units approved Level III or IV technical electives (MATLS 4G03, 4H03 are recommended if offered.)
SOCIETY:
6 units ENGSOCTY 3X03, 3Z03
6-9 units Engineering and Society focus electives
INTERNATIONAL STUDIES:
6}3\mathrm{ units ENGINEER 3PM3, ENGSOCTY 3X03
6-9 units International Studies focus electives
LEVEL V: 32-36 34-38 UNITS
6 units ENGINEER 4B03, 4J03
11 units MATLS 4F03, 4J04, 4L04, ENGINEER 4T04
4 units-6units from MATLS 4K04, 4Z04 4K06, 4Z06
2-3 units approved technical electives (MATLS 4G03, 4H03 are recommended if offered.)
Society:
6 units ENGSOCTY 4X03, 4Z03 4Y03
3-6 units Engineering and Society focus electives
International Studies:
6 units ENGNEER 4SG3, ENGSOCTY 4X03, 4Y03
3-6 units International Studies focus electives
```


## COURSE UNITS CHANGE:

```
MATLS 4K04 4K06 SENIOR THESIS
MATLS \(4 Z 04\) 4Z06 INDUSTRIAL PROJECTS
```


## NEW COURSE:

MATLS 4N03 HYDROGEN, SOLAR AND NUCLEAR MATERIALS
Fundamental physics of materials used in non-fossil energy technologies. Solar cells, irradiation damage and nuclear materials, modern battery materials, fuel cells.
Three lectures: first term
Prerequisite: Registration in Level III, IV or V of any program in Materials Engineering or permission of the instructor.

COURSE DELETION:

## MECHANICAL ENGINEERING

## PROGRAM REVISIONS:

## Mechanical Engineering

## Mechanical Engineering and Management

## Mechanical Engineering and Society

Mechanical Engineering and International Studies

## Admission <br> See Admission to Level II Engineering Programs. <br> Notes

1. Level IV Mechanical Engineering students must choose one of the following option areas and complete sufficient units of the listed required courses and technical electives.
Program Option Compulsory Courses:

- GENERAL: two of MECH ENG 3D03, 4B03, 4E03, 4Q03, 4S03, 4W03, 4Z03
- MECHANICS AND DESIGN: MECH ENG 4Q03; three of ENGINEER 4T04, MATLS 4J04, 4T03, MECH ENG 4B03, 4BB3, 4CC3, 4E03, 4H03, 4I03, 4K03, 4L03, 4T03, 4Z03
- MANUFACTURING: MECH ENG 4Q03; three of CHEM ENG 4X03, ENGINEER 4J03, 4T04, MATLS 4J04, 4T03, MECH ENG 4B03, 4D03, 4E03, 4H03, 4K03, 4T03, 4Z03
- THERMOFLUIDS AND ENERGY SYSTEMS: MECH ENG 3D03, 4S03, 4W03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4O04, 4Q03, 4T03, 4U03
- APPROVED TECHNICAL ELECTIVES: any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 4QA3

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0.

## NEW COURSES:

## MECH ENG 4004 SUSTAINABLE ENERGY SYSTEMS

Assessment of current and future energy systems, covering resources, extraction, conversion with emphasis on meeting regional and global energy needs in a sustainable manner. Different renewable and conventional energy technologies will be presented and their attributes described within a framework that aids in evaluation and analysis of energy technology systems in the context of political, social, economic, and environmental goals.
Three lectures, one tutorial; second term
Prerequisite: MECH ENG 2W04, MECH ENG 3004 or permission of the department

## MECH ENG 4W03 THERMODYNAMICS OF ENERGY SYSTEMS

Re-examination of laws of thermodynamics, analysis using second law of thermodynamics, multicomponent systems, psychrometry, HVAC systems, combustion systems, steam power systems and micro-nano systems. Three lectures; first term
Prerequisite: MECH ENG 2W04
Antirequisite: MECH ENG 3 D03

## COURSE DELETION:

MECH ENG 3D03 THERMODYNAMICS OF ENERGY SYSTEMS

## BACHELOR OF TECHNOLOGY

## PROGRAM REVISIONS:

```
TECHNOLOGY I: 36 UNITS
18 units ENG TECH 1CH3, 1CP3, 1EL3, 1MC3, 1MT3, 1PH3
12 units GEN TECH 1CS3, 1FS3, 1FT3, 10B3, 1HB3,1TI3
1 course ENG TECH 1A00
1 course ENG TECH 1EE0
6 \text { units (choose from stream below)}
- Automotive and Vehicle Technology: ENG TECH 1ME3, 1PR3
- Biotechnology: ENG TECH 1AC3, 1BI3
- Process Automation Technology: ENG TECH 1AC3, 1PR3
6 units from ENG TECH 1AG3, 1B13, 1ME3, 1PR3 (See Note above.)
1-course ENG TECH 1A00
Technology (B.Tech.)
Admission
    Completion of Technology I including ENG TECH 1ME3 and 1PR3.
LEVEL II: }36\mathrm{ UNITS
15 units AUTOTECH 2AC3, 2AE3, 2CD3, 2MT3, 2TS3
12 units ENG TECH 2MA3, 2MT3, 3ES3, 3MN3, 3ST3,
9 units GEN TECH 2EN3, 2ET3, 2TC3, 2TE3
LEVEL III: }36\mathrm{ UNITS
21 units AUTOTECH 3AE3, 3AV3, 3CT3, 3MP3, 3MV3, 3TS3, 3VD3
3 units ENG TECH 3FE3
12 units GEN TECH 2TL3, 2TM3, 3PM3, 3SF3 3FT3, 3MT3
Level IV: }33\mathrm{ units
21 units AUTOTECH 4AE3, 4AT3, 4CI3, 4DV3, 4EC3, 4MS3, 4TP3
9 units GEN TECH 2TP3, 3TL3, 4SS3
3 units from GEN TECH 1DM3, 1EE3, 1HR3, 2IS3, 4LM3, 4ST3 4DM3, 4EE3, 4HR3, 4IS3, 4LT3, 4SZ3
```


## Biotechnology (B.Tech.)

## Admission

```
Completion of Technology I including ENG TECH 1AC3 and 1BI3.
LEVEL II: 33 UNITS
21 units BIOTECH 2BC3, 2BE3, 2BT3, 2CB3, 2GT3, 2MB3, \(2 O C 3\)
3 units ENG TECH 2MA3
9 units GEN TECH 2EN3, 2ET3, 2TC3, 2TE3
Level III: 36 units
21 units BIOTECH 3BP3, 3EC3, 3FM3, 3FR3, 3IV3, 3MB3, 3PM3
3 units ENG TECH 3ST3 3ES3
12 units GEN TECH 2TL3, 2TM3, 3PM3, 3SF3 3FT3, 3MT3
Level IV: 33 UNits
21 units BIOTECH 4BI3, 4BL3, 4BM3, 4BS3, 4GP3, 4TB3, 4TR3 4TP3
9 units GEN TECH 2TP3, 3TL3, 4SS3
3 units from GEN TECH 1DM3, 1EE3, 1HR3, 2IS3, 4LM3, 4ST3 4DM3, 4EE3, 4HR3, 4IS3, 4LT3, 4SZ3
```


## Process Automation Technology (B.Tech.)

```
Admission
Completion of Technology I including ENG TECH 1AC3 and 1PR3.
Level II: 36 units (Not Offered in 2008-2009)
21 units PROCTECH 2CA3, 2CE3, 2EC3, 2EE3, 2IO3, 2IC3, 2PL3
6 units ENG TECH 2MA3, 2MT3
9 units GEN TECH 2EN3, 2ET3, 2TC3, 2TE3
```

Level III: 36 UNits

```
18 units PROCTECH 3CE3, 3CT3, 3MC3, 3PL3, 3SC3, 3SD3
6 units ENG TECH 3MN3, 3ST3 3ES3
12 units GEN TECH 2TL3, 2TM3, 3PM3, 3SF3 3FT3, 3MT3
LEVEL IV: }36\mathrm{ UNITS
24 units PROCTECH 4AS3, 4CT3, 4IC3, 4IT3, 4MS3, 4MT3, 4SS3, 4TR3 4TP3
9 units GEN TECH 2TP3, 3TL3, 4SS3
3 units from GEN TECH 1DM3, 1EE3, 1HR3, 2IS3, 4LM3, 4ST3 4DM3, 4EE3, 4HR3, 4IS3, 4LT3, 4SZ3
```


## PROGRAMS FOR THE DEGREE COMPLETION B.TECH.

```
Civil Engineering Infrastructure Technology (B.Tech.)
LEVEL III: 36 UNITS
6 \text { units ENG TECH 3MA3, 3ML3}
1215 units GEN TECH 1FS3, 1HR3, 1OB3, 2EN3, 3PM3
6 \text { units CIV TECH 3GT3, 3SA3}
9 units six units from CIV TECH 3FM3, 3GE3 and three units from Infrastructure Electives Course List (See Note 1
    above.)
    or
    nine units from Infrastructure Electives Course List (See Note 1 above.)
3 units from GEN TECH 1DM3, 1EE3, 1HR3, 4LM3, 4ST3
1 course ENG TECH 1A00
Level IV: }30\mathrm{ UNits
3 units CIV TECH 3MN3
9 units CIV TECH 4EI3, 4ES3, 4SD3
12 units three units from CIV TECH 4MH3 and nine units from Infrastructure Electives Course List (See Note 2 above.)
    or
    12 units from Infrastructure Electives Course List (See Note 2 above.)
3 units GEN TECH 3SF3
3 units from GEN TECH 1DM3, 1EE3, 2IS3, 1HR3, 4LM3, 4ST3
```


## Computing and Information Technology (B.Tech.)

Level IV: 36 UNITS
18 units COMPTECH 4ES3, 4FD3, 4IN3, 4SD3, 4TM3, 4TR3 (See Note 4 above.)
6 units from COMPTECH 4AP3 4CC3, 4DM3 (See Note 4 above.)
69 units GEN TECH 2IS3, 3PM3, 3SF3
63 -units from GEN TECH 1DM3, 1EE3, 1HR3, 4LM3, 4ST3

## Energy Engineering Technologies (B.Tech.)

Level III: 36 units
27 units ENR TECH 3CT3, 3EP3, 3FM3, 3IE3, 3IN3, 3MA3, 3MI3, 3MP3, 3PD3, 3SG3 3PP3
9 units GEN TECH 1FS3, 1OB3, 2EN3
1 course ENG TECH 1A00 (See Note 3 above.)
Level IV: 36 UNits
24 units from ENR TECH 4EM3, 4EP3, 4NA3, 4NP3, 4PD3, 4PM3, 4PP3, 4PQ3, 4RE3, 4RT3
3 units GEN TECH 4PS3
6 units GEN TECH 3PM3, 3SF3
63 units from GEN TECH 1DM3, 1EE3, 1HR3, 4SS3, 4LM3, 4ST3, MAN TECH 4ST3

## Manufacturing Engineering Technology (B.Tech.)

Note
ENG TECH 1A00 must be taken in the first term of the program.
Level III: 36 UNITS
18 units from ENG TECH 1CP3, 1SP3, 3CT3, 3FE3, 3FN3, 3MA3, 3ML3, 3MN3, 3SP3
9 units from MAN TECH 3CC3, 3CD3, 3MD3, 3TF3, 4FB3
9 units GEN TECH 1FS3, 1OB3, 2EN3
1 course ENG TECH 1A00 (See Note above.)
Level IV: 36 units
24 units from MAN TECH 3CC3. 3CD3, 4DM3,-4FB3, 4FM3, 4FT3, 4ID3, 4MC3, 4MT3, 4ST3, 4TF3
69 units GEN TECH 3PM3, 3SF3, 4LM3
63 units from GEN TECH 1DM3, 1EE3, 1HR3, 2IS3, 4SS3, 4LM3, 4ST3

## Manufacturing Engineering Technology (B.Tech.)

(Requirements for students who entered prior to September 2006)
This program is currently being phased out. All new applicants should apply to Manufacturing Engineering Technology 4319 as specified above. Students currently enrolled in this program must complete all of the program requirements before September 2011.
Note
ENG TECH 1A00 must be taken in the first term of the program.
LEVEL II: 18 UNITS
9 units from ENG TECH 3CT3, 3FE3, 3FN3, 3MN3, 3SP3
9 units MAN TECH 3MD3, 4MT3, 4TF3
1 COURSE ENG TECH 1 A00 (See Note above.)
Level III: 1518 units
9 units MAN TECH 4FB3, 4FM3, 4FT3
6 units MAN TECH 4MC3, 4ST3

## CHANGE IN COURSE CODE: <br> BIOTECH 4TR3 4TP3 TECHNICAL PROJECT

## NEW COURSES:

## ENR TECH 3PP3 POWER PLANTS MECHANICAL SYSTEMS

Power plant operation, turbine, diesel engine, pumps, heat exchanger. Heat and mass balance flow diagrams. Gt-pro Software, Thermodynamics cycles (Simple, Combine and Gate).
Three lectures; one term
Prerequisite: Registration in Energy Engineering Technologies

## ENG TECH 3ES3 ENGINEERING STATISTICS

An introductory statistics course covering the following topics with engineering applications: organization and description of data, probability and distributions, confidence intervals and hypothesis testing and bivariate data analysis using regression.
Three lectures; one term
Prerequisite: ENG TECH 1MT3; or Level II of Automotive and Vehicle Technology; or Level III of Biotechnology or Process Automation Technology
Antirequisite: ENG TECH 3ST3

## GEN TECH 1FT3 FINANCIAL SYSTEMS FOR TECHNOLOGY ORGANIZATIONS

Introduction to the use of accounting data in the management of technical units and projects.
Three lectures; one term
Prerequisite: Registration in Technology I
Antirequisite: GEN TECH 1FS3

## GEN TECH 1HB3 HUMAN BEHAVIOUR IN TECHNOLOGY SETTINGS

The basic principles of human behaviour and organization for application in technical organizations and their sub-units.
Three lectures; one term
Prerequisite: Registration in Technology I
Antirequisite: GEN TECH 1OB3

## GEN TECH 2ET3 TECHNOLOGICAL ENTREPRENEURSHIP

The processes for bringing new technologies to market through business formulation and entrepreneurship.
Three lectures; one term
Prerequisite: Registration in Level II of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology
Antirequisite: GEN TECH 2EN3

## GEN TECH 3FT3 FORMULATING TECHNOLOGY STRATEGY

Issues in the development of organizational strategy around technological and market imperatives, emphasizing the competitive mobilization of technical capabilities.
Three lectures; one term
Prerequisite: GEN TECH 1FS3, 2EN3 and Registration in Level III or above of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology
Antirequisite: GEN TECH 3SF3

## GEN TECH 3MT3 THE MANAGEMENT OF

## TECHNICAL PROJECTS

Introduction to best practice in the management of technical projects including the use of planning, software and the management of people.
Three lectures; one term
Prerequisite: Registration in Level III of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology
Antirequisite: GEN TECH 3PM3

## GEN TECH 4DM3 ANALYTICAL THINKING AND PROBLEM SOLVING METHODOLOGIES

This course provides a foundation in analytical thinking concepts and tools for solving practical problems. It will cover methodologies that focus on processes that drive efficiently to technical solutions in a business or technical setting.
Three lectures; one term
Prerequisite: Registration in Level IV of Automotive and Vehicle Technology, Biotechnology or
Process Automation Technology
Three lectures; one term
Antirequisite: GEN TECH 1DM3

## GEN TECH 4EE3 ENGINEERING ECONOMICS

Costing methods for engineering designs and processes; minimum attractive rate of return, return sensitivities, time value of money, internal rates of return, payback period, amortization of equipment and capital cost allowance structures.
Three lectures; one term
Prerequisite: Registration in Level IV of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology
Antirequisite: GEN TECH 1EE3

## GEN TECH 4HR3 HUMAN RESOURCES IN A TECHNOLOGY SETTING

Best practices in managing technical human resources and others who work in technical organizations.
Three lectures; one term
Prerequisite: Registration in Level IV of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology
Antirequisite: GEN TECH 1HR3

## GEN TECH 4IS3 INFORMATION SYSTEMS IN TECHNOLOGY MANAGEMENT

The use of information systems in the management of the technical aspects of business and in integrating the technical functions in the broader organization.
Three lectures; one term
Prerequisite: Registration in Level IV of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology

## GEN TECH 4LT3 LEAN THINKING

Students will learn about and apply classical lean techniques well beyond the shop floor. Lean methods will enable students to deploy and adapt tools aimed at minimizing waste,
removing non-value added activities, and pursuing incremental improvements across
organizations.
Three lectures; one term
Prerequisite: Registration in Level IV of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology
Antirequisite: GEN TECH 4LM3

## GEN TECH 4SC3 SUPPLY CHAIN MANAGEMENT \& RESOURCE PLANNING

This course addresses Supply Chain management concepts and models. Topics include Enterprise Resource Planning (ERP), Manufacturing Execution Systems (MES), integration of plant floor data with the planning systems, plant modeling and simulation and theory of contraints.
Three lectures; one term
Prerequisite: Registration in Level IV of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology

## GEN TECH 4SZ3 SPECIAL TOPICS

Students are offered a selection of three to four emerging issues of the day as those issues relate to current and emerging technology and management technology practices. These topics could include supply chain management, ERP, knowledge management, 6 sigma methods, etc.
Three lectures; one term
Prerequisite: Registration in Level IV of Automotive and Vehicle Technology, Biotechnology or Process Automation Technology
Antirequisite: GEN TECH 4ST3

## COURSE DELTIONS:

## ENR TECH 3MP3 MECHATRONICS AND PLC'S IN POWER APPLICATION <br> ENR TECH 3SG3 SYNCHRONOUS GENERATORS AND INDUCTION MACHINES <br> ENG TECH 2EEO FOUR MONTH CO-OP EXPERIENCE I <br> ENG TECH 3EEO FOUR MONTH CO-OP EXPERIENCE II <br> ENG TECH 4EEO FOUR MONTH CO-OP EXPERIENCE III <br> GEN TECH 4PS3 POWER SYSTEMS SAFETY -RULES AND REGULATIONS

# FACULTY OF HUMANITIES 

UNDERGRADUATE CURRICULUM REPORT TO UNDERGRADUATE COUNCIL

FOR THE 2009-10 CALENDAR

## FACULTY OF HUMANITIES <br> REPORT TO UNDERGRADUATE COUNCIL SUMMARY OF MAJOR CURRICULUM CHANGES FOR 2009-10

## 1. SCHOOL OF THE ARTS

- Revision of admission into Honours Music (Music Cognition)
- One new course:

ART 3J03 Creative Collaborative Project

- One renumbered course:

THTR\&FLM 2S03 $\begin{aligned} & \text { The Split Screen - Reconstructing National Identities in West and East } \\ & \text { German Cinema }\end{aligned}$

- One new cross-listing:

THTR\&FLM 2P03 Performance and Performativity

- One deletion of a cross-listing:

SOTA 2G03 Performance and Performativity

- Four course deletions:

MUSIC 2Y03 History of Western Music: Romantic to Present
MUSIC 2YY3 History of Western Music: Medieval and Renaissance
THTR\&FLM 3Q03 Topics in National Cinemas I
THTR\&FLM 3YY3 Non-Western Performance in Action
2. CLASSICS

- Two new courses:

CLASSICS 3B03 Topics in Classical Archaeology
CLASSICS 3Z03 Satire

- Eight Renumbered Courses:

GREEK 3AA3
GREEK 3C03 Greek Drama
GREEK 3BB3 Topics in Greek Literature
GREEK 4T03 Independent Study
LATIN 3AA3 Latin Prose
LATIN 3C03 Latin Love Poetry
LATIN 3BB3 Topics in Latin Literature
LATIN 4T03 Independent Study

- Eleven Course Deletions:

CLASSICS 2Z03 Greek and Roman Religion
CLASSICS 3TT3 Leisure and Entertainment in Greece and Rome
CLASSICS 3Y03 Classical Literatures and Beyond
GREEK 4AA3 Greek Prose
GREEK 4B03 Greek Drama
GREEK 4BB3 Topics in Greek Literature
GREEK 4K03 Independent Study
LATIN 4AA3 Latin Prose
LATIN 4B03 Latin Love Poetry
LATIN 4BB3 Topics in Latin Literature
LATIN 4K03 Independent Study

## 3. COMMUNICATION STUDIES AND MULTIMEDIA

- Revision of program requirements for Honours and Combined Honours Multimedia
- Five new courses:

CMST 2S03 Television and Society
MMEDIA 2K03 Information Technology Concepts

| MMEDIA 3M03 | Programming Fundamentals |
| :--- | :--- |
| MMEDIA 4F03 | Topics in Multimedia Production |
| MMEDIA 4J03 | Building Social Web Applications |
| Eight course deletions: |  |
| MMEDIA 2C03 | Computer Architecture for Multimedia |
| MMEDIA 2D03 | Electronic Textuality and Programming |
| MMEDIA 3D03 | Technical Writing and Communication |
| MMEDIA 3E03 | Interactive Digital Culture |
| MMEDIA 3G03 | Network Services for Multimedia |
| MMEDIA 3J03 | Programming for The Web |
| MMEDIA 4C03 | Computers in Education |
| MMEDIA 4D03 | Topics in Visualization |

## 4. COMPARATIVE LITERATURE

- Closure of the Comparative Literature Program
- One cross-listing:


## COMP LIT 3Z03 Satire

- One renumbered course:

COMP LIT 2S03 The Split Screen - Reconstructing National Identities in West and East German Cinema

- Ten course deletions:

COMP LIT 1A03 Introduction to Comparative Literature I
COMP LIT 1AA3 Introduction to Comparative Literature II
COMP LIT 2J03 Twentieth-Century German Film and Fiction
COMP LIT 3F03 The Metamorphoses of Don Juan
COMP LIT 3FF3 The Literature of The Delinquent
COMP LIT 3HH3 World Poetry
COMP LIT 3WW3 International Women Writers
COMP LIT 4G03 Berlin/Vienna: The Cultural Life of a City
COMP LIT 4J03 The Split Screen - Reconstructing National Identities in West and East German Cinema
COMP LIT 4T03 Special Topics

## 5. DEPARTMENT OF ENGLISH AND CULTURAL STUDIES

- Revision of Areas of Study
- Ten new courses:

CSCT 2C03
ENGLISH 2H06
ENGLISH 2T03 Comparative Literary Studies I
ENGLISH 2TT3 Comparative Literary Studies II
ENGLISH 3F03 The Fairy Tale
ENGISH 3GG3 European Drama
ENGLISH 4ER3 European Romanticism
ENGLISH 4IP3 Literature of Israel and Palestine
ENGLISH 4KK3 Kafka After Kafka
ENGLISH 4PR3 Literature as Peace Research

- Two new cross-listings:

The following courses are cross-listed as English courses as shown above.
CSCT 4IP3 Literature of Israel and Palestine
CSCT 4PR3 Literature as Peace Research

- Five course deletions:

ENGLISH 2X06 American Literature: Colonialization, Revolution and Slavery

ENGLISH 2 Y06
CSCT/ENGL 4FR3
CSCT/ENGL 4FT3
CSCT/ENGLI4LM3

American Literature: Postbellum, Modern and Contemporary
Fantasies of the Orient in $18^{\text {th }}$-Century Britain
The Fairy Tale
Eighteenth-Century Machine Life

## 6. DEPARTMENT OF FRENCH

- Revision of program requirements for Honours and Combined Honours French
- One course deletion:

FRENCH 2N03 Introduction to the Civilization of France

## 7. DEPARTMENT OF HISTORY

- Revision of Fields of Study
- Seven new courses:

HISTORY 3CG3 Canadians in a Global Age, 1914 to the Present
HISTORY 3CW3 Canada in a World of Empires, 1492-1919
HISTORY 3H03 Italian Renaissance, 1300-1600
HISTORY 3SA3 South Asia
HISTORY 3S03 History of Exercise and Sports Medicine
HISTORY 4L06 The Cultural History of London, 1840-1970
HISTORY 4YY6 The World Wars

- Two renumbered courses:

HISTORY 2A03 The Modern Middle East
HISTORY 2N03 Early Modern France

- Five course deletions:

HISTORY 2EB3 Islam in the World, 1300-1800
HISTORY 3AA3 The Modern Middle East
HISTORY 3T03 Early Modern France
HISTORY 3TT3 Leisure and Entertainment in Greece and Rome
HISTORY 4Y06 The Second World War

## 8. HUMANITIES

- One new cross-listing:

HUMAN 2A03 Foreign Culture Through Film and Music

## 9. DEPARTMENT OF LINGUISTICS AND LANGUAGES

- Revision to program requirements for Honours Linguistics and Linguistic Cognitive Science
- Change of Subject Code from HISPANIC to SPANISH
- Fourteen new courses:

CHINESE 1Z06 Mandarin Chinese for Beginners
CHINESE 1ZZ6 Mandarin Chinese for Dialect Speakers
CHINESE 2Z06 Intermediate Mandarin Chinese
GERMAN 3F03 The German-Canadian Experience (Taught in English)
GERMAN 3H03 The New Europe: A New Germany (Taught in English)
ITALIAN 2M03 Modern Italy in Its Writings (Taught in English)
ITALIAN 3C03 The Italian-Canadian Experience (Taught in English)
LINGLANG 2A03 Foreign Culture Through Film and Music
LINGUSIT 2D03 Research Methods
LINGUIST 2FL3 Introduction to Forensic Linguistics
LINGUIST 4F03 Cognitive Neuroscience of Language

SPANISH 2D03 Multiculturalism and Globalization in the Spanish Middle Ages (Taught in English)
SPANISH 3A03 The Latino "Soul": Gender and Sexualities in Latin America's Culture (Taught in English)
SPANISH 3B03 "Spanglish": A Linguistics and Cultural Study of Spanish in North America (Taught in English)

- Twenty-one renumbered courses:

| GERMAN 2S03 | The Split-Screen - Reconstructing National Identities in West and East <br> German Cinema |
| :--- | :--- |
| ITALIAN 3Z03 | Advanced Grammar Practice |
| ITALIAN 3ZZ3 | Composition and Stylistics I |
| ITALIAN 4Z03 | Composition and Stylistics II |
| JAPANESE 3Z03 | Advanced Intensive Japanese I |
| JAPANESE 3ZZ3 | Advanced Intensive Japanese II |
| POLISH 1Z03 | Beginner's Polish I |
| POLISH 1ZZ3 | Beginner's Polish II |
| POLISH 2Z03 | Intermediate Polish I |
| POLISH 2ZZ3 | Intermediate Polish II |
| RUSSIAN 1Z03 | Intensive Beginner's Russian I |
| RUSSIAN 1ZZ3 | Intensive Beginner's Russian II |
| RUSSIAN 2Z03 | Intermediate Russian I |
| RUSSIAN 2ZZ3 | Intermediate Russian II |
| SPANISH 2A03 | Spanish-American Civilization and Culture (Taught in English) |
| SPANISH 2C03 | Introduction to Spanish American Literature (Taught in English) |
| SPANISH 3Z03 | Language Practice I |
| SPANISH 3ZZ3 | Spanish Translation |
| SPANISH 2B03 | Spanish and Latin American Culture Through Cinemas |
| SPANISH 3C03 | Representative Dramatists of 20th-Century Spain |
| SPANISH 4Z03 | Language Practice II |

- One deletion of a cross-listing:

JAPAN ST 4S03 Japanese Business

## - Thirty-six course deletions:

GERMAN 3B03

GERMAN 4FF3
GERMAN 4G03
GERMAN 4H03
GERMAN 4HH3
GERMAN 4J03

GERMAN 4K03
HISPANIC 2C03
HISPANIC 2D03
HISPANIC 2DD3
HISPANIC 2L03
HISPANIC 2X03
HISPANIC 2XX3
HISPANIC 3X03
HISPANIC 3Y03
HISPANIC 4A03
HISPANIC 4D03

Globalization and Autonomy: German War Narratives from the 18th Century to the Present
German Folklore and Fairy Tales
Berlin/Vienna: The Cultural Life of a City
The Holocaust in German Film and Fiction
German Language Through the Ages
The Split-Screen - Reconstructing National Identities in West and East German Cinema
Franz Kafka and 'Minor Literature' in Contemporary German Culture
Contemporary Spanish-American Culture
Intensive Spanish for Native Speakers I
Intensive Spanish for Native Speakers II
Introduction to Spanish American Literature
Contemporary Spain
Spain in the Western Tradition
Language Practice I
Spanish Translation
The Spanish American Novel (Before 1954)
Humour in Latin American Literature

HISPANIC 4L03 Spain's Great Myths: Don Quijote and Don Juan
HISPANIC 4M03
Heroes and Anti-Heroes in Spanish Literature
HISPANIC 4N03
HISPANIC 4P03
The Spanish American Short Story
HISPANIC 4Q03
HISPANIC 4R03
The Boom Generation and Their Short Stories

HISPANIC 4V03
Spanish and Latin American Culture Through Cinemas
Women Writers of Latin America and Spain
HISPANIC 4XX3
ITALIAN 1ZZ6
ITALIAN 2F03
ITALIAN 3A03
ITALIAN 3D03
ITALIAN 3Y03
ITALIAN 4A03
ITALIAN 4X03
ITALIAN 4XX3
Representative Dramatists of $20^{\text {th }}$-Century Spain
Language Practice II
Beginners' Accelerated Italian
Introduction to the Study of Literature: Il Neorealismo
Advanced Grammar Practice
Composition and Stylistics I
Culture and Society in Renaissance Italy
Composition and Stylistics II
Love and Life in The Middle Ages
Dante's World
ITALIAN 4YY3
Risorgimento: The Romantic Quest for a Nation
JAPANESE 3A03 Advanced Intensive Japanese I
JAPANESE 3AA3 Advanced Intensive Japanese II
POLISH 2A03 Beginner's Polish I
POLISH 2AA3 Beginner's Polish II
POLISH 3A03 Intermediate Polish I
POLISH 3AA3 Intermediate Polish II
RUSSIAN 2A03 Intensive Beginner's Russian I
RUSSIAN 2AA3 Intensive Beginner's Russian II
RUSSIAN 3A03 Intermediate Russian I
RUSSIAN 3AA3 Intermediate Russian II

## 10. PEACE STUDIES

- Three renumbered courses:

PEACE ST 2F03 The Modern Middle East
PEACE ST 4IP3 The Literature of Israel and Palestine
PEACE ST 4PR3 Literature as Peace Research

- Three course deletions:

PEACE ST 3F03 The Modern Middle East
PEACE ST 3MM3 The Literature of Israel and Palestine
PEACE ST 4D03 Literature as Peace Research

## 11. WOMEN'S STUDIES

- Four new cross-listings:

WOMEN ST 2B03
WOMEN ST 2BB3
WOMEN ST 3FF3
WOMEN ST 4WA3

Women in the Biblical Tradition Images of the Divine Feminine Gender and Religion Women as Public Intellectuals

- One course deletion:

WOMEN ST 3WW3 International Women Writers

## SCHOOL OF THE ARTS

## REVISION OF PROGRAM:

Rationale: Admission into the Honours Music Cognition program is being revised to simplify the process.

## HONOURS MUSIC (MUSIC COGNITION) ADMISSION

Enrolment in this program is limited, and admission is by selection but Admission requires, as a minimum, completion of Music I, a Cumulative Average of at least 6.0, and an average of at least 7.0 in PSYCH 1A03 and 1AA3 (or 1X03 and 1XX3). PSYCH 1 A03 and 1AA3 (or 1 X03 and 1XX3). A written personal statement is also required.

## NEW COURSE:

ART 3J03 CREATIVE COLLABORATIVE PROJECT
This course provides an opportunity for cross-discipline and cross-faculty interdisciplinary projects combining art with another area of study. Discussions, lectures, workshops and creative collaborative projects are included in this course.
Four hours; one term
Prerequisite: Registration in Level III or IV of any Honours Program and permission of the School of the Arts. Students must submit a written proposal to the Director of the School of the Arts by April 15 of the preceding academic year.
Course Capacity: 20 Categories: NIL
Rationale: Given the limited resources of the Studio area, this course is a creative solution for interdisciplinary teaching and learning.

## RENUMBERED COURSE:

## THTR\&FLM 4J03 THE SPLIT SCREEN - RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA

Rationale: This cross-listed course is being renumbered as THTR\&FLM 2S03 to reflect a change in the level of the course which was made by the Department of Linguistics \& Languages.

## NEW CROSS-LISTING:

THTR\&FLM 2P03 Performance and Performativity - cross-listed as CMST 2G03
Rationale: CMST $2 G 03$ was conceived in part by the Theatre and Film Studies program, but cross-listed as SOTA 2G03. However, enrolment in SOTA 2G03 over the years has been very low so this cross-listing is being deleted. CMST $2 G 03$ will now be cross-listed as THTR\&FLM 2P03 in order to increase course visibility to students registered in the Theatre \& Film Studies program.

## DELETION OF A CROSS-LISTING:

SOTA 2G03
Performance and Performativity (see THTR\&FLM 2P03 explanation above)

## COURSE DELETIONS:

MUSIC 2Y03
MUSIC 2YY3
THTR\&FLM 3Q03
THTR\&FLM 3YY3

History of Western Music: Romantic to Present
History of Western Music: Medieval and Renaissance
Topics in National Cinemas I
Non-Western Performance in Action

Rationale: MUSIC $2 Y 03$ and 2YY3 are being deleted as a result of last year's restructuring of the Level I and II music history courses. THTR\&FLM 3Q03 and 3YY3 were designed for rotation, but have not been offered in many years.

## - A A A

## DEPARTMENT OF CLASSICS

## NEW COURSES:

## CLASSICS 3B03 TOPICS IN CLASSICAL ARCHAEOLOGY

Studies of Classical material culture and archaeological sites.

Three lectures; one term
Prerequisite: Six units from CLASSICS 1A03, 2B03, 2C03 or registration in Level III or above of a program in Classics
Classics 3B03 may be repeated, if on a different topic, to a total of six units
Offered on an irregular rotation basis.
Course capacity: 50 Categories: CL2-50\%; OTH-50\%
Rationale: This new course will provide flexibility in archaeological offerings parallel to that present in the Department's History and Literature courses. It will be taught by Togo Salmon post docs.

## CLASSICS $3 Z 03$ SATIRE

A study of Greek and especially Roman satirical writing in translation, with a stress on attack, entertainment and preaching.
Three lectures; one term
Prerequisite: Six units from CLASSICS 2D03, 2E03, 2H03, 2Y03, 2YY3 or registration in Level III or above of a program in Classics
Cross-list: COMP LIT 3Z03
Offered in alternate years
Course capacity: 50 Categories: CL2-55\%; CP2 - 15\%; OTH-30\%
Rationale: CLASSICS $3 Z 03$ is an addition to the Department's literature/myth stream of course offerings.

## RENUMBERED COURSES:

GREEK 3AA3
GREEK 3C03
GREEK 3BB3
GREEK 4T03
LATIN 3AA3
LATIN 3C03
LATIN 3BB3
LATIN 4T03

Greek Prose (formerly 4AA3)
Greek Drama (formerly 4B03)
Topics in Greek Literature (formerly 4BB3)
Independent Study (formerly 4K03)
Latin Prose (formerly 4AA3)
Latin Love Poetry (formerly 4B03)
Topics in Latin Literature (formerly 4BB3)
Independent Study (formerly 4KO3)

Rationale: Level IV Greek and Latin literature courses are being renumbered as Level III courses since these are available to students with a Level II background in grammar and literary criticism. The Independent Study courses are being renumbered for consistency in the numbering of such courses in the Department.

## COURSE DELETIONS:

CLASSICS 2Z03
CLASSICS 3TT3
CLASSICS 3Y03
GREEK 4AA3
GREEK 4B03
GREEK 4BB3
GREEK 4K03
LATIN 4AA3
LATIN 4B03
LATIN 4BB3
LATIN 4K03

Greek and Roman Religion (previously "parked"- no longer fits with the Dept.'s priorities)
Leisure and Entertainment in Greece and Rome (faculty resignation)
Classical Literatures and Beyond (previously "parked"- faculty resignation)
Greek Prose (renumbered to GREEK 3AA3)
Greek Drama (renumbered to GREEK 3C03)
Topics in Greek Literature (renumbered to GREEK 3BB3)
Independent Study (renumbered to 4T03)
Latin Prose (renumbered to LATIN 3AA3)
Latin Love Poetry (renumbered to LATIN 3C03)
Topics in Latin Literature (renumbered to LATIN 3BB3)
Independent Study (renumbered to 4T03)

## DEPARTMENT OF COMMUNICATION STUDIES AND MULTIMEDIA

## REVISION OF PROGRAMS:

## HONOURS MULTIMEDIA PROGRAMS

Rationale: Rapid changes in the multimedia industry and technologies require continual review and updating of this program with audio, visual, and programming being some of the key areas for improvement. The Single Honours and Combined Honours programs are being revised to ensure that students have the key competencies needed in this field
and include: (i) an increase in the overall required units for Multimedia courses, (ii) a decrease in the number of electives, and (iii) modification of the requirements to reflect the new and deleted courses. These program requirements will be effective for September 2009. Students currently registered in the programs will complete their degree requirements in accordance with the requirements in effect when they entered the program.

## HONOURS MULTIMEDIA:

## COURSE LIST 1

COMP SCI 1MA3, 2SC3; MMEDIA 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 4C03, 4D03, 4F03, 4J03

## COURSE LIST 2

CMST 2DD3, 2E03, 2G03, 2H03, 2K03, 2S03, 2T03, 3C03, 3CC3, 3H03, 3I03, 3K03, 3MM3, 3N03, 4I03
REQUIREMENTS
1827 units MMEDIA 2A03, 2B03, 2G03, 2K03, 3A03, 3B03, 3M03, 4A03, 4B03
12 units CMST 1A03, 2A03, 2B03, 2C03
3 units from MMEDIA 2C03, 2G03
15 units from Course List 1
6 units from Course List 2
3630 units Electives

## COMBINED HONOURS IN MULTIMEDIA AND ANOTHER SUBJECT:

## COURSE LIST

CMST 2T03, COMP SCI 1MA3, 2SC3; LINGUIST 4D03; MMEDIA 2C03, 2D03, 2E03, 2F03, 2G03,-2H03, 2I03, 2J03, 2K03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03,-3K03, 4C03, 4D03, 4F03, 4J03; MUSIC 2F03; THTR\&FLM 2E03; WOMEN ST 2D03

## REQUIREMENTS

| 1827 units | MMEDIA 2A03, 2B03, 2G03, 2K03, 3A03, 3B03, 3M03, 4A03, 4B03 |
| :---: | :---: |
| 3 units | from MMEDIA 2C03, 2G03 |
| 15-12 units | from Course List |
| 36 units | Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.) |
| 1815 units | Electives to total 120 units |

## NEW COURSES:

## CMST 3S03

## TELEVISION AND SOCIETY

This course will examine television as a socio-cultural and political phenomenon. This course will involve theoretical and empirical analysis of the television industry, production, texts and genres, and audiences. Major debates in television studies will be addressed.
Three hours; one term
Prerequisite: Registration in Level III or above of a program in Communication Studies
Course capacity: 75 Categories: NIL
Rationale: CMST 3 S03 covers a crucial aspect of communication studies (television) and broadens offerings in this area.

## MMEDIA 2K03 INFORMATION TECHNOLOGY CONCEPTS

Students will study essentials in computer architecture and data network services for multimedia. Critical readings and class discussions will include the history of computing, networking and the internet.
One lecture (two hours), one tutorial; one term
Prerequisite: Registration in a Multimedia program
Antirequisite: MMEDIA 2C03 and 3G03
Course capacity: 50
Categories: NIL
Rationale: This course will integrate course material from MMEDIA 2C03 and 3G03 to facilitate students' learning in computer architecture and data network services from multimedia into one course.

## MMEDIA 3M03 PROGRAMMING FUNDAMENTALS

This course exposes students to core programming concepts relevant to a wide range of interactive multimedia works.

Students will create simple web applications that incorporate server-side scripting and client-side functionality. Three hours (lecture and lab); one term
Prerequisite: MMEDIA 3A03; and registration in a Multimedia program
Course capacity: $50 \quad$ Categories: NIL
Rationale: This course builds on programming concepts introduced in MMEDIA 3A03 that will prepare students for advanced concepts and technologies.

## MMEDIA 4F03 TOPICS IN MULTIMEDIA PRODUCTION

Advanced multimedia production in a topic to be determined by the instructor. Topics may include: mobile application development, digital game design, autonomic computing, visualization, interactive installation art, video, animation, photography. This course is not repeatable.
Three hours (lecture and lab); one term
Prerequisite: Registration in Level IV of a Multimedia program
Course capacity: 25 Categories: NIL
Rationale: This course will increase variety and flexibility in the course offerings.

## MMEDIA 4J03 BUILDING SOCIAL WEB APPLICATIONS

Students will learn to design and build media-rich, social networking web applications with a significant server-side component (including interaction with a database) and an interactive client-side component (using Javascript libraries). Three hours (lecture and lab); one term Prerequisite: MMEDIA 3A03 and 3M03 and registration in Level IV of a Multimedia program
Course capacity: 25 Categories: NIL
Rationale: This course builds on concepts and technologies in MMEDIA 3J03 and provides advanced coursework in programming at the $4^{\text {th }}$ year level.

## COURSE DELETIONS:

MMEDIA 2C03
MMEDIA 2D03
MMEDIA 3D03
MMEDIA 3E03
MMEDIA 3G03
MMEDIA 3 J03
MMEDIA 4C03
MMEDIA 4D03

Computer Architecture for Multimedia<br>Electronic Textuality and Programming Technical Writing and Communication (currently "parked") Interactive Digital Culture Network Services for Multimedia Programming for The Web Computers in Education Topics in Visualization

## Rationale:

- Relevant material from MMEDIA 2C03 and 3G03 has been migrated to create MMEDIA 2K03 which provides an introduction to both computer architecture and network services and is based on the need for students to have a basic introduction to these concepts and technologies in one required course.
- Students find the material in MMEDIA 2D03 to be quite challenging at Level II because it involves programming. The content of this course is more appropriately taught at higher levels.
- MMEDIA 3D03 and 3E03 have not been taught for many years and should, therefore, be deleted.
- The programming provided by MMEDIA $3 J 03$ is being incorporated into 3M03 to provide better course coordination building on programming concepts introduced in 3A03.
- MMEDIA 4C03 was designed as a teachable subject, but was never recognized as such by the school boards. Course content has been revamped substantially under the new MMEDIA $4 J 03$.
- MMEDIA 4D03 content has been redesigned and made available in the new MMEDIA 4F03.


## COMPARATIVE LITERATURE

## DELETION OF PROGRAM AND MINOR:

In 2007, the Comparative Literature Program underwent a very productive Undergraduate Program Review. The review team applauded the many achievements of Comparative Literature in its "long and successful history" at McMaster, but also recognized that, "as a result of resource restraints," the program "cannot prosper in its present circumstances" and is no longer viable as an independent entity. One possible scenario proposed by the review teamto "close the Comparative Literature Program but incorporate its unique contributions to the Faculty's curriculum into another unit"-has been adopted. Specifically, arrangements have been made with the Department of English and Cultural Studies to incorporate "the expertise of core faculty members in Comparative Literature in general areas of literary studies" in the curriculum of that department by offering eight of the core Comparative Literature courses as English courses: COMP LIT 1A03, 1AA3, 3EE3, 3G03, 3JJ3, 3MM3, 4A03, and 4D03. This will be done without moving any faculty members from their home departments.

The two introductory courses, COMP LIT 1A03 and COMP LIT 1AA3, will be deleted, but will be revised and introduced as English courses at level two: ENGLISH $2 T 03$ and ENGLISH 2TT3. The other six courses will initially be cross-listed as English courses and administered by the Department of English and Cultural Studies: COMP LIT 3EE3/ENGL 4KK3; COMP LIT 3G03/ENGL 3GG3; COMP LIT 3JJ3/ENGL 3F03; COMP LIT 3MM3/ENGL 4IP3; COMP LIT 4A03/ENGL 4ER3; COMP LIT 4D03/ENGL 4PR3. Once students currently in the program have completed their requirements for the degree, the COMP LIT cross-listings will be deleted and the courses will be offered as ENGLISH courses only. Thus, eight core courses will be incorporated into the curriculum of the Department of English and Cultural Studies, and the review team's vision of "a successful accommodation of at least some parts of the Comparative Literature program" within that unit will have been achieved. Comparative Literature will, in this new form, continue "to make a distinct and lively contribution" to McMaster’s academic mission.

As the program is phased out, a number of courses will be deleted each year. Courses that are cross-listed with other departments will be retained as COMP LIT courses until students currently registered in the program have completed their degree requirements. No new registrants will be accepted after the 2008-09 academic session. The Director will meet with each of the 24 in-course program students to determine a plan for program completion; 8 of these students are in level IV (and should graduate at the end of this academic year), 9 are in level III, and 7 are in level II. The Minor in Comparative Literature will be available until the students currently in level II complete their degree requirements.

## NEW CROSS-LISTINGS:

COMP LIT 3Z03

## SATIRE

Rationale: COMP LIT $3 Z 03$ reflects a new course offered by the Department of Classics. This cross-listing will enhance the number of courses available to Comparative Literature program students who are attempting to complete their degree requirements.

COMP LIT 3EE3
COMP LIT 3G03
COMP LIT 3JJ3
COMP LIT 3MM3
COMP LIT 4A03
COMP LIT 4D03

Will now be cross-listed as ENGLISH 4KK3/CSCT 4KK3
Will now be cross-listed as ENGLISH 3GG3
Will now be cross-listed as ENGLISH 3F03
Will now be cross-listed as ENGLISH 4IP3/CSCT 4IP3/PEACE ST 4IP3
Will now be cross-listed as ENGLISH 4ER3
Will now be cross-listed as ENGLISH 4PR3/CSCT 4PR3/PEACE ST 4PR3

## RENUMBERED COURSE:

COMP LIT 2S03 The Split Screen - Reconstructing National Identities In West And East German Cinema (formerly COMP LIT 4J03)

Rationale: This cross-listed course is being renumbered as COMP LIT 2SO3 to reflect a change in Level made by the Dept. of Linguistics \& Languages.

## COURSE DELETIONS:

COMP LIT 1A03 Introduction to Comparative Literature I

COMP LIT 1AA3 Introduction to Comparative Literature II
COMP LIT 2J03
COMP LIT 3F03
COMP LIT 3FF3
COMP LIT 3HH3
COMP LIT 3WW3
COMP LIT 4G03
COMP LIT 4J03
COMP LIT 4T03
Twentieth-Century German Film and Fiction
The Metamorphoses of Don Juan
The Literature of The Delinquent
World Poetry
International Women Writers
Berlin/Vienna: The Cultural Life of a City
The Split Screen - Reconstructing National Identities in West and East German Cinema (renumbered as COMP LIT 2S03) Special Topics

## DEPARTMENT OF ENGLISH AND CULTURAL STUDIES

## REVISION OF PROGRAMS:

Rationale: The Department is revising the name of two of its Areas of Study to incorporate the addition of Comparative Literature courses into its curriculum.

|  | AREA | ENGLISH COURSES |
| :--- | :--- | :--- |
| AREA 1 | Early British and <br> Comparative Literature | 2BO6, 2T03, 3C06, 3I06, 3KO6, 3L06, <br> 3V06 |
| AREA 2 | Later British and <br> Comparative Literature | 2I06, 2TT3, 3G06, 3M06, 3N06 |
| AREA 3 | Canadian, American, <br> and Post-Colonial | 2G06, 2H06, 2X06, 2Y06,3R06 |
| AREA 4 | Theory and Cultural <br> Studies | 2A03, 2K06, 2M03, 2MM3, 3A03, <br> 3AA3, 3J03, 3JJ3, 3Q03, 3QQ3 |

## NEW COURSES:

## CSCT 2C03 THE CULTURAL STUDY OF MUSIC

An introduction to the role music plays in shaping culture, with particular emphasis on constructions of identity. Topics may include music and everyday life, geopolitical conflict, new media/technology, and national identity.
Three hours; one term
Prerequisite: Registration in a Combined Honours program in Cultural Studies and Critical Theory
Antirequisite: MUSIC 1Y03
Course capacity: 50 Categories: NIL
Rationale: The Cultural Studies and Critical Theory program has been deficient in its offerings in the cultural study of music. This course will fill that need and will be incorporated into the program's list of Core courses.

## ENGLISH 2H06 AMERICAN LITERATURE

A survey of American literature with focus on selected authors, genres, or themes.
Three hours; two terms
Prerequisite: Registration in a program in English
Antirequisite: ENGLISH 2X06, ENGLISH 2 Y06
Course capacity: 145 Categories: NIL
Rationale: The current courses in American Literature, ENGLISH 2X06 and 2Y06, are being deleted and replaced by ENGLISH 2 H 06 which will provide faculty with more flexibility in teaching the full range of literature in the American tradition in one course.

## ENGLISH 2T03

COMPARATIVE LITERARY STUDIES I
An exploration of selected literary works (read in English translation) from texts of antiquity to the beginnings of modern literature.
Three hours; one term
Prerequisite: Registration in a program in English
Antirequisite: COMP LIT 1A03
Course capacity: 50
Categories: NIL

## ENGLISH 2TT3 COMPARATIVE LITERARY STUDIES II

An exploration of selected literary works (read in English translation, where necessary) from the 18th century on.
Three hours; one term
Prerequisite: Registration in a program in English
Antirequisite: COMP LIT 1AA3
Course capacity: 50 Categories: NIL
Rationale: ENGLISH $2 T 03$ and 2TT3 (formerly COMP LIT 1A03 and 1AA3 respectively) are being incorporated into the Department from the Comparative Literature Program and will form part of the training for English program students in foundational literary texts and comparative literary studies.

## ENGLISH 3F03 THE FAIRY TALE

An examination of fairy tales from a variety of cultures and historical periods. Students will also explore theories of the folktale and their implications for our understanding of other literary genres.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 3JJ3
Course capacity: 300 Categories: NIL

## ENGLISH 3GG3 EUROPEAN DRAMA

A study of representative plays by major European dramatists from the $18^{\text {th }}$ century to the present.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 3G03
Course capacity: 200 Categories: NIL

## ENGLISH 4ER3 EUROPEAN ROMANTICISM

A study of selected literary texts of European Romanticism, including women's writing of the period. Attention is also given to Romantic aesthetic theory.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: COMP LIT 4A03
Departmental permission required.
Course capacity: 20
Categories: EGL-50\%; CP2-50\%

## ENGLISH 4IP3 LITERATURE OF ISRAEL AND PALESTINE

Through the study of relevant literature and film, with a focus on contemporary Israeli and Arab texts, students gain a context for the exploration of conflicts in the Middle East.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English
Antirequisite: PEACE ST 3MM3
Cross-list: COMP LIT 3MM3, CSCT 4IP3, PEACE ST 4IP3
Departmental permission required.
Course capacity: 20 Categories: EGL-40\%; CCT-10\%; CP2-30\%; PC2-20\%

## ENGLISH 4KK3 KAFKA AFTER KAFKA

This course examines the influence of Franz Kafka's fiction on writers, critics, and film makers of the $20^{\text {th }}$ century.

Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: COMP LIT 3EE3, CSCT 4KK3
Departmental permission required.
Course capacity: 20 Categories: EGL-50\%; CP2-50\%

## ENGLISH 4PR3 LITERATURE AS PEACE RESEARCH

An exploration of new ways of thinking about war, peace, human security and conflict transformation, with emphasis on a close study of selected literary texts.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English
Cross-list: COMP LIT 4D03, CSCT 4PR3, PEACE ST 4PR3
Antirequisite: PEACE ST 4D03
Departmental permission required.
Course capacity: 20
Categories: EGL-40\%; CCT-10\%; CP2-30\%; PC2-20\%
Rationale: ENGLISH 3F03, 3GG3, 4ER3, 4IP3, 4KK3 and 4PR3 are courses which are being imported into the Department from the Comparative Literature Program. The cross-listings as COMP LIT courses will be retained until such time that Comparative Literature program students complete their degree requirements.

## NEW CROSS-LISTINGS:

CSCT 4IP3 Literature of Israel And Palestine - cross-listed as ENGLISH 4IP3
CSCT 4KK3
Kafka After Kafka - cross-listed as ENGLISH 4KK3
CSCT 4PR3 Literature as Peace Research - cross-listed as ENGLISH 4PR3

## COURSE DELETIONS:

ENGLISH 2X06 American Literature: Colonialization, Revolution \& Slavery
ENGLISH 2Y06 American Literature: Postbellum, Modern and Contemporary
Rationale: ENGLISH 2 X06 and 2Y06 are being replaced by 2H06(see above).
CSCT/ENGLISH 4FR3 Fantasies of The Orient In $18^{\text {th }}$-Century Britain
CSCT/ENGLISH 4FT3 The Fairy Tale
CSCT/ENGLISH 4LM3Eighteenth-Century Machine Life
Rationale: The deletion of ENGLISH 4FR3, 4FT3, and 4LM3 result from faculty leaving the University and a retirement.)

## DEPARTMENT OF FRENCH

## REVISION OF PROGRAMS:

The Single Honours and Combined Honours programs in French are being revised to include a French-Canadian component (i.e., three units from FRENCH 3AA3 or 4U03) in the degree which would parallel the current Culture course selection and the African and Caribbean Literatures selection of courses.

## HONOURS FRENCH

## REQUIREMENTS

12 units FRENCH 2B03, 2BB3, 3C03, 4A03
9 units FRENCH 2E03, 2F03, 2H03
3 units from FRENCH 3Z03, 4LL3
3 units from FRENCH 3AA3, 4U03
12 units from FRENCH 2J03 or 2JJ3; 3K03 or 3KK3; 3Q03 or 3QQ3; 3W03 or 3WW3; 3Y03, 4J03, or 4S03
129 units Levels II, III or IV French
6 units Level IV French
36 units Electives

# COMBINED HONOURS IN FRENCH AND ANOTHER SUBJECT <br> REQUIREMENTS 

12 units FRENCH 2B03, 2BB3, 3C03, 4A03
96 units FRENCH 2E03, 2F03, 2H03
3 units from FRENCH 3Z03, 4LL3
3 units from FRENCH 3AA3, 4U03
12 units from FRENCH 2J03 or 2JJ3; 3K03 or 3KK3; 3Q03 or 3QQ3; 3W03 or 3WW3; 3Y03, 4J03, or 4S03
36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units Electives to total 120 units

## COURSE DELETION:

FRENCH 2N03 Introduction to the Civilization of France
Rationale: With the offering of FRENCH 2F03 (Survey of French Literature) and 3F03 (French Civilization and Culture), this course has not been taught for several years as it has become redundant.

## $\boldsymbol{\Delta} \boldsymbol{A} \boldsymbol{A}$

## DEPARTMENT OF HISTORY

## REVISION OF PROGRAMS:

The Department is expanding its breadth requirement to cover four Areas and adjusting the program requirements accordingly as shown in the Notes below for each program. This will provide more flexibility to History program students who often had to rely on cross-listed courses from Classics to fulfill the requirement as it was previously stated.

## Honours History

Notes - In selecting courses, students must ensure that they take a minimum of six units in each of three fields of history any two fields of history and three units in each of the other two fields. This requirement must be satisfied by the end of Level III. All Level II and III history courses from the above list may be used towards this requirement.

## Combined Honours in History and Another Subject

Notes - In selecting courses, students must ensure that they take a minimum of three units in each of three four fields of history. This requirement must be satisfied by the end of Level III. All Level II and III history courses from the above list may be used toward this requirement.

## B.A. in History

Notes - In selecting courses, students must ensure that they take a minimum of three units in each of three four fields of history. All Level II and III history courses from the above list may be used towards this requirement.

|  | FIELDS | HISTORY COURSES |
| :--- | :--- | :--- |
| FIELD 1 | Europe <br> (including <br> Britain) | 2CC3, 2DD3, 2EE3, 2F03, 2FF3, 2II3, 2K03, 2LA3, <br>  |
| 2LB3, 2LC3, 2LD3, 2M03, 2MM3, 2N03, 2Q03, 2QQ3, |  |  |
| FIELD 2 | 3D03, 3E03, 3EE3, 3FF3, 3H03, 3HH3, 3I03, 3M03, 3MA3, <br> 3MB3, 3PP3, 3QQ3, 3R03, 3RR3, 3SS3, 3T03, 3TT3, 3VV3, <br> 3X03, 3YY3 |  |
| FIELD 3 | Middle East | The Americas |
|  |  | 2A03, 2HH3, 2J03, 2JJ3, 3A03, 3AA3, 3B03, 3BB3, <br> 3DD3, 3GG3, 3SA3, 3TT3 |
| FIELD 4A3, 2D03, 2G03, 2R03, 2RR3, 2T03, 2TT3, 3G03, |  |  |
| 3 | Global History, 3J03, 3K03, 3KK3, 3N03, 3NN3, 3P03, 3W03, |  |
| 3WW3, 3Y03 |  |  |

## NEW COURSES:

## HISTORY 3CG3 CANADIANS IN A GLOBAL AGE, 1914 TO THE PRESENT

This course considers ways in which global developments influenced and were influenced by Canadian peoples, with a thematic emphasis on selected developments such as wars and revolutions, the development of international alliances and organizations, and the spread of mass communication and consumer culture.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Course capacity: 65 Categories: HT2-70\%; OTH-30\%

## HISTORY 3CW3 CANADA IN A WORLD OF EMPIRES, 1492-1919

A thematic exploration of the interactions of European and North American cultures and societies in the northern half of the continent, with special attention to the fate of European imperial projects, ideologies and institutions in the new world.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Course capacity: 65 Categories: HT2-70\%; OTH-30\%
Rationale: The addition of HISTORY 3CG3 and 3CW3 will allow the Department to explore approaches to the teaching of undergraduate Canadian history from a global perspective. Demand for Canadian history courses at Level III is strong and most Faculties of Education require at least six units of Canadian history for admission.

## HISTORY 3H03 ITALIAN RENAISSANCE, 1300-1600

An examination of the nature and influence of one of the most important cultural episodes in European history. Topics will include the Italian merchant and urban life, political culture, humanism, art and architecture.
Three lectures; one term
Prerequisite: Registration in Level II or above
Course capacity: 65 Categories: HT2-70\%; OTH-30\%
Rationale: HISTORY $3 H 03$ will provide the only focused study of Italy in the Department's offerings and will appeal to students in other disciplines interested in literature, art history and political science. It complements early modern Ottoman courses by offering a European perspective on the Mediterranean as a zone of cultural interaction.

## HISTORY 3SA3 SOUTH ASIA

Lectures will explore the most significant cultural, political, social, and intellectual themes of the region's history.
Three lectures; one term
Prerequisite: Registration in Level II or above
Course capacity: 150 Categories: HT2-43\%; OTH-57\%

## HISTORY 3503 HISTORY OF EXERCISE AND SPORTS MEDICINE

Selected topics in the social and cultural history of exercise and sports medicine in the Western World, with an emphasis on the $19^{\text {th }}$ - and $20^{\text {th }}$-century developments in North America.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above
Cross-list: KINESIOL 3A03
Course capacity: 65 Categories: HT2-54\%; KIN-31\%; OTH-15\%
Rationale: This course will be taught by a new faculty addition to the Department.

## HISTORY 4L06 THE CULTURAL HISTORY OF LONDON, 1840-1970

Topics to be examined include: London as centre of empire; sexuality and urban spectatorship; housing and transportation; architectural controversy and governance issues; leisure activities and neighbourhood life.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2MM3, 3RR3, or 3YY3 and registration in Level III or IV of any Honours program in History

Departmental permission is required.
Course capacity: 20 Categories: NIL
Rationale: HISTORY 4L06 is a modification of 4E06 which is being "parked".

## HISTORY 4YY6 THE WORLD WARS

An examination of the two world wars of the twentieth century. Topics may include the military, political, social, economic, and intellectual history of the conflicts.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2II3, 2QQ3, 2S03, 3FF3, 3I03, 3Q03, 3R03, or 3YY3; and registration in Level III or IV of any Honours program in History
Antirequisite: HISTORY 4Y06
Departmental permission required.
Course capacity: 20 Categories: NIL
Rationale: HISTORY 4YY6 is a modification of $4 Y 06$ which is being deleted.

## RENUMBERED COURSES:

HISTORY 2A03 The Modern Middle East (formerly 3AA3)
HISTORY 2N03 Early Modern France (formerly 3T03)
Rationale: Students need a Level II introduction as preparation for upper-level courses in these areas.

## COURSE DELETIONS:

HISTORY 2EB3
Islam in The World, 1300-1800 (previously "parked")
HISTORY 3AA3 The Modern Middle East (renumbered as 2A03)
HISTORY 3T03 Early Modern France (renumbered as 2N03)
HISTORY 3TT3 Leisure and Entertainment in Greece and Rome
HISTORY 4Y06 The Second World War
Rationale: HISTORY 2EB3 has not been taught for several years. HISTORY 3TT3 is a cross-listed course which is being deleted by the Department of Classics. HISTORY $4 Y 06$ is being replaced by the expanded 4YY6.

## A A A A

## HUMANITIES COURSES

## NEW CROSS-LISTING:

HUMAN 2A03 Foreign Culture Through Film and Music (cross-listed as LINGLANG 2A03)
Rationale: The Department of Linguistics and Languages is introducing this cross-listed course which will expose students from a variety of disciplines to other cultures.

## DEPARTMENT OF LINGUISTICS AND LANGUAGES

## REVISION OF PROGRAMS:

Rationale: All courses covering the Core Areas of Linguistics (Phonetics, Phonology, Morphology, Syntax and Semantics), together with a course on Research Methods (LINGUIST 2D03), should be required for all students in the Linguistics and Linguistic Cognitive Science programs to ensure that students receive the most complete preparation for the discipline. An adjustment has been made to the overall required units to include LINGUIST 2 D03.

## HONOURS LINGUISTICS

15 18units LINGUIST 2D03, 2L03, 3A03, 3I03, 3II3, 3M03
3 units from LINGUIST 2AA3, 2LL3
3 units from LINGUIST 2E03, 2FL3, 3P03, 3X03
6 units from LINGUIST 3B03, 3C03
3 units from LINGUIST 4F03, 4LB3, 4LC3, 4XX3

3 units from LINGUIST 4I03, 4M03, 4N03, 4R03, 4S03,
from LINGUIST 4B03, 4D03, 4E03, 4T03
12 units from one of the languages (above Level I)
6 units from a second language
18 units from Course List 1 or 2
1815 units Electives

## COMBINED HONOURS IN LINGUISTICS AND ANOTHER SUBJECT

12 units from LINGUIST 2AA3, 2E03, 2FL3, 2LL3, 3B03, 3C03, 3P03, 3X03, 4B03, 4D03, 4F03, 4E03, 4I03, 4M03, 4N03, 4R03, 4S03, 4T03, 4XX3, 4Z03
1218 units from LINGUIST 2D03, 2L03, 3A03, 3I03, 3II3, 3M03
12 units from a language other than English, above Level I.
36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18. 12 units Electives to total 120 units

HONOURS LINGUISTIC COGNITIVE SCIENCE
1518 units LINGUIST 2D03, 2L03, 3A03, 3I03, 3II3, 3M03
3 units from LINGUIST 3C03, PSYCH 3II3
3-6-units from LINGUIST 4B03, 4F03, 4LB3, 4LC3, 4M03, 4XX3, 4Z03, 4ZZ3,
63 units
6 units
6 units
3 units
3 units from PSYCH 2RA3, 2RR3, SOC SCI 2J03 from LINGUIST 3P03, PHILOS 2B03, 3E03, 3F03
from PSYCH 1AA3 (or 1X03), 1XX3 (or 1AA3 or equivalent), 2H03
from LINGUIST 3B03, PSYCH 3U03, 3UU3
from PSYCH 2D03, 2E03, 2F03, 2N03
12 units from a language other than English
3 units from Course List 1
COMBINED HONOURS IN LINGUISTIC COGNITIVE SCIENCE AND ANOTHER SUBJECT
COURSE LIST 1: LINGUIST 4D03, 4II3, 4Z03; PSYCH 3EE3, 3LL3, 3QQ3, 3V03
REQUIREMENTS
12-18 units from LINGUIST 2D03, 2L03, 3A03, 3I03, 3II3, 3M03
3 units from LINGUIST 3C03, PSYCH 3 II3
36 units from LINGUIST 4B03, 4F03, 4LB3, 4LC3, 4M03, 4XX3, 4Z03, 4ZZ3
3 units from LINGUIST 3P03, PHILOS 2B03, 3E03
6 units from PSYCH 1AA3 (or 1X03), 1XX3 (or 1AA3 or equivalent), 2H03
6 units from LINGUIST 3B03, PSYCH 3U03, 3UU3
3 units from PSYCH 2RA3, 2RR3, SOC SCI 2J03
3 units from Course List 1
36 units Courses specified for the other subject.
15- 6 units Electives

## CHANGE OF SUBJECT CODE:

All HISPANIC courses will now be listed as SPANISH courses. The designation "Hispanic" was introduced when the Department was offering Hispanic Studies as a possible major. This was done because the program covered both Spain and the Spanish speaking countries in Central and South America. As the Department is now focusing on language courses, "Spanish" is the most natural label. A statement to this effect will be added to the Calendar at the beginning of the SPANISH course listings. Courses will be renumbered as follows:

| FORMER COURSE CODE | NEW COURSE CODE |
| :---: | :---: |
| HISPANIC 1A03 | SPANISH 1A03 |
| HISPANIC 1AA3 | SPANISH 1AA3 |
| HISPANIC 1Z06 | SPANISH 1Z06 |
| HISPANIC 2C03 | SPANISH 2A03 |
| HISPANIC 2D03 | deleted |


| FORMER COURSE CODE | NEW COURSE CODE |
| :---: | :---: |
| HISPANIC 2DD3 | deleted |
| HISPANIC 2L03 | SPANISH 2C03 |
| HISPANIC 2X03 | deleted |
| HISPANIC 2XX3 | deleted |
| new course | SPANISH 2D03 |
| HISPANIC 2Z03 | SPANISH 2Z03 |
| HISPANIC 2ZZ3 | SPANISH 2ZZ3 |
| new course | SPANISH 3A03 |
| new course | SPANISH 3B03 |
| HISPANIC 4V03 | SPANISH 3C03 |
| HISPANIC 3X03 | SPANISH 3Z03 |
| HISPANIC 3Y03 | SPANISH 3ZZ3 |
| HISPANIC 4A03 | deleted |
| HISPANIC 4D03 | deleted |
| HISPANIC 4II3 | SPANISH 4II3 |
| HISPANIC 4L03 | deleted |
| HISPANIC 4M03 | deleted |
| HISPANIC 4N03 | deleted |
| HISPANIC 4P03 | deleted |
| HISPANIC 4Q03 | SPANISH 2B03 |
| HISPANIC 4R03 | deleted |
| HISPANIC 4YY3 | SPANISH 4A03 |
| HISPANIC 4XX3 | SPANISH 4Z03 |

## RESTRUCTURING OF DEPARTMENTAL LANGUAGE OFFERINGS:

Due to the closure of the Honours B.A. degrees in German, Hispanic Studies, Italian and Japanese Studies, the Department embarked this year on a major restructuring of all language and culture/literature course offerings in the various languages. The following rationale provides a context to understand the various revisions being proposed.

The new offerings are aligned according to four initiatives:

- Canadian Experience Courses - The "-Canadian" experience courses (i.e., GERMAN 3F03, ITALIAN 3C03, and SPANISH 3B03) are an important aspect of the Departmental initiative on ethnic diversity and identity and how it is manifested in language.
- Translation Courses - Level IV translation courses in German, Italian and Spanish are part of a new initiative in socio- and cognitive linguistics within the Departmental Linguistics offerings. These courses will be pivotal for Linguistics program students.
- Language Courses - The Department wishes to offer to interested students a basic set of language courses that would satisfy requirements for the Department's Linguistics programs, graduate studies in Linguistics or the languages, or international career opportunities. The courses will be structured starting with the beginner's intensive 1Z06 course, followed by a three-year progression of language study.
- Culture/Civilization Courses - The new courses listed below for the various languages will be taught in English in order to make courses in foreign culture and civilization available to all students at the university. In addition, some previous courses have been renumbered and taught in English to make them accessible to more students. The Department feels this is an important initiative in view of Canada's multicultural and diverse society. The vast majority of culture/literature courses are being deleted as a result of the program closures.


## NEW COURSES (LANGUAGES):

## CHINESE 1Z06 MANDARIN CHINESE FOR BEGINNERS

An intensive beginner's course in modern standard (Mandarin) Chinese designed for students with no prior knowledge of the language. The focus is on developing proficiency in the skills of listening, speaking, reading and writing. In addition to general knowledge about China and Chinese culture, students will be exposed to some basic Chinese script. Four hours; two terms

Prerequisite: Open, except to dialect speakers. Not available to students with credit in, or registered in, Chinese 1 ZZ6. Course capacity: 75 Categories: NIL

CHINESE 1ZZ6 MANDARIN CHINESE FOR DIALECT SPEAKERS
An intensive beginner's course in modern standard (Mandarin) Chinese designed for students who understand a Chinese dialect, Standard Chinese or proficiency in Chinese script. Speaking, reading and writing are equally emphasized.
Four hours; two terms
Prerequisite: Open. Not available to students with credit in, or registered in, Chinese 1Z06. Students with prior knowledge of the language as determined by a placement test may be required to take an appropriate alternative. Course capacity: 75 Categories: NIL

## CHINESE 2Z06 INTERMEDIATE MANDARIN CHINESE

This course aims to develop students' communicative skills in Mandarin Chinese through speaking, listening, reading and writing practice. Emphasis is on building communicative skills and acquiring fundamental skills to read and write Mandarin in formal and informal contexts.
Four hours; two terms
Prerequisite: CHINESE 1Z06 or 1ZZ6, or permission of the instructor.

## Course capacity: 35 Categories: NIL

Rationale: Chinese courses reflect the Faculty's commitment to diversifying its language offerings.

## GERMAN 3F03 THE GERMAN-CANADIAN EXPERIENCE (TAUGHT IN ENGLISH)

An investigation of the characteristics of the language and culture of the German-Canadian communities in Canada compared to other countries.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: LINGUIST 3G03
Course capacity: 50
Categories: LNG-40\%; LCS-20\% ; OTH-40\%
Rationale: This course provides a more practical complement to LINGUIST $4 I 03$ which explores the theoretical issues of contact languages.

## GERMAN 3H03 THE NEW EUROPE: A NEW GERMANY (TAUGHT IN ENGLISH)

In the heart of the "New Europe" lies a "New Germany," united after almost a half-century of division. But how new, and how united, is this new Germany? German literature and film provide an insight into this fascinating multicultural world.
Three hours; one term
Prerequisite: Registration in Level II or above
Course capacity: 50 Categories: NIL

## ITALIAN 2M03 MODERN ITALY IN ITS WRITINGS (TAUGHT IN ENGLISH)

A look at the depiction of modern Italian society and life by exploring representative print materials, including contemporary novels, newspapers, advertising and song lyrics.
Three hours; one term
Prerequisite: Registration in Level II or above
Course capacity: 75 Categories: NIL
ITALIAN 3C03 THE ITALIAN-CANADIAN EXPERIENCE (TAUGHT IN ENGLISH)
An investigation of the characteristics of the language and culture of the Italian-Canadian community in Canada compared to those in other countries.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: LINGUIST 3 Y03
Course capacity: $50 \quad$ Categories: LNG-40\%; LCS-20\%; OTH-40\%
Rationale: This course provides a more practical complement to LINGUIST $4 I 03$ which explores the theoretical issues of contact languages.

This course will examine the political, social, artistic and cultural interactions of the peoples of the Iberian Peninsula from the early Visigoths and the Hispano-Romans, to the three-caste society of Christians, Muslims and Jews.
Three lectures; one term
Prerequisite: Registration in Level II or above
Course capacity: $75 \quad$ Categories: NIL

## SPANISH 3A03 THE LATINO "SOUL": GENDER AND SEXUALITIES IN LATIN AMERICA'S CULTURE (TAUGHT IN ENGLISH)

This course looks at the representation of women and the stereotypical figure of the "macho/Latin lover" portrayed in various forms of cultural production. With readings as a theoretical base, students will be encouraged to question images of genders as fixed categories of identity in all forms of cultural production.
Three hours; one term
Prerequisite: Registration in Level II or above
Offered in alternate years.
Course capacity: 75 Categories: NIL

## SPANISH 3B03 "SPANGLISH": A LINGUISTIC AND CULTURAL STUDY OF SPANISH IN NORTH AMERICA (TAUGHT IN ENGLISH)

Through a variety of media, the students will explore questions such as: How and when do bilinguals use the mix of Spanish and English? Is there a relationship between nationality, race, ethnicity and language given the variations of Spanglish spoken in the USA and in Canada?
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: LINGUIST 3Z03
Offered in alternate years.
Course capacity: 50 Categories: LNG-40\%; LCS-20\%; OTH-40\%
Rationale: This course provides a more practical complement to LINGUIST 4IO3 which explores the theoretical issues of contact languages.

## NEW COURSE (INTERDISCIPLINARY):

## LINGLANG 2A03 FOREIGN CULTURE THROUGH FILM AND MUSIC

An exploration of contemporary major European and Japanese cultures through film, music and popular media. Topics covered might include cultural stereotypes, communication styles, advertising and interpersonal and international relations.
One term: 2 hours plus one film screening per week
Prerequisite: Registration in Level II or above
Cross-list: HUMAN 2A03
Course capacity: $150 \quad$ Categories: NIL
Rationale: The Department, as part of its restructuring, is introducing an interdisciplinary course involving expertise from faculty teaching linguistics and those teaching languages. This course will complement the Department's language offerings by exposing students not only to the culture of the language they speak or are learning, but to other cultures as well within the Department's offerings. The course will also expose students to a variety of analytical techniques and will be of interest to the university community in general.

## NEW COURSES (LINGUISTICS): <br> LINGUIST 2D03 RESEARCH METHODS

An introduction to qualitative and quantitative approaches to research in linguistics, including topics such as research ethics, principles of data gathering and analysis, and fundamentals of statistical analysis and inference.
Three hours (lectures and tutorials); one term
Prerequisite: Registration in Level II or III of a program in Linguistics
Antirequisite: LINGUIST 3D03
Course capacity: 35
Categories: NIL

Rationale: LINGUIST 2D03 fills a need for methodology teaching for linguistics students.

## LINGUIST 2FL3 INTRODUCTION TO FORENSIC LINGUISTICS

An introduction to the new and exciting discipline of language and the law. Through a consideration of several famous trials and cases, topics covered include: speaker/voice identification, the language of police interrogations, courtroom language, forensic document investigation, the nature of legal language, the linguist as expert witness.
Three hours; one term
Prerequisite: Registration in Level II or above
Course capacity: $150 \quad$ Categories: NIL
Rationale: There is considerable demand for such a course from students registered in other programs and Faculties.

## LINGUIST 4F03 COGNITIVE NEUROSCIENCE OF LANGUAGE

Brain imaging methods have provided remarkable insights into what areas of the brain are involved in linguistic processes. This course will survey the current scientific literature dealing with the neuroimaging of normal and pathological brain function as related to language processes.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a program in Linguistics or Honours Psychology and permission of the Department of Linguistics and Languages
Cross-list: PSYCH 4L03
Course capacity: 35 Categories: LCS-35\%; LNG-35\%; PSY-25\%; OTH-5\%
Rationale: The Cognitive Science of Language is extremely popular amongst the students and this offering will provide a solid foundation in the area.

## RENUMBERED COURSES:

GERMAN 2S03
ITALIAN 3Z03
ITALIAN 3ZZ3
ITALIAN 4Z03
JAPANESE 3Z03
JAPANESE 3ZZ3
POLISH 1Z03
POLISH 1ZZ3
POLISH 2Z03
POLISH 2ZZ3
RUSSIAN $1 Z 03$
RUSSIAN 1ZZ3
RUSSIAN 2Z03
RUSSIAN 2ZZ3
SPANISH 2A03
SPANISH 2C03
SPANISH $3 Z 03$
SPANISH 3ZZ3
SPANISH 2B03
SPANISH 3C03
SPANISH 4Z03

The Split-Screen - Reconstructing National Identities in West and East German Cinema (formerly GERMAN 4JO3)
Advanced Grammar Practice (formerly ITALIAN 3A03)
Composition and Stylistics I (formerly ITALIAN 3D03)
Composition and Stylistics II (formerly ITALIAN 4A03)
Advanced Intensive Japanese I (formerly JAPANESE 3A03)
Advanced Intensive Japanese II (formerly JAPANESE 3AA3)
Beginner's Polish I (formerly POLISH 2A03)
Beginner's Polish II (formerly POLISH 2AA3)
Intermediate Polish I (formerly POLISH 3A03)
Intermediate Polish II (formerly POLISH 3AA3)
Intensive Beginner's Russian I (formerly RUSSIAN 2A03)
Intensive Beginner's Russian II (formerly RUSSIAN 2AA3)
Intermediate Russian I (formerly RUSSIAN 3A03)
Intermediate Russian II (formerly RUSSIAN 3AA3)
Spanish-American Civilization and Culture (Taught in English) (formerly HISPANIC 2C03)
Introduction to Spanish American Literature (Taught in English) (formerly HISPANIC 2L03)
Language Practice I (formerly HISPANIC 3X03)
Spanish Translation (formerly HISPANIC 3Y03)
Spanish and Latin American Culture Through Cinemas (formerly HISPANIC 4Q03)
Representative Dramatists of $20^{\text {th }}$-Century Spain (formerly HISPANIC 4VO3)
Language Practice II (formerly HISPANIC 4XX3)

## DELETION OF A CROSS-LISTING:

JAPAN ST 4S03 Japanese Business (School of Business is deleting the cross-listing in view of the closure of the Japanese Studies program.)

## COURSE DELETIONS:

GERMAN 3B03
Globalization and Autonomy: German War Narratives from the 18th Century to the Present
GERMAN 4FF3 German Folklore and Fairy Tales

GERMAN 4G03
GERMAN 4H03
GERMAN 4HH3
GERMAN 4J03

GERMAN 4K03
HISPANIC 2C03
HISPANIC 2D03
HISPANIC 2DD3
HISPANIC 2L03
HISPANIC 2X03
HISPANIC 2XX3
HISPANIC 3X03
HISPANIC 3Y03
HISPANIC 4A03
HISPANIC 4D03
HISPANIC 4L03
HISPANIC 4M03
HISPANIC 4N03
HISPANIC 4P03
HISPANIC 4Q03
HISPANIC 4R03
HISPANIC 4V03
HISPANIC 4XX3
ITALIAN 1ZZ6
ITALIAN 2F03
ITALIAN 3A03
ITALIAN 3D03
ITALIAN 3 Y03
ITALIAN 4A03
ITALIAN 4X03
ITALIAN 4XX3
ITALIAN 4YY3
JAPANESE 3A03
JAPANESE 3AA3
POLISH 2A03
POLISH 2AA3
POLISH 3A03
POLISH 3AA3
RUSSIAN 2A03
RUSSIAN 2AA3
RUSSIAN 3A03
RUSSIAN 3AA3

Berlin/Vienna: The Cultural Life of a City
The Holocaust In German Film and Fiction
German Language Through the Ages
The Split-Screen - Reconstructing National Identities in West and East German Cinema (renumbered as GERMAN 2S03)
Franz Kafka and 'Minor Literature’ in Contemporary German Culture
Contemporary Spanish-American Culture (renumbered as SPANISH 2A03)
Intensive Spanish for Native Speakers I
Intensive Spanish for Native Speakers II
Introduction to Spanish American Literature (renumbered as SPANISH 2C03)
Contemporary Spain
Spain in the Western Tradition
Language Practice I (renumbered as SPANISH 3Z03)
Spanish Translation (renumbered as SPANISH 3ZZ3)
The Spanish American Novel (Before 1954)
Humour in Latin American Literature
Spain's Great Myths: Don Quijote and Don Juan
Heroes and Anti-Heroes in Spanish Literature
The Spanish American Short Story
The Boom Generation and Their Short Stories
Spanish and Latin American Culture Through Cinemas (renumbered as SPANISH 2B03)
Women Writers of Latin America and Spain
Representative Dramatists of $20^{\text {th }}$-Century Spain (renumbered as SPANISH 3C03)
Language Practice II (renumbered as SPANISH 4Z03)
Beginners’ Accelerated Italian
Introduction to the Study of Literature: Il Neorealismo
Advanced Grammar Practice (renumbered as ITALIAN 3Z03)
Composition and Stylistics I (renumbered as ITALIAN 3ZZ3)
Culture and Society in Renaissance Italy
Composition and Stylistics II (renumbered as ITALIAN 4ZO3)
Love and Life in The Middle Ages
Dante's World
Risorgimento: The Romantic Quest for a Nation
Advanced Intensive Japanese I (renumbered as JAPANESE 3Z03)
Advanced Intensive Japanese II (renumbered as JAPANESE 3ZZ3)
Beginner's Polish I (renumbered as POLISH 1Z03)
Beginner's Polish II (renumbered as POLISH 1ZZ3)
Intermediate Polish I (renumbered as POLISH 2Z03)
Intermediate Polish II (renumbered as POLISH 2ZZ3)
Intensive Beginner's Russian I (renumbered as RUSSIAN 1Z03)
Intensive Beginner's Russian II (renumbered as RUSSIAN 1ZZ3)
Intermediate Russian I (renumbered as RUSSIAN 2Z03)
Intermediate Russian II (renumbered as RUSSIAN 2ZZ3)

## PEACE STUDIES PROGRAM

## RENUMBERED COURSES:

PEACE ST 2F03 The Modern Middle East (formerly 3F03)
PEACE ST 4IP3 The Literature of Israel and Palestine (formerly 3MM3)
PEACE ST 4PR3 Literature as Peace Research (formerly 4D03)
Rationale: These cross-listed courses are being renumbered by the home departments.
COURSE DELETIONS:

PEACE ST 3F03
PEACE ST 3MM3
PEACE ST 4D03

The Modern Middle East (renumbered as 2F03)
The Literature of Israel and Palestine (renumbered as 4IP3)
Literature as Peace Research (renumbered as 4PR3)

A A A A

## WOMEN'S STUDIES PROGRAM

## REVISION OF PROGRAM:

The program requirements are being revised to reflect new cross-listed courses and one course deletion by the Department of Religious Studies.

6 units WOMEN ST 2A03, 2AA3
6 units from RELIG ST 2SS3, SOCIOL 2Q06, WOMEN ST 2BB3, 2B03, 2F03, 2FF3, 2H03, 2HH3, 2J03, 2K06, 2L03
6 units WOMEN ST 3A03, 3AA3
6 units from LABR ST 3E03, WOMEN ST 3B03, 3BB3, 3DD3, 3E03, 3FF3, 3G03, 3GG3, 3H03, 3HH3, 3I03, 3NN3, 3WW3, 3Z03
6 units WOMEN ST 4A06
6 units from HISTORY 4I06, KINESIOL 4T03, SOC WORK 4R03, WOMEN ST 4B03, 4C03, 4J03, 4WA3
36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
18 units Elective course work above Level I to total 120 units

## NEW CROSS-LISTINGS:

WOMEN ST 2A03 Human Rights and Social Justice (adding LABR ST 2W03 to the cross-listing)
WOMEN ST 2B03 Women in the Biblical Tradition (cross-listed as RELIG ST 2B03)
WOMEN ST 2BB3 Images of the Divine Feminine (cross-listed as RELIG ST 2BB3)
WOMEN ST 3FF3 Gender and Religion (cross-listed as RELIG ST 3FF3)
WOMEN ST 4WA3 Women as Public Intellectuals (cross-listed as CSCT/ENGLISH 4WA3)

## COURSE DELETION:

WOMEN ST 3WW3 International Women Writers
Rationale: This cross-listed course is being deleted by the Comparative Literature program.

# FACULTY OF SCIENCE 

REPORT OF THE<br>ACADEMIC PLANNING AND POLICY COMMITTEE<br>FOR THE 2009-2010 UNDERGRADUATE CALENDAR

FOR PRESENTATION TO

UNDERGRADUATE COUNCIL

## Summary of 2009-2010 Undergraduate Curriculum Changes

The continued implementation of the new Level I programs required numerous housekeeping changes to the admission statements of all Level II programs. All Departments, Schools, and Programs will be listed in alphabetical order in the Faculty of Science section of the Calendar, thus eliminating the 'Interdisciplinary Programs' section. All Faculty of Science Departmental Notes will include a statement alerting students in the B.Tech. Program that courses administered by the Faculty of Science will not be open to them.

This report highlights substantive changes being proposed. For a complete review all changes, please refer to the November, 2008 Report of the Academic Planning and Policy Committee for changes to the 2009-2010 Undergraduate Calendar, found at: www.science.mcmaster.ca/~associatedean/2009APPCreport.pdf.

1.0 Admission and Program Requirements for Level I Programs<br>The admission requirements for Environmental and Earth Sciences I, Kinesiology I, Life Sciences I, and Medical Radiation Sciences I have been amended to allow the use of either Advanced Functions $U$ or Calculus and Vectors $U$ in the admission average. A new course/cross-list, MED PHYS 1E03/SCIENCE 1E03 will be added to the Course Lists of Earth Sciences I, Life Sciences I, and Physical Sciences I.

### 2.0 Department of Biochemistry and Biomedical Sciences (Page 3) <br> Changes made by the Department of Biology are appropriately reflected in program requirements and course requisites. No other substantive changes have been made to programs or courses.

### 3.0 Department of Biology (Pages 3-22)

To simplify program options for students and more efficiently deploy teaching resources, the Department is introducing the Honours Molecular Biology and Genetics program. This program allows for the phasing out three current specializations: Biodiversity, Genetics, and Microbiology and serves to replace the Interdisciplinary Honours Molecular Biology program. Honours Molecular Biology and Genetics will also be available as a coop and combined Arts \& Science program. Appropriate course restructuring has been done to support the new programs, including the renaming of 39 units of BIOLOGY to MOL BIOL and 9 units of MOL BIOL to BIOLOGY. A total of 30 units (BIOLOGY and MOL BIOL) have been deleted. 3 units of BIOLOGY have been introduced. The Honours Biology and Environmental Sciences and Computational Biology programs will be moved from Interdisciplinary Programs to the Department of Biology section of the Calendar.

### 4.0 Department of Chemistry (Pages 22-27)

Housekeeping changes have been made to reflect the restructuring introduced last year. 9 units of CHEM BIO will be administratively tied to 9 units of existing CHEM courses to allow Chemical Biology students to be sectioned into separate labs.

### 5.0 Department of Computing and Software (Page 27) <br> An appropriate reference directing students to the Faculty of Engineering will be introduced.

6.0 School of Geography and Earth Sciences (Pages 27-37)

A minor in Geography and Earth Sciences has been introduced to allow students the use of a combination of EARTH SC and GEOG courses. The previous minor in Geography will now require courses that are exclusively GEOG. All minors offered by the School of Geography and Earth Sciences will be moved to the Faculty of Science section of the

Calendar. 15 units (some, with appropriate cross-lists) have been introduced. 6 units of new cross-listings (to existing courses) have also been introduced. 9 units have been deleted.

### 7.0 Integrated Science (iSci) Program (Page 38) <br> Appropriate housekeeping changes will be made.

8.0 Department of Kinesiology (Pages 38-42)

Appropriate housekeeping changes to reflect the move of the Department of Kinesiology to the Faculty of Science will be made throughout the Calendar. A 6 -unit course has been split into two, 3 unit offerings. 9 units have been introduced. 15 units, as well as two, non-credit courses, have been deleted.
9.0 Life Sciences Programs (Pages 43-52)

Responding to the findings of the Faculty of Science Task Force on Undergraduate Education and Teaching in the Life Sciences, the curriculum of the Honours B.Sc. and B.Sc. Life Sciences programs have been amended to reflect academically rigorous, yet flexible requirements. A suite of 'LIFE SCl' courses have been introduced, some of which are cross-listed or administratively tied to existing offerings. Given Life Sciences will have a Program Director and administrative support, the students of the largest programs in the Faculty will have ownership, identity, and stronger leadership.
10.0 Department of Materials Science and Engineering (Page 52)

An appropriate program reference directing students to the Faculty of Engineering will be introduced.
11.0 Department of Mathematics and Statistics (Page 53)

No substantive program changes have been made. 20 units have been deleted and 3 units have been moved to cold storage.
12.0 Department of Medical Physics and Applied Radiation Sciences
(Pages 54-62)
A Minor in Radiation Sciences and 12 units have been introduced. 15 units have been deleted.

### 13.0 Origins Research Specialization (Page 62)

No substantive program or course changes have been made.
14.0 Physical Sciences (Honours) Program (Page 62)

No substantive program changes have been made.
15.0 Department of Physics and Astronomy (Pages 63-71)

The Department is phasing out both the Computation \& Theory and Experimental Specializations. A new inquiry course, PHYSICS 3D03 (3DA1 and 3DA2 for co-op) will expose students to current research in Level III. Effective 2011, 3 additional units of Physics will be required at Level IV.
16.0 Department of Psychology, Neuroscience and Behaviour (Pages71-80) PSYCH 2D03 will be replaced by 2N03. New cross-listings to support the Cognitive Linguistics and Music Cognition programs have been introduced.
17.0 Science Courses (Pages 80 - 82)

A new course/cross-listing (SCIENCE 1E03/MED PHYS 1E03) has been introduced. 9 units have been placed in cold-storage.

## Department of Biochemistry

Changes made by the Department of Biology are appropriately reflected in program requirements and course requisites. No substantive program or course changes are proposed.

## Department of Biology

### 1.0 NEW PROGRAMS

1.1 Honours Molecular Biology and Genetics \{XXXX\}

ADMISSION NOTE
PHYSICS 1 B03 must be completed by the end of Level II. Completion of PHYSICS
1BB3 is also recommended.
ADMISSION
Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units $\quad$ BIOLOGY 1A03, 1M03 (or 1AA3) with an average of at least 6.0
6 units $\quad$ CHEM 1A03, 1AA3
3 units from MATH 1A03, 1LS3
3 units from PHYSICS 1B03, 1L03 (See Admission Note above.)
6 units from Life Sciences I Course List

## PROGRAM NOTES

1. BIOLOGY 2B03, 2 C 03 and 2EE3 must be completed in Level II.
2. Six units of BIOLOGY 2A03, 2D03, 2F03, 3FF3 are required, however, completion of $9-12$ units is recommended.
3. Completion of STATS 2B03 by the end of Level III is recommended.
4. MOL BIOL 3A03 and 3103 are recommended as preparatory courses for BIOLOGY 4C09 or 4F06.
5. Completion of BIOLOGY 4C09 or 4F06 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biology program.
6. Students interested in microbiology and biotechnology and especially those considering postgraduate studies in this area should take the following courses: BIOLOGY 4PP3, MOL BIOL 3CC3, 4P03, 4XX3.
7. Some Biology courses have been renamed Molecular Biology (MOL BIOL). To determine the former Biology courses, please see Biology in the Course Listings section of this Calendar.
MOLECULAR BIOLOGY AND GENETICS COURSE LIST
BIOCHEM 2B03, 2BB3, 2EE3, 3G03, 4E03, 4EE3; BIOLOGY 2A03, 2D03, 2F03, 2L03,
3CC3, 3FF3, 3HH3, 3M03, 3Y03, 4B03, 4DD3, 4E03, 4EE3, 4P03, 4PP3, 4R03, 4U03,
4XX3; CHEM BIO 2A03, 2P03; CHEM ENG 2B03, 3BK3, 3BM3; HTH SCI 3I03, 3K03,
4II3, MOL BIOL 3A03, ЗСС3, 3HH3, 3I03, 3M03, 3Y03, 4DD3, 4H03, 4P03, 4RR3;
ORIGINS 2FF3
REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVEL I: 30 UNITS
30 units (See Admission above.)
LEVELS II-IV: 90 UNITS

| 6 units | CHEM 2OA3, 2OB3 |
| :--- | :--- |
| 6 units | from BIOLOGY 2A03, 2D03, 2F03, 3FF3 (See Note 2 above.) |
| 3 units | STATS 2B03 (See Note 3 above.) |
| 24 units | BIOLOGY 2B03, 2C03, 2EE3, 3I03, MOL BIOL 3H03, 3O03, 3S03, 3V03 |
| 27 units | from Molecular Biology and Genetics Course List, which must include at <br>  <br>  <br> least 12 units of Levels III, IV courses, and one of BIOLOGY 4C09 or <br> 4F06 (See Notes 4 and 5 above.) <br> $0-3$ units <br> $21-24$ unitsPHYSICS 1B03, if not completed in Level I (See Admission Note above.) <br> Electives (See Note 2 above.) |

1.2 Honours Molecular Biology and Genetics Co-op $\{X X X X\}$ ADMISSION
Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II of the Honours Molecular Biology and Genetics program, including BIOLOGY 2B03, 2C03, 2EE3, with a Cumulative Average of at least 6.0. Admission is by selection, and possession of published minimum requirements does not guarantee admission. Information about this program and the selection procedure can be obtained from Science Career and Cooperative Education.

## PROGRAM NOTES

1. This is a five-level (year) co-op program, which includes eight months of offcampus work and a four-month academic work term. All work terms must be spent in Molecular Biology and Genetics related placements.
2. Students must be registered full-time and take a full academic workload as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2 COO before the first work placement.
4. Students should seek academic counselling for this program in the Department
of Biology.
5. Completion of BIOLOGY 2B03, 2 C 03 and 2EE3 is required prior to admission to this program.
6. Students should consult the MOL BIOL 4GG9 Course Coordinator regarding supervision arrangements.
7. Students may complete the program in December of the year prior to Spring convocation.

## MOLECULAR BIOLOGY AND GENETICS COURSE LIST

BIOCHEM 2B03, 2BB3, 2EE3, 3G03, 4E03, 4EE3; BIOLOGY 2A03, 2D03, 2F03, 2L03,
ЗСC3, 3FF3, 3HH3, 3M03, 3Y03, 4B03, 4DD3, 4E03, 4EE3, 4P03, 4PP3, 4R03, 4U03,
4XX3; CHEM BIO 2A03, 2P03; CHEM ENG 2B03, 3BK3, 3BM3; HTH SCI 3I03, 3K03,
4113 , MOL BIOL 3A03, ЗCC3, 3HH3, 3103, 3M03, 3Y03, 4DD3, 4H03, 4P03, 4RR3; ORIGINS 2FF3
REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVEL I: 30 UNITS
30 units
Completed prior to admission to the program
LEVEL II: 30 UNITS
30 units
Completion of Level II Honours Molecular Biology and Genetics program, including BIOLOGY 2B03, 2C03, 2EE3 (See Admission above.)


| $0-3$ units | Molecular Biology and Genetics Course List |
| :--- | :--- |
| $0-3$ units | Electives |
| LEVEL IV: $\mathbf{3 0}$ UNITS |  |
| 6 units | Course List 1 |
| 12 units | Molecular Biology and Genetics Course List |
| $6-9$ units | BIOLOGY 4C09 or 4F06 |
| $3-6$ units | Electives |

Justification (1.1-1.3):
Given the Department of Biochemistry \& Biomedical Sciences is no longer providing support to the interdisciplinary Honours Molecular Biology program, the Department of Biology has assumed full responsibility for it. To simplify program options for students, and to more efficiently deploy departmental teaching resources, the Department has created the Honours Molecular Biology and Genetics program. Not only is it a modified version of the former Honours Molecular Biology Program, but, it allows for the closure of the Honours Biology Biodiverstiy, Genetics and Microbiology Specializations. The Honours Molecular Biology and Genetics Co-Op program replaces the Honours Biology (Genetics Specialization) Co-Op program. The Honours Arts \& Science and Molecular Biology and Genetics program replaces the Honours Arts \& Science and Biology (Microbiology Specialization) program.

### 2.0 CHANGES TO EXISTING PROGRAMS (AND PROGRAM NOTES)

## Honours Biology

\{2050808\}

## ADMISSION NOTE

Students who have not completed one of PHYSICS 1B03 or 1L03 (first offered 20082009) will be considered for admission, however, completion of one of these courses is required by the end of Level II.
ADMISSION
2008-2009 ONLY: Enrolment in this program is limited and possession of the publishod minimum requirements does not guaranteo admission. Solection is based on acadomic achiovement but requires, as a minimum, completion of any Level I program with a Cumulative Avorage of at loast 6.0 including: 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0 3 units MATH 1A03
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1B03 (See Admission Note above.)
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
3 units from Science I Course List
ADMISSION
EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units
6 units
3 units
3 units
6 units
BIOLOGY 1A03, 1 M03 (or 1AA3) with an average of at least 6.0
CHEM 1A03, 1AA3
from MATH 1A03, 1LS3
from PHYSICS 1B03, 1L03 (See Admission Note above.)
from Life Sciences I Course List
PROGRAM NOTES

1. The Honours Biology program allows students to choose Biology courses which reflect their own interests. Students are encouraged to discuss their course selections with a Biology undergraduate Counsellor.
2. Students who wish to take the following courses should take both CHEM 2OA3 and 2OB3: BIOCHEM 3G03, BIOLOGY 3CC3, 3P03, 4B03, 4T03, more advanced Biochemistry and Chemistry courses. Students are advised to check prerequisites carefully.
3. Students must complete nine units from BIOLOGY 2A03, 2B03, 2D03, 2EE3, 2F03. Additional units from this list may be used towards the Biology course list requirement.
4. Completion of STATS 2 B 03 by the end of Level III is recommended. If STATS 1CC3 has been completed these units will be taken as electives.
5. Students considering graduate studies in Biology are recommended to complete BIOLOGY 4C09 or 4F06.
6. Students interested in microbiology and biotechnology and especially those considering postgraduate studies in this area should take the following courses: BIOLOGY 2EE3, 4PP3, MOL BIOL 3CC3, 3003, 3V03, 4P03, 4XX3.
7. Students interested in biodiversity and especially those considering postgraduate studies in this area should see the Honours Biology and Environmental Sciences program or consider registration in the following courses: BIOLOGY 2C03, 2D03, 2F03, 2G03, 3FF3, 3G03, 4AA3, 4E03, EARTH SC $2 G I 3$.

## BIOLOGY COURSE LIST

BIOLOGY 2A03, 2B03, 2D03, 2EE3, 2F03, 2G03, 2103, 2L03, all Biology Level III and IV courses (except BIOLOGY 3Q03, 3QQ3); BIOCHEM 2B03, 2BB3, 3G03, 3H03, 3N03, 4E03, 4EE3, 4J03, 4K03, 4Q03all Biochemistry courses for which the prerequisites are met; CHEM BIO 2A03, 2P03, 3A03, 4OA3, 4OB3; CHEM ENG 2B03; EARTH SC 2B03, 2C03, 2E03, 2EI3, 2GI3, 2Q03, 2W03, 3GI3, 3J03, 4B03, 4C03, 4EA3, 4FF3, 4GI3; ENVIR SC 2MB3, 3EP3, 3SA3; GEO 2A03, 2B03, 2C03, 2E03, 2103, 2Q03, 2W03, 3A03, 3I03, 3J03, 3S03, 4A03, 4B03, 4C03, 4FF3, 4I03, 4S03; HTH SCI 3I03, 3K03, 4II3; MED PHYS 3T03, 4B03; MOL BIOL 4H03, 4JO3-all Molecular Biology courses for which the prerequisites are met; ORIGINS 2FF3, 3D03; PSYCH 2D03, 2E03, 2F03, 2N03, 2TT3, 3A03, 3F03, 3FA3, 3S03, 3T03, 3Y03, 4R03, 4 Y03

## REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

## LEVEL I: 30 UNITS

30 units(See Admission above.)
LEVELS II-IV: 90 UNITS
3 units BIOCHEM 2EE3
3 units BIOLOGY 2C03
3 units from STATS 1CC3, 2B03 (See Program Note 4 above.)
9 units from BIOLOGY 2A03, 2B03, 2D03, 2EE3, 2F03 (See Program Note 3 above.)
3 units from CHEM 2E03, 2OA3, 2OC3
1518 units from Biology Course List (See Program Note 3 above.)
15 units Levels III, IV Biology and Molecular Biology which may include BIOLOGY 4C09 or 4F06
0-3 units from PHYSICS 1B03, 1L03 if not completed in Level I (See Admission Note above.)
36-39 units Electives (See Program Note 2 above.)

## Justification:

BIOCHEM 2EE3 is no longer required, but may be completed as part of the Biology Course List options. Appropriate changes will be reflected in all Honours Biology programs.

Biology or Honours Biology and Environmental Sciences program. Students who registered in the program prior to September 2009 may see an Academic Advisor in the Office of the Associate Dean of Science (Studies) or refer to their personal degree audit for program requirements.

## ADMISSION NOTE

Students who have not completed one of PHYSICS 1B03 or 1 L03 (first offered 20082009) will be considered for admission, however, completion of one of these courses is required by the end of Level II.

## ADMISSION

2008-2009 ONLY: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including: 6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
3 units MATH 1A03
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1B03 (See Admission Note above.)
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
3 units from Science I Course List
ADMISSION
EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

| 6 units | BIOLOGY 1A03, 1M03 (or 1AA3) with an average of at least 6.0 |
| :--- | :--- |
| 6 units | CHEM 1A03, 1AA3 |
| 3 units | from MATH 1A03, 1LS3 |
| 3 units | from PHYSICS 1B03, 1L03 (See Admission Note above.) |
| 6 units | from Life Sciences 1 Course List |

## PROGRAM NOTES

1. Students interested in the Biodiversity Specialization are recommended to register in at least one of ENVIR SC 1A03, 1B03 or 1G03 in Level I or II.
2. Students who wish to take the following courses should take both CHEM 2OA3 and 2OB3: BIOCHEM 3G03, BIOLOGY 3CC3, 3P03, 4B03, 4T03, more advanced Biochemistry and Chemistry courses. Students are advised to check prerequisites carefully.
3. All students are recommended to take EARTH SG 2GI3 (formerly GEO 2103) and PSYCH 2RA3 or STATS 2B03 in Level II. If STATS 16G3 has been completed these units will be taken as electives.
4. Completion of one of BIOLOGY 4C09, 4F06 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biology program.

## BIODIVERSITY COURSE LIST

BIOLOGY 2A03, 2B03, 2EE3, 3B03, 3BB3, 3E03, 3MM3, 3R03, 3S03, 3SS3, 3TT3, ЗU03, 3UU3, 3Y03, 4A03, 4DD3, 4EE3, 4J03, 4JJ3, 4PP3, 4X03, 4Y03; GEO 2A03, 2B03, 2C03, 2E03, 2G03, 2103, 2Q03, 2W03, 3A03, 3J03, 3L03, 3NN3, 3S03, 4B03, 4603, 4FF3, 4103, 4S03; PSYCH 2F03, 2RA3, 2RB3, 2 TT3, 3A03, 3F03, 3FA3, 3S03, 3T03, 3 Y03, $4 \mathrm{RO} 03,4 \mathrm{Y03}$
BIOLOGY COURSE LIST
BIOLOGY 2A03, 2B03, 2EE3, all Biology Level III and IV courses (except BIOLOGY 3Q03, 3QQ3); BIOCHEM 2B03, 2BB3, 3G03, 3H03, 3N03, 4E03, 4EE3, 4J03, 4K03, 4Q03; CHEM ENG 2B03; EARTH SC 2B03, 2C03, 2E03, 2EI3, 2GI3, 2Q03, 2W03, 3GI3, 3J03, 4B03, 4C03, 4EA3, 4FF3, 4Gl3; ENVIR SC 2MB3, 3EP3, 3SA3; GEO 2A03, 2B03,

```
2C03, 2E03, 2103, 2Q03, 2W03, 3A03, 3103, 3003, 3S03, 4A03, 4B03, 4C03, 4FF3, 4103,
4S03; HTH SCI 3103, 3K03, 4113; MED PHYS 3T03, 4B03; MOL BIOL 4H03, 4J03;
PSYCH 2F03, 2TT3, 3A03, 3F03, 3FA3, 3S03, 3T03, 3Y03, 4R03, 4Y03
REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level|
LEVELI: 30 UNITS
30 units(See Admission above.)
LEVELS II-IV: 90 UNITS
3 units BIOCHEM 2EE3
24 units BIOLOGY 2C03, 2D03, 2F03, 2G03, 3FF3, 3G03, 4AA3, 4E03
3 units from EARTH SC 2Gl3, GEO 2103 (See Program Note 3 above.)
3units from-CHEM 2E03, 2OA3, 2OG3
3 units from STATS 1GG3, 2B03, PSYCH 2RA3 (See Program Note 3 above.) -
21units from Biodiversity Course List, including at loast six units from Biology
g units BIOLOGY 4C09; or BIOLOGY 4F06 and three units from Biology
                        Gourse List (See Program Note 4 above.)
0-3 units PHYSICS 1B03, 1 L03 if not completed in Level I (See Admission Note
                above.)
21-24 units Electives (See Program Note 2 above.)
Justification:
Due to lack of teaching resources and student interest, the Honours Biology
(Biodiversity Specialization) program (and the Honours Arts and Science and
Biology - Biodiversity Specialization) is being phased out. Interested students
will be directed to the Honours Biology and/or the Honours Biology and
Environmental Sciences program. Given the size of the current cohort, the
program is being removed from the Calendar.
```

2.3 Honours Biology (Genetics Specialization)
\{2050814\}
The Honours Biology (Genetics Specialization) program is being phased out. Students who intended to register in this program should see the Honours Molecular Biology and Genetics program below. Entry to Level III Honours Biology (Genetics Specialization) is last available in 2009-2010.
ADMISSION NOTE (2008-2009 ONLY)
Students who have not completed PHYSICS 1B03 will be considered for admission, however, completion of the course is required by the end of Levelll. Completion of PHYSIGS 1BB3 is also recommended.

## ADMISSION

2008-2009 ONLY: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on acadomic achiovement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units BIOLOGY 1A03, 1 AA3 with an average of at least 6.0
3 units MATH 1A03
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1B03 (See Admission Note above.)
3 units from MATH 1AA3, 1B03, 1D03, STATS 1C63-
3 units from Science 1 Course List
ADMISSION NOTE (EFFECTIVE 2009-2010)
PHYSICS 1 B03 must be completed by the end of Level II. Completion of PHYSICS 1BB3 is also recommended.

## ADMISSION

EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program
with a Cumulative Average of at least 6.0 including:
6 units BIOLOGY 1A03, 1 M 03 (or 1AA3) with an average of at least 6.0
6 units CHEM 1A03, 1AA3
3 units from MATH 1A03, 1LS3
3 units from PHYSICS 1B03, 1L03 (Seo-Admission Note above.)
6 units from Life Sciences I Course List

## PROGRAM NOTES

1. Students registered in the Genetics Specialization are encouraged to complete PHILOS 2D03 or 2G03 as an elective.
2. Students with mathematical interests are encouraged to register in mathematical statistics. (See Note 4 under Notes Applicable to all Honours Biology Programs in this section of the Calendar.)
3. Students in the Genetics Specialization must complete BIOLOGY 2B03, and 2 CO 3 and BIOCHEM 2EE3 in Level 11.
4. BIOLOGY 2A03 and 2F03 are strongly recommended.
5. Completion of STATS 2B03 by the end of Level III is recommended. If STATS 1CC3 has been completed these units will be taken as electives.
6. Completion of BIOLOGY 4C09 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biology program.
7. Students who registered in the program prior to September 2007 may use BIOLOGY 2EE3 toward the Genetics Course List.
GENETICS COURSE LIST
BIOCHEM 2EE3, 3G03, 4E03, 4EE3; BIOLOGY 2L03, 3CC3, ЗE03, 3HH3, 3J03, 3M03, 3S03, 3V03, 3Y03, 4B03, 4DD3, 4E03, 4EE3, 4P03, 4PP3, 4V03, 4XX3; HTH SCI 3I03, 3K03, 4II3; MOL BIOL 3CC3, 3HH3, 3M03, 3V03, 3Y03, 4DD3, 4P03, 4H03, 4XX3
REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVELI: $\mathbf{3 0}$ UNITS
30 units(See Admission above.)
LEVELS II-IV: 90 UNITS
6 units CHEM 2OA3, 2OB3
3 units from STATS 1CC3, 2B03 (See Program Note 54 above.)
3 units BIOCHEM 2EE3
39 units from BIOLOGY 2B03, 2C03, 2D03, 2EE3, 3FF3, 3H03, 3I03, 3O03, 3S03, 4C09, 4R03, MOL BIOL 3H03, 3O03, 4RR3 (See Program Note 65 above.)
15-18 units from Genetics Course List (See Program Note 7 above.)
0-3 units PHYSICS 1B03 if not completed in Level I (See Admission Note above.)
21-24 units Electives (See Program Note 43 above.)

Justification:
The Honours Biology (Genetics Specialization) program is being phased out. Interested students should consider the Honours Molecular Biology and Genetics program. Changes to requirements reflect amended course offerings. The Honours Biology (Genetics Specialization Coop) program is also being phased out and students will be directed to the new Honours Molecular Biology and Genetics Coop option. Given the size of the current cohort, the program has been deleted from the Calendar.
2.4 Honours Biology (Microbiology and Biotechnology Specialization) \{2050817\}

The Honours Biology (Microbiology and Biotechnology Specialization) program has been cancelled. Students who intended to register in this program should see
the Honours Molecular Biology and Genetics program below. Students who registered in the program prior to September 2009 may see an Academic Advisor in the Office of the Associate Dean of Science (Studies) or refer to their personal degree audit for program requirements.
ADMISSION NOTE (2008-2009 ONLY)
Students who have not completed PHYSICS 1 B03 will be considered for admission, however, completion of the course is required by the end of Level II. PHYSICS 1BB3 is also recommended
ADMISSION
2008-2009 ONLY: Enrolment in this program is limited and possession of the
published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units BIOLOGY 1A03, 1AA3 with an average of at least 6.0
3 units MATH 1A03
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1B03 (Seo Admission Note above.)
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
3 units from Science 1 Course List
ADMISSION NOTE (EFFECTIVE 2009-2010)
PHYSICS 1 B03 must be completed by the end of Level II. Completion of PHYSICS 1BB3 is also recommended.

## ADMISSION

EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units BIOLOGY 1A03, 1M03 (or 1AA3) with an average of at least 6.0 6 units CHEM 1A03, 1AA3
3 units from MATH 1A03, 1LS3
3 units from PHYSICS 1B03, 1 L03 (See Admission Note above.)
6 units from Life Sciences I Course List
PROGRAM NOTES

1. The Microbiology and Biotechnology Specialization option allows students to focus on applied aspects of biology and to choose courses with significant laboratory and self-directed learning components. Students intending to specialize in Microbiology and Biotechnology are encouraged to consult with a Biology undergraduate advisor.
2. Students in the Microbiology and Biotechnology Specialization are recommended to take BIOLOGY 3FF3, CHEM ENG 2B03, HTH SCI 3103 and 3K03.
3. Completion of BIOLOGY 4C09 or 4F06 is required in Level IV. Students who do not obtain the minimum Cumulative Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and may apply to transfer to the Honours Biology program.
4. Completion of STATS 2B03 by the end of Level III is recommended. If STATS 1CC3 has been completed these units will be taken as electives.
MICROBIOLOGY AND BIOTECHNOLOGY COURSE LIST
BIOLOGY 3FF3, 3H03, 3HH3, 3103, 3Y03, 4E03, 4DD3; CHEM ENG 2B03, ЗBK3, ЗBM3; HTH SCI 3103, 3K03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be LevelH
LEVEL
30 units(See Admission above.)

LEVELSH-IV: 90 UNITS
6 units BIOCHEM 2EE3, 3G03
33 units BIOLOGY 2B03, 2C03, 2EE3, 3663, 3003, 3503, 3V03, 3WW3, 4P03, 4PP3, 4XX3
6 units CHEM 2OA3, 2OB3
3 units from STATS 1CC3, 2B03 (See Program Note 4 above.)
3 units from BIOLOGY 2A03, 2D03, 2F03
6 units from Microbiology and Biotechnology Course List
9 units BIOLOGY 4C09; or BIOLOGY 4F06 and three units from Microbiology and Biotechnology Course List (See Program Note 3 above.)
$0-3$ units PHYSICS 1 B03 if not completed in Level I (See Admission Note above.) $21-24$ units Electives (See Program Note 2 above.)

Justification:
Due to lack of student interest, the Honours Biology (Microbiology and Biotechnology Specialization) program is being phased out. Interested students should consider the Honours Molecular Biology and Genetics program. Given the size of the current cohort, the program is being removed from the Calendar.

### 2.5 Honours Biology and Psychology \{2050460\} <br> ADMISSION NOTES (2008-2009 ONLY)

1. MATH $1 \mathrm{B03}$ and PHYSICS 1BB3 are strongly recommended for students intending to pursue graduate work in Experimental Psychology or Neuroscience.
2. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1AA3 in Level I and consult with a departmental advisor.
ADMISSION
2008-2009 ONLY: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units BIOLOGY 1A03, 1AA3 with an average of at least 7.0
6 units a grade of at least $B$ - in both PSYCH 1A03 and 1AA3
6 units CHEM 1A03, 1AA3 with an average of at least 7.0
3 units MATH 1A03
3 units PHYSICS 1B03
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Admission Notes 1 and 2 above.)

## ADMISSION NOTES (EFFECTIVE 2009-2010)

1. Students who have not completed PHYSICS 1B03 will be considered for admission, however, completion of the course is required by the end of Level II.
2. MATH $1 \mathrm{BO3}$ and PHYSICS 1BB3 are strongly recommended for students intending to pursue graduate work in Experimental Psychology or Nouroscience.
3. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1AA3 in Levoll and consult with a departmental advisor.

## ADMISSION

EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units BIOLOGY 1A03, 1M03 (or 1AA3) with an average of at least 7.0
6 units a grade of at least B- in both PSYCH 1X03 (or 1AA3) and 1XX3 (or 1A03)
6 units CHEM 1A03, 1AA3 with an average of at least 7.0
3 units from MATH 1A03, 1LS3

3 units from PHYSICS 1B03, 1L03 (See Admission Note 1 above.)
3 units from Life Sciences 1 Course List (See Admission Notes 2 and 3 above.)
PROGRAM NOTES

1. Counselling for this program is shared by the Departments of Biology and Psychology, Neuroscience and \& Behaviour. Information may be obtained through the Undergraduate Advisors in the Life Sciences Building, LS-215 or Psychology Building, PC-207.
2. Students who are registered in this program prior to September 2006 and who completed PSYCH 2RR3 and STATS 1CC3 do not need to complete PSYCH 2RA3 and 2RB3. Beginning September 2006, students with credit in STATS 1 CC3 but not PSYCH 2RR3 must complete both PSYCH $2 R A 3$ and $2 R B 3$.
3. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS $2 D 03$ and 2MB3. In this case, students are advised to take MATH 1AA3 in Level 1 and consull with a departmental advisor.
4. 2. Students who completed PSYCH 3 QQ3 or 4QQ3 prior to September 2007 may use this credit towards fulfilling the Lovel III lab requirement. Effective September 2007, PSYCH 3QQ3 or 4QQ3 will only fulfill this requirement the psychology lab requirement if taken under the supervision or co-supervision of a faculty member in the Department of Psychology, Neuroscience and \& Behaviour.
1. Students intending to do a Psychology thesis (PSYCH 4DD6, 4D09) must complete a Psychology lab course prior to doing a thesis.
2. Students who registered in the program prior to September 2007 may use PSYCH 2003 or 2503 as a substitution for three units of Psychology Course List.
7.3. For Psychology Courses with limited enrolment which require permission by preregistration ballot, theThe Psychology, Neuroscience and \& Behaviour Department pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D09, 4DD6), and the Individual Study courses (PSYCH ZQQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the Fall term. Ballots can be obtained from the Department of Psychology, Neuroscience and \& Behaviour web site at http://www.mcmaster.ca/psychology. Priority will be given to students registered in Honours Psychology, Neuroscience and Behaviour, Honours Psychology and Combined Honours Psychology programs.
8.4. Students who entered the program prior to September 2007 may complete PSYCH 4D06 to satisfy the thesis requirement. For students entering the program effective September 2007, students who do not obtain the minimum Cumulative Average as stated in the prerequisite of one of BIOLOGY 4C09, 4F06 or PSYCH 4D09, 4DD6 may request a requisite waiver from the Undergraduate Associate Chair of the Department. Students denied permission may not continue in the program and may apply to transfer to Honours Biology or Honours Psychology, Neuroscience and Behaviour and apply to graduate with a Minor in the alternate subject area.
9.5. Students who entered the program prior to September 20072008 should refer to the 2006-2007 Undergraduate Calendar of the year they entered the program or their personal degree audit for program requirements.

## BIOLOGY COURSE LIST

BIOCHEM 2EE3, 3H03, 3N03, 4E03, 4EE3, 4K03, 4Q03; BIOLOGY 2A03, 2B03, 2D03, 2EE3, 2F03, 2G03, 2103, 2L03, all Level III and IV Biology courses (exeept BIOLOGY 3Q03, 3QQ3); HTH SCI 2J03, 3103, 4BB3, 4II3; MED PHYS 3T03, 4B03; AHOL BIOL 4H03all Molecular Biology courses for which the prerequisites have been met

## PSYCHOLOGY COURSE LIST

KINESIOL 3E03, 4P03; MUSICCOG 2A03, 3A03, 3B03; PSYCH 2E03, 2F03, 2H03, 2TT3, all Level III and IV Psychology courses (PSYCH 2AA3, 2B03, 2C03, 2103, 2S03, 3AB3, 3AC3, 3BA3, 3CB3, 3CD3 may only be used as elective credit.)
PSYCHOLOGY LAB COURSE LIST
PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3MM3, 3QQ3, 3S03, 3V03, 4QQ3 (All Psychology lab courses have limited enrolment. See Program Notes 4,5 and 72 and 3 above.)
REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVEL I
30 units (See Admission above.)
LEVELS II-IV: 90 UNITS
(See Program Note 95 above.)
18 units BIOCHEM ZEE3, 3G03, BIOLOGY 2B03, 2C03, CHEM 2OA3, 2OB3, PSYCH 2RA3, 2RB3
3 units from BIOLOGY 2A03, 2B03, 2F03
6 units from PSYCH 2E03, 2F03, 2H03, 2TT3, which must include 3 units from PSYCH 2F03 or 2TT3
9 units PSYCH 2F03, 2RA3, 2RB3 (See Program Notes 2 and 3 above.)
3 units from PSYCH 2E03, 2TT3
9 units from Biology Course List which must include at least three units of Level III
6 units from Psychology Course List which must include at least three units of Level III or IV (See Program Note 6 above.)
3 units Level III or IV courses from Biology Course List or Psychology Course List
24 units Level III or IV courses from Biology Course List or Psychology Course List, including at least nine units from Biology Course List and nine units from Psychology Course List. One of BIOLOGY 4C09, 4F06, PSYCH 4D09 or 4DD6 must be included. (See Program Notes 7 and 83 and 4 above.)
3 units from Psychology Lab Course List (See Program Notes 4, 5 and 72 and 3 above.)
0-3 units PHYSICS 1 B03 if not completed in Level I (See Admission Note 1 above.)
12-15-18 units Electives
Justification:
Notes updated and redundant/unnecessary notes eliminated. Psychology Course List updated to reflect modified degree requirements. Rigid Level II requirements prevented students from registering in BIOLOGY 2A03, the biology course with the most animal content in Level II. In keeping with other specializations, BIOCHEM 2EE3 is no longer required but may be completed as part of the Course List. Increased choice has been provided in the required Level II Biology and Psychology requirements.
to provide students with a broad view and understanding of biological processes from a molecular perspective. Students will develop knowledge and understanding of the structure, interaction and function of biomolecules and the molecular basis of cellular and organismal biology.

## ADMISSION NOTE (2008-2009 ONLY)

Students who have not completed PHYSICS 1 B03 will be considered for admission, however, completion of the course is required by the end of Level II. Completion of PHYSICS 1BB3 is also recommended.

## ADMISSION

2008-2009 ONLY: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units BIOLOGY 1A03, 1AA3, with an average of at least 6.0
6 units CHEM 1A03, 1AA3
3 units MATH 1A03
3 units PHYSICS-1B03(Soo-Admission Note above.)
3 units STATS 1C63
3 units from Science 1 Course List
A grade of at least $C+$ in three of CHEM 1A03, 1AA3, MATH 1A03, STATS $1 C C 3$ is required.
ADMISSION NOTE (EFFECTIVE 2009-2010)
PHYSICS 1 B03 must be completed by the end of Level 11 . Completion of PHYSICS 1BB3 is also recommended.

## ADMISSION

EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee-admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units BIOLOGY 1A03, 1 M 03 (or 1AA3) with an average of at least 6.0
6 units CHEM 1A03, 1AA3 with a minimum grade of $C+$ in each
3 units from MATH 1A03, 1LS3 with a minimum grade of $C+$
3 units from PHYSICS 1B03, 1L03 (See Admission Note above.)
6 units from Life Sciences I Course List

## PROGRAM NOTES

1. This program is administered within the Faculty of Science through a Committee of Instruction and also draws on the Departments of Biology, Biochemistry and Biomedical Sciences and Pathology and Molecular Medicine.
2. Information may be obtained through the Program Administrators in Life Sciences Building, Room 119A or Health Science Centre, Room 4H45 who can refer students to the appropriate faculty ounselin.
3. A Minor in Biochemistry, Biology, or Chemistry is not permitted in the Honours Molecular Biology program.
4. Students who do not meet all of the requirements of the program may apply to transfer to Honours Biology or Honours Biochemistry.
5. BIOLOGY 2A03, 2D03, CHEM 2N03, 2R03, CHEM BIO 2A03, 2P03, ORIGINS 2FF3 are recommended electives in Level II.
6. BIOLOGY 2L03, MOL BIOL 3A03, 3I03 isare strongly recommended as an electives in Level III.
7. Completion of STATS 2B03 by the end of Level III is recommended.

## MOLECULAR BIOLOGY COURSE LIST

BIOCHEM 2EE3, 3G03, 4E03, 4EE3; BIOLOGY 2A03, 2D03, 2EE3, 2F03, 2L03, 3CC3,
3FF3, ЗHH3, 3M03, 3Y03, 4B03, 4DD3, 4E03, 4EE3, 4P03, 4PP3, 4R03, 4U03, 4XX3;
CHEM BIO 2A03, 2P03; CHEM ENG 2B03, HTH SCI 3I03, 3K03, 4II3, MOL BIOL 3A03,
3СС3, ЗНН3, 3I03, 3M03, 3Y03, 4DD3, 4H03, 4P03, 4RR3

## REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVEL I
30 units (See Admission above.)
LEVELS IH-IV: 90 UNITS (2008-2009 ONLY)
12 units BIOCHEM 2B03, 2BB3, 3D03, 4E03
12 units BIOLOGY 2C03, 2EE3, 3003, 3S03
6 units CHEM 2OA3, 20B3-
27 units MOL BIOL 2B03, $2 \mathrm{~L} 06,3 \mathrm{A03}, 3 \mathrm{VO3}, 4 \mathrm{AO3}, 4 \mathrm{R} 09$
6 units from BIOLOGY $3 \mathrm{H} 03,3 \mathrm{HH} 3,3103,3 \mathrm{MO} 03$, HTH SCI 3103
9 units from BIOCHEM 4EE3, 4H03, 4N03, 4Q03, BIOLOGY 4B03, 4E03, 4P03, 4PP3, 4R03, 4T03, HTH SCI 4113 , MOL BIOL 4H03, 4.03, STATS $2 B 03$
(See Program Note 7 above.)
$0-3$ units PHYSICS 1 B03 if not completed in Level I (See Admission Note above.) 15-18 units Electives (Seo Program Notes 5 and 6 above.)
LEVELS II-IV: 90 UNITS (EFFECTIVE 2009-2010)
12 units BIOCHEM 2B03, 2BB3, 3D03, 4E03
129 units BIOLOGY 2C03, 2EE3,3O03, 3S03
6 units CHEM 2OA3, 2OB3
27 units MOL BIOL 2B03, 2L06, 3A03, 3V03, 4A03, 4R09
3 units STATS 2 B03 (See Program Note 72 above.)
6 units from BIOLOGY $3 \mathrm{H} 03,3 \mathrm{HH} 3,3103,3 \mathrm{M} 03$, HTH SCI 3103
9 units from BIOCHEM 4EE3, 4H03, 4N03, 4Q03, BIOLOGY 4B03, 4E03, 4P03, 4PP3, 4R03, 4T03, HTH SCI 4II3, MOL BIOL 4H03, 4J03, 4RR3
0-3 units PHYSICS 1B03 if not completed in Level I (See Admission Note above.) 12-15-18 units Electives (See Program Notes 5 and 6 above.)

Justification:
The Interdisciplinary Honours Molecular Biology program is being phased out. Until the existing program has been phased out, it will be moved to the Department of Biology section of the Calendar. A notation directing students to the program will be placed in the Interdisciplinary section of the Calendar. New students, interested in the area of study, should consider the Honours Molecular Biology and Genetics program.

### 3.0 NEW COURSES

3.1 BIOLOGY 2L03 EXPERIMENTAL DESIGN IN BIOLOGY

An active learning approach to experiencing how research is conceived, executed, interpreted and communicated in Biology. Principles and case studies in lectures are matched with hands-on application in the lab.
Two lectures, one lab (three hours); one term
Prerequisite: Registration in Level II or III of any Honours Biology, Honours Molecular Biology and Genetics or Honours Molecular Biology program

Enrolment capacity: 40
Enrolment categories: NIL
Justification:
This course will prepare students for a career that involves research, the critical interpretation of the research of others, or as essential preparation for an undergraduate or postgraduate thesis research.

MOL BIOL 3CC3 GENOMICS AND SYSTEMS BIOLOGY

## Formerly BIOLOGY 3CC3

Advanced topics of microbial physiology/biochemistry and introduction to systems approaches based on microbial genomics, transcriptomics, proteomics and metabolomics projects.
Two lectures, one lab or tutorial (three hours); one term
Prerequisite: BIOLOGY 2B03 (or MOL BIOL 2B03) or LIFE SCI 2B03, and BIOLOGY
2C03, 2EE3, 3O03; or registration in Honours Computational Biology
Antirequisite: BIOLOGY 3CC3
Enrolment capacity: 40
Enrolment categories: NIL

### 3.3 MOL BIOL 3H03 MOLECULAR BIOLOGY OF THE NUCLEUS

## Formerly BIOLOGY 3H03

Structure of the nucleus and of chromatin; organization of DNA sequences; DNA
replication, transcription; gene expression; some relevant techniques.
Two lectures, one tutorial (two hours); one term
Prerequisite: BIOLOGY 2B03 (or MOL BIOL 2B03) or LIFE SCI 2B03
Antirequisite: BIOCHEM 3B03, BIOLOGY 3H03
Enrolment capacity: 300
Enrolment categories: NIL

### 3.4 MOL BIOL 3HH3 ORGANIZATION OF THE CYTOPLASM

Formerly BIOLOGY 3HH3
A detailed examination of the molecular organization and function of cytoplasmic structures in metazoans, with particular focus on the differentiation and specialization of the cell surface and the cytoskeleton.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 2B03 (or MOL BIOL 2B03) or LIFE SCI 2B03
Antirequisite: BIOLOGY 3HH3
Enrolment capacity: 375
Enrolment categories: NIL
3.5 MOL BIOL 3M03 FUNDAMENTAL CONCEPTS OF DEVELOPMENT
Formerly BIOLOGY 3M03
Recent advances using genetic and molecular approaches will be discussed in the context of classical experiments. Various model systems (mice, fruitflies, worms) will be examined.
Two lectures, one tutorial or lab (three hours); one term
Prerequisite: BIOLOGY 2B03 (or MOL BIOL 2B03) or LIFE SCI 2B03; and BIOLOGY 2 C 03
Antirequisite: BIOLOGY 3M03
Enrolment capacity: 75
Enrolment categories: NIL

### 3.6 MOL BIOL 3003 MICROBIAL GENETICS

Formerly BIOLOGY 3003
The genetics of bacteriophages, bacteria and fungi. Special emphasis will be placed on relationships between microbial genetics and general problems in genetics and gene regulation.
Three lectures, one tutorial; one term

Prerequisite: BIOLOGY 2C03; and credit or registration in BIOLOGY 2EE3
Antirequisite: BIOLOGY 3003
Enrolment capacity: 200
Enrolment categories: NIL
MOL BIOL 3 Y03 PLANT RESPONSES TO THE ENVIRONMENT
Formerly BIOLOGY 3 Y03
How plants respond at the genetic, molecular, biochemical and phenotypic levels to environmental stress. Manipulation of these responses to improve crops will be explored. Three lectures; one term
Prerequisite: BIOLOGY 2B03 (or MOL BIOL 2B03) or LIFE SCI 2B03; and BIOLOGY 2C03, 2 D03
Antirequisite: BIOLOGY 3 Y03
Enrolment capacity: 50
Enrolment categories: NIL
3.8 MOL BIOL 4DD3 MOLECULAR EVOLUTION

Formerly BIOLOGY 4DD3
The study of how molecules change over time within and between species. The experimental data, techniques and theories will be examined.
Two lectures, one tutorial; one term
Prerequisite: ANTHROP 2D03 or BIOLOGY 3FF3; and registration in Level III or above of any Honours program
Antirequisite: BIOCHEM 4Y03, BIOLOGY 4DD3
Offered in alternate years.
Not offered in 2009-2010.
Enrolment capacity: 30
Enrolment categories: NIL

### 3.9 MOL BIOL 4GG9 SENIOR CO-OP THESIS

Formerly BIOLOGY 4GG9
A thesis based upon a research project in an area of molecular biology and genetics carried out under the direction of a member of the Department of Biology.
Prerequisite: Registration in Level IV of the Honours Molecular Biology and Genetics Co-
Op program or Honours Biology (Genetics Specialization Co-op) program; and permission of the Course Administrator, Life Sciences Building, Room 215.
Arrangements to take MOL BIOL 4GG9, including the agreement of the supervisory committee, should be made according to Departmental Guidelines before the end of March in Level III. For information on Departmental Guidelines, please refer to the Biology web site at http://www.biology.mcmaster.ca/bio_ugrad.htm.
Antirequisite: BIOLOGY 4GG9, HTH SCI 3H03, 4A09, 4B06
Enrolment is limited.
Enrolment capacity: 8
Enrolment categories: NIL
MOL BIOL 4P03 MEDICAL MICROBIOLOGY
Formerly BIOLOGY 4P03
Infectious diseases: identification, epidemiology and treatment.
Two lectures, one tutorial (three hours); one term
Prerequisite: BIOLOGY 2EE3 and registration in Level III or above of any Honours program. Credit or registration in BIOLOGY 3003 is strongly recommended.

Antirequisite: BIOLOGY 4P03
Not offered in 2009-2010.
Enrolment capacity: 60
Enrolment categories: NIL
MOL BIOL 4RR3 HUMAN GENETICS
Formerly BIOLOGY $4 R 03$
The human genome and genetic medicine. Topics include normal and pathological cytology; the human genome project; gene mapping, linkage and therapy.
Two lectures, one tutorial (two hours); one term
Prerequisite: BIOLOGY 3103 and registration in Level III or above of any Honours program
Antirequisite: BIOLOGY 4R03
Enrolment capacity: 60
Enrolment categories: NIL
MOL BIOL 4XX3 WORKSHOP IN MOLECULAR GENETICS
Formerly BIOLOGY $4 X X 3$
An intensive two-week laboratory/lecture course. Topics covered will include scientific reasoning, ethics, technology transfer, molecular genetics techniques, techniques used in cell culture, and gene expression studies.
Note: Course will consist of two weeks of laboratory instruction, seminars and workshops. To be held the first two weeks of May.
Prerequisite: BIOLOGY 2EE3; and registration in Honours Biology (Genetics Specialization or Microbiology and Biotechnology Specialization) or Honours Biology (Genetics Specialization Co-op) or Honours Molecular Biology and Genetics or Honours Molecular Biology and Genetics Co-Op; and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration.
Antirequisite: BIOLOGY 4XX3
Enrolment is limited.
Enrolment capacity: 32
Enrolment categories: NIL
Justification (3.2-3.12):
More appropriate as a MOL BIOL offerings.

### 4.0 CHANGES TO EXISTING COURSES

4.1 BIOLOGY 1X03 INTRODUCTION TO COMPUTATIONAL BIOLOGY

Methods with which computers are used to study living systems are introduced. Computational techniques such as modelling, simulation and data analysis to conduct biological research are surveyed.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 1AA3 or creditCredit or registration in BIOLOGY 1M03 (or 1AA3)
or HTH SCI 1E06; and credit or registration in MATH 1AA31A03; and registration in a program in the Faculty of Science or permission of the instructor
Not open to students with credit or registration in ISCI 1A24.
Justification:
Correction of prerequisite.

Fundamental principles of animal physiology, including: cellular energetics, diffusion, osmosis, membrane transport, excitability and contractility, gas exchange, fluid dynamics, electrolyte balance.
Three lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 1A03, 1AA31M03 (or 1M031AA3); or ISCI 1A24
Antirequisite: MED PHYS 4XX3, SCIENCE 4XX3
Not open to students with credit or registration in BIOLOGY 3P03, 3U03, 3UU3,HTH SCt
$1 \mathrm{HO3}, 1 \mathrm{HH} 3,2 \mathrm{FO3}, 2 \mathrm{FF3}, \mathrm{KINESIOL} 1406,1 \mathrm{YO3}, 1 \mathrm{YY3}$.or to students registered in the
B.Sc.N., the Bachelor of Health Sciences (Honours), or Bachelor of Health Sciences
(Honours) - Biomedical Sciences Specialization program.
Justification:
In consultation with the Department of Kinesiology, it has been determined that the content in BIOLOGY 2A03 and KINESIOL 1A03, 1AA3, (or 1Y03, 1YY3) is different enough to allow students to complete each of these courses.

### 4.3 BIOLOGY 2B03 CELL BIOLOGY

Basic treatment of cell structure and function, including transport and chemical signals; adaptation of structure and function in specialized cells.
Three lectures, one lab (three hours), one tutorial (two hours); one term
Prerequisite: BIOLOGY 1A03, 1AA3 (or 1M03), CHEM 1AA3; or ISCI 1A24
Antirequisite: HTH SCI 2K03, MOL BIOL 2B03
Cross-list: LIFE SCI 2B03
Not open to students registered in the Honours Molecular Biology program.
Enrolment capacity: 350
Enrolment categories: SC2 98\%
AS2 1\%
OTH 1\%
Justification:
More appropriate prerequisite/Housekeeping. Capacity adjustment for cross-list course (net increase of 50 students).
4.4 BIOLOGY 2F03 FUNDAMENTAL AND APPLIED ECOLOGY

An introduction to fundamental ecological principles and illustration of how these are applied to current environmental problems at the level of organisms, populations and ecosystems.
Three lectures, one optional tutorial, one lab (three hours); one term
Prerequisite: Biology BIOLOGY1AA31M03 (or 1M031AA3) or ISCI 1A24
Cross-list: LIFE SCI 2F03
Enrolment capacity: 250
Enrolment categories: SC2 95\%
OTH 5\%
Justification:
Capacity adjustment for cross-list course.
MOL BIOL 3A03 CURRENT TOPICS IN MOLECULAR BIOLOGY AND GENETICS
A review of current literature in molecular biology and genetics. A combination of lectures and student presentations on selected topics.
One lecture, one tutorial (two hours); one term
Prerequisite: Registration in Honours Biology, of Honours Molecular Biology or Honours
Molecular Biology and Genetics

Justification:
Better reflects course content.

MOL BIOL 3V03 TECHNIQUES IN MOLECULAR GENETICS
A laboratory course involving basic experiments in Molecular Genetics.
One lecture, two labs (three hours each); one term
Prerequisite: Credit or registration in BIOLOGY 3O03; and registration in Level III or IV of any Honours Biology, Honours Molecular Biology or Honours Molecular Biology and Genetics program
Prerequisite: (Effective 2010-2011): Credit or registration in BIOLOGY 3O03; and registration in Level III or IV of Honours Molecular Biology and Genetics
Antirequisite: BIOCHEM 3P03, BIOLOGY 3V03
Enrolment is limited.
This course is administered by the Department of Biology.

Justification:
Access to course will be restricted, effective 2010-2011.
4.7 PHARMAC 3B06 METHODS IN PHARMACOLOGY

Methods to study effects of drugs in vitro (such as organ baths, ligand binding, and electrophysiological actions) and analysis of pharmacological data.Experimental methods for the study of drugs in vitro. Interpretation and communication of experimental data. Design and conduct of a Discovery Project.
One lab (sixthree hours); two terms
Prerequisite: Credit or registration in PHARMAC 3A06

Justification:
Better reflects course content. Correction of lab time commitment.
5.0 COURSE DELETIONS:

BIOLOGY 3BB3 ULTRASTRUCTURE, DEVELOPMENT AND FUNCTION OF PLANT CELLS
BIOLOGY 3Q03 PEER MENTORING IN BIOLOGY (CELLULAR AND MOLECULAR BIOLOGY)
BIOLOGY 3QQ3 PEER MENTORING IN BIOLOGY (BIODIVERSITY, EVOLUTION AND HUMANITY) COMMUNITY ECOLOGY MICROBIOLOGY INQUIRY INTRODUCTION TO GENOMICS
INQUIRY IN BIOCHEMICAL TECHNIQUES
COMMUNICATIONS IN MOLECULAR BIOLOGY BIOCHEMICAL IMMUNOLOGY

Justification:
No academic need to continue offering.

BIOLOGY 3CC3 MICROBIAL GENOMES AND SYSTEMS BIOLOGY BIOLOGY 3H03 MOLECULAR BIOLOGY OF THE NUCLEUS BIOLOGY 3HH3

BIOLOGY 3M03
BIOLOGY 3003
BIOLOGY 3V03
BIOLOGY 3Y03
BIOLOGY 4DD3
BIOLOGY 4GG9
BIOLOGY 4P03
BIOLOGY 4R03
BIOLOGY 4XX3

FUNDAMENTAL CONCEPTS OF DEVELOPMENT MICROBIAL GENETICS TECHNIQUES IN MOLECULAR GENETICS PLANT RESPONSES TO THE ENVIRONMENT MOLECULAR EVOLUTION SENIOR GENETICS CO-OP THESIS MEDICAL MICROBIOLOGY HUMAN GENETICS WORKSHOP IN MOLECULAR GENETICS

Justification:
Former BIOLOGY courses renamed \&/or to be offered only as MOL BIOL.

```
MOL BIOL 2B03 CELL BIOLOGY
MOL BIOL 4R09 SENIOR THESIS
```

Justification:
Former MOL BIOL courses to be offered only as BIOLOGY.

## Department of Chemistry

### 1.0 CHANGES TO EXISTING PROGRAMS:

1.1 Honours Chemical Biology
\{2071\}
ADMISSION NOTES

1. Students who have not completed PHYSICS 1 B03 will be considered for admission, however, completion of the course is required by the end of Level II.
2. Completion of MATH 1 B 03 and PHYSICS 1BB3 is strongly recommended.

## ADMISSION

2008-2009 ONLY: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units from MATH 1A03, 1AA3, STATS 16G3
6 units BIOLOGY 1A03, 1AA3 with a grade of at least $C+$ in each
6 units CHEM 1A03, 1AA3 with an average of at least 6.0
3 units PHYSICS 1B03 (See Admission Note 1 above.)
3 units from Science 1 Course List (See Admission Note 2 above.)
EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
3 units from MATH 1A03, 1LS3
6 units BIOLOGY 1A03, 1M03 (or 1AA3) with a grade of at least $C+$ in each
6 units CHEM 1A03, 1AA3 with an average of at least 6.0
3 units from PHYSICS 1B03, 1L03 (See Admission Note 1 above.)
6 units from either Life Sciences I Course List or Physical Sciences I Course List (See Admission Note 2 above.)

## PROGRAM NOTES

1. Students are encouraged to seek academic counselling from the Undergraduate Advisor for the Chemical Biology program (email advisor@chembio.mcmaster.ca).
2. In some cases there are Level II and III prerequisites for Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.

## REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I and at least 36 units must be Levels III, IV

## LEVEL I

30 units (See Admission above.)

## LEVEL II: 30 UNITS

12 units from CHEM BIO 2A03, 2AA3, 2L03, 2P03, 2Q03
6 units from CHEM 2OA3, 2OB3, CHEM BIO 2OA3, 2OB3
6 units BIOCHEM 2B03, 2BB3
3 units BIOLOGY 2B03
0-3 units from PHYSICS 1B03, if not completed in Level I (See Admission Note 1 above.)
0-3 units Electives (See Admission Note 2 above.)
LEVEL III: 30 UNITS
6 units CHEM BIO 3OA3, 3P03
3 units from CHEM BIO 3OB3, 4IB3
6 units CHEM 3AA3, 3OA3
3 units CHEM BIO 3L03
3 units BIOCHEM 3D03
3 units BIOLOGY 2C03
6 units Electives

## LEVEL IV: 30 UNITS

6 units from CHEM BIO 4A03, 4OA3, 4OB3
3-9 units from CHEM BIO 4G03, 4GG9
15-21 units Electives, of which at least 12 units must be Level III or IV
Justification:
Honours Chemical Biology students will complete CHEM BIO 2AA3 in place of CHEM BIO 2A03 and CHEM BIO 2OA3 and 2OB3 in place of CHEM 2OA3, 2OB3 to allow for a distinct lab sections. These sets of courses will be administratively tied and, therefore, offered as single lecture sections.

### 2.0 NEW COURSES:

2.1 CHEM BIO 2AA3 INTRODUCTION TO BIO-ANALYTICAL CHEMISTRY

An introductory course covering basic principles of quantitative analysis of biological samples based on classical volumetric techniques and modern instrumental methods including spectroscopy and chromatography.
Three lectures, one lab; one term
Prerequisite: Registration in Honours Chemical Biology
Antirequisite: CHEM 2A03, 2N03, CHEM BIO 2A03
Enrolment capacity: 30-50 (Note, enrolment capacity of CHEM BIO 2 A03 will be reduced by same amount)
Enrolment categories: NIL
Justification:
This course, administratively tied to CHEM BIO 2A03, will allow for a single lecture section, yet the ability to separate the Honours Chemical Biology students in the labs.

CHEM BIO 2OA3
ORGANIC CHEMISTRY I
An introduction to organic chemistry with emphasis on the reactions of functional groups and an introduction to spectroscopic techniques for structure determination. Three lectures, one lab (three hours) every other week; one tutorial (two hours) every other week; one term
Prerequisite: Registration in Honours Chemical Biology
Prerequisite (Beginning 2010-2011): CHEM 1AA3 with a grade of at least C- and registration in Honours Chemical Biology
Antirequisite: CHEM 2BA3, 2E03, 2OA3, 2OC3
Students with credit in CHEM 2E03 will forfeit credit upon completion of this course.
Enrolment capacity: 30-50 (Note, enrolment capacity of CHEM 2OA3 will be reduced by same amount)
Enrolment categories: NIL
Justification:
This course, administratively tied to CHEM 2OA3, will allow for a single lecture section, yet the ability to separate the Honours Chemical Biology students in the labs.

CHEM BIO 2OB3 ORGANIC CHEMISTRY II
Nucleophilic substitutions at carbonyl centres, aromatic chemistry, carbohydrates, applications of spectroscopic techniques in organic chemistry.
Three lectures, one lab (three hours) every other week; one tutorial (two hours) every other week; one term
Prerequisite: One of CHEM 2OA3, 2OD3, or CHEM BIO 2OA3; and registration in
Honours Chemical Biology
Antirequisite: CHEM 2BB3, 2OB3, 2OD3
Enrolment capacity: 30-50 (Note, enrolment capacity of CHEM 2OB3 will be reduced by same number)
Enrolment categories: NIL
Justification:
This course, administratively tied to CHEM 2OB3, will allow for a single lecture section, yet the ability to separate the Honours Chemical Biology students in the labs.

### 3.0 CHANGES TO EXISTING COURSES AND DEPARTMENT NOTES:

## CHEM BIO 2A03 INTRODUCTION TO BIO-ANALYTICAL CHEMISTRY

An introductory course covering basic principles of quantitative analysis of biological samples based on classical volumetric techniques and modern instrumental methods including spectroscopy and chromatography.
Three lectures, one lab; one term
Prerequisite: CHEM 1A03, 1AA3 and registration in an Honours Biochemistry, Honours Biology, Honours Chemical Biology or Honours Life Sciences or Honours Molecular Biology program
Antirequisite: CHEM 2A03, 2N03, CHEM BIO 2AA3
Not open to students registered in Honours Chemical Biology.
Justification:
This course will become administratively tied to CHEM BIO 2AA3 to allows for
separation of Honours Chemical Biology program students in the labs.

CHEM BIO 30B3 APPLICATIONS OF SPECTROSCOPY: STRUCTURAL ELUCIDATION
Applications of spectroscopy detailing the use of NMR, MS, IR, and UV in determining structures of small molecules and biomolecules with a particular focus on natural products.
Three lectures; one term
Prerequisite: One of CHEM 2BB3, 2OB3, 2OD3, CHEM BIO 2OB3
May be offered in alternate years.
First offered in 2009-2010.
3.4 CHEM BIO 4OA3 NATURAL PRODUCTS

A description of basic building blocks and reaction mechanisms involved in the (bio)synthesis of naturally occurring compounds.
Three lectures; one term
Prerequisite: One of CHEM 2BB3, 2OB3, 2OD3 CHEM BIO 3OA3
May be offered in alternate years.
First offered in 2010-2011.

## CHEM BIO 4OB3 MEDICINAL CHEMISTRY: DRUG DESIGN AND

DEVELOPMENT
Topics will include lead compound discovery strategies; high-throughput screening and "in silico" screening; exploration of structure-activity relationships; drug targets and molecular mechanisms of drug action; strategies for drug optimization.
Three lectures; one term
Prerequisite: One of CHEM 2BB3, 2OB3, 2OD3 CHEM 3OA3
May be offered in alternate years.
First offered in 2010-2011.
3.6 CHEM 2A03 ANALYTICAL CHEMISTRY I

An introduction to the basic principles of analytical chemistry, with particular emphasis on solution equilibria and classical methods of analysis.
Two lectures, one lab (three hours); one term
Prerequisite: One of EARTH SC 2Q03, GEO 2Q03 or registration in a Chemical
Engineering program
Antirequisite: CHEM 2N03, 2AA3, CHEM BIO 2A03, CHEM BIO 2AA3

## 3.7 <br> CHEM 2E03 INTRODUCTORY ORGANIC CHEMISTRY

CHEM BIO 30A3 BIO-ORGANIC CHEMISTRY
Chemistry and biology of primary metabolism. Synthesis, biosynthesis and degradation of carbohydrates, nucleotides, and proteins are compared and contrasted by studying reaction mechanisms and catalysis.
Three lectures, one lab; one term
Prerequisite: One of CHEM 2BB3, 2OB3, 2OD3, CHEM BIO 2OB3
Antirequisite: CHEM 3FF3
May be offered in alternate years.
First offered in 2009-2010.


Irstofer in 2010 -2011.

An introduction to the chemistry of monofunctional aliphatic and aromatic compounds.
Three lectures, one tutorial; one term
Prerequisite: CHEM 1AA3 or ISCI 1A24
Antirequisite: CHEM 2BA3, 2OA3, 2OC3, CHEM BIO 2OA3
CHEM 2E03 is not a prerequisite for further courses in Organic Chemistry.
(See Department Note 1.)
Justification (3.2-3.7):
Appropriate antirequisites.

## CHEM 2OA3 ORGANIC CHEMISTRY I

An introduction to organic chemistry with emphasis on the reactions of functional groups and an introduction to spectroscopic techniques for structure determination.
Three lectures, one lab (three hours) every other week; one tutorial (two hours) every other week; one term
Prerequisite: CHEM 1AA3 and registration in an Honours Program. Students with a grade of less than C- in CHEM 1AA3 are encouraged to seek counselling before attempting this course.
Prerequisite (Beginning 2010-2011): ISCI 1A24; or CHEM 1AA3 with a grade of at least C- and registration in an Honours program; or CHEM 1AA3, registration in an Honours program and permission of the Department. (See Department Note 2.)
Antirequisite: CHEM 2BA3, 2E03, 2OC3, CHEM BIO 2OA3
Students with credit in CHEM 2E03 will forfeit credit upon completion of this course. Not open to students registered in Chemical Biology.

Justification:
New requisite reflects appropriate background/standing. Chemical Biology students will register in CHEM BIO 2OA3 instead.
Note: enrolment capacity will be reduced by 30-50 to accommodate the new, administratively tied course of CHEM BIO 2A03.

CHEM 2OB3 ORGANIC CHEMISTRY II
Nucleophilic substitutions at carbonyl centres, aromatic chemistry, carbohydrates, applications of spectroscopic techniques in organic chemistry.
Three lectures, one lab (three hours) every other week; one tutorial (two hours) every other week; one term
Prerequisite: One of CHEM 2OA3; 2OD3, CHEM BIO 2OA3
Antirequisite: CHEM 2BB3, CHEM BIO 2OB3
Not open to students registered in Chemical Biology.
Justification:
Chemical Biology students will register in CHEM BIO $2 O B 3$ instead.
Note: enrolment capacity will be reduced by 30-50 to accommodate the new, administratively tied course of CHEM BIO 2B03.

CHEM 2OC3 STRUCTURE AND REACTIVITY OF ORGANIC MOLECULES
Examines how structure affects properties and chemistry of organic molecules important for life, health, and advanced technologies. Fundamentals of organic reaction mechanisms and structure determination.
Three lectures; one term
Prerequisite: CHEM 1AA3 or ISCI 1A24
Prerequisite (Beginning 2010-2011): ISCI 1A24; or CHEM 1AA3 with a grade of at least
C- and registration in an Honours program; or CHEM 1AA3, registration in an Honours
program and permission of the Department. (See Department Note 2.)
Antirequisite: CHEM 2BA3, 2E03, 2OA3, CHEM BIO 2OA3

Justification:
New requisite reflects appropriate background/standing. Appropriate antirequisite.
3.11 CHEM 2OD3 SYNTHESIS AND FUNCTION OF ORGANIC MOLECULES

Survey of fundamental reactions used to construct organic molecules, with emphasis on reaction mechanisms. Introduction to functional group interconversions, and construction of complex organic molecules.
Three lectures; one term
Prerequisite: One of CHEM 2OA3, or 2OC3, CHEM BIO 2OA3
Antirequisite: CHEM 2BB3, 2OB3, CHEM BIO 2OB3

Justification:
Appropriate requisites.
4.0 COURSE DELETIONS:

CHEM 3A03 ANALYTICAL CHEMISTRY II
CHEM 3BA3 QUANTUM MECHANICS AND SPECTROSCOPY I
CHEM 3BB3 QUANTUM MECHANICS AND SPECTROSCOPY II
CHEM 3D03 ORGANIC CHEMISTRY
CHEM 3FF3 BIO-ORGANIC CHEMISTRY
CHEM 3LI3 CHEMISTRY LABORATORY INQUIRY
CHEM 3P03 TRANSITION METAL CHEMISTRY
CHEM 3Q03 INORGANIC CHEMISTRY
CHEM 3ZZ3 PROPERTIES OF MATERIALS
CHEM 4C03 SOLID STATE CHEMISTRY
CHEM 4F03 SURFACE CHEMISTRY
CHEM 4P03 ADVANCED ANALYTICAL CHEMISTRY
CHEM 4PP3 POLYMER CHEMISTRY
CHEM 4Q03 ADVANCED QUANTUM MECHANICS
CHEM 4R03 ADVANCED TRANSITION METAL CHEMISTRY
CHEM 4S03 ADVANCED MAIN GROUP CHEMISTRY

## Department of Computing and Software

Appropriate program references directing students to the Faculty of Engineering section have been introduced.

School of Geography and Earth Sciences
1.0 NEW PROGRAMS/MINORS:
1.1 MINOR IN GEOGRAPHY AND EARTH SCIENCES


## 2.0 <br> CHANGES TO EXISTING PROGRAMS/MINORS:

### 2.1 Minor in Environmental Studies

Notes

1. The Minor in Environmental Studies is not permitted for students registered in the Honours Geography Environment and Health Specialization Program.
2. At least nine of the 12 Course List units must be selected from outside the student's own department or school.
3. At least six Course List units must be outside of the School of Geography and Earth Sciences.
COURSE LIST
ANTHROP 2AN3, 2F03, 2H03, 2U03, 3C03, 3Z03, 4AE3, 4P03
BIOLOGY 2D03, 2E03, 2F03, 3SS3, 3TT3, 4Y03
ECON 2J03,3W03
ENVIR SC 3 CC 3 (GEO 3CC3)
EARTH SC 2GG3 (GEO 2GG3), 2WW3 (GEO 2WW3)
GEOG 2EI3 (GEO 2A03), 3EE3, 3ER3 (GEO 3HE3), 3HH3 (GEO 3HH3), 4EA3 (GEO 4A03), 4HH3 (GEO 4HH3)
HEALTHST 4E03
PHILOS 2G03, 2N03
POL SCI 2E06, 3Z03, 3ZZ3, 4D06
RELIG ST 2W03

## REQUIREMENTS

24 units total
3 units from GEOG 1HA3 (GEO 1HS3), 1HB3 (GEO 1HU3)
3 units from ENVIR SC 1A03, 1B03, 1G03
6 units from GEOG 2EI3 (GEO 2A03), 3ER3 (GEO 3HE3), 4EA3 (GEO 4A03)
12 units from Course List including at least six units from Levels III or IV (See Notes 2 and 3 above.)

## Minor in Geography

Please see Minor in Geography in the School of Geography and Earth Sciences in the Faculty of Social Sciences soction of this Calondar.

## Note <br> Students who completed GEO 2GG3, 2HC3, 2HG3, 2HU3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3 prior to September 2008 may include up to six units toward the minor. <br> REQUIREMENTS <br> 24 units total <br> 6 units from ENVIR SC 1A03, 1B03, 1G03, GEOG 1HA3 (GEO 1HS3), 1HB3 (GEO 1HU3) <br> 18 units Levels II, III or IV Geography, including at least six units of Levels III or IV. No more than six units may be from GEOG 2RC3 (GEO 2HC3), 2RU3 (GEO 2HU3), 3RJ3 (GEO 3HJ3), 3RW3 (GEO 3HR3) (See Note 1 above.)

Justification (2.1-2.2):
These minors are not new, they are simply being moved to the Faculty of Science section of the Calendar so that all Minors administered by the School of Geography and Earth Sciences are alphabetically listed in one place.

### 3.0 NEW COURSES:

EARTH SC 3 T03 GEOCHEMISTRY OF MINERALS AND ROCKS
Chemistry of the earth including formation of the solar system and the earth, water rock chemical interaction at the earth's surface, chemistry of environmentally-sensitive minerals, techniques for analysing minerals and rocks.
Prerequisite: EARTH SC 2K03 (GEO 2K03); and EARTH SC 2Q03 (GEO 2Q03) or ENVIR SC 2Q03
Antirequisite: GEO 3Q03
Enrolment Capacity: 25
Enrolment Categories: GEO 80\%
OTH 20\%
Justification:
Replaces EARTH SC 3Q03, and fills a gap in the earth science curriculum regarding the formation, geochemistry and stability of minerals.

### 3.2 EARTH SC 4 V 03 MINERAL EXPLORATION GEOPHYSICS

Principles of geophysical methods employed in mineral exploration. Use of gravity, magnetic and radiometric methods for surface and sub-surface geological mapping.
Applications to specific mineral deposit types.
Two lectures, one lab (two hours); one term
Prerequisite: One of EARTH SC 2E03, ENVIR SC 2E03, GEO 2E03; and EARTH SC 3V03 or GEO 3V03

## Enrolment Capacity: 24

Enrolment Categories: GEO 80\%
OTH 20\%
Justification:
Presently offered on Dean's permission, course is becoming a permanent offering to maintain exploration geophysics as part of earth science curriculum.
3.3 EARTH SC 4WB3 CONTAMINANT HYDROGEOLOGY

Physical and chemical aspects of the fate and transport of contaminants in soils and groundwater, including fundamental processes, multiphase flow, and groundwater remediation.
Three lectures; one term
Prerequisite: Credit or registration in EARTH SC 3W03 (GEO 3W03) or ENVIR SC 3W03
Cross-list: ENVIR SC 4WB3
Antirequisite: EARTH SC 4WW3, ENVIR SC 4WW3, GEO 4WW3

## Enrolment capacity: 25

Enrolment categories: GEO 80\%
OTH 20\%
Justification:
Replaces EARTH SC 4WW3 which, due to its course code, students falsely
assumed to be an Earth Science elective. This has been a source of complications for both the instructor and students. Also, changes to the description of the course content, as well as to the timetabling of the course were required.
3.4 ENVIR SC 3ME3 ENVIRONMENTAL STUDIES FIELD CAMP

Within the context of a field project, this course introduces students to field techniques in environmental science and to the potential effects of environmental issues on human health and well-being.
The field camp component occurs outside of the regular academic term, usually two weeks preceding the start of term in September. Details and applications are available in January, in the School of Geography and Earth Sciences.
Students enrolling in this course must pay both the incidental fees as prescribed by the School and the regular tuition fees.
Prerequisite: One of EARTH SC 2B03, 2E03, 2EI3, 2G03, 2Q03, ENVIR SC 2B03, 2E03, 2G03, 2Q03, GEO 2A03, 2B03, 2E03, 2G03, GEOG 2EI3; and registration in Level III or above of Honours Biology and Environmental Sciences, Honours Environmental Sciences, Honours Geography and Environmental Studies; and permission of the instructor One of EARTH SC 2Q03 (GEO 2Q03), ENVIR SC 2Q03, is recommended. Cross-list: GEOG 3ME3

## Enrolment Capacity: 30

Enrolment Categories: NIL 100\%
Justification:
Introduced as a more appropriate mandatory field experience in the Honours Geography and Environmental Studies program, and intended for students in environmental science programs not eligible for EARTH SC 3FE3.
3.5 ENVIR SC 4WB3 CONTAMINANT HYDROGEOLOGY

Physical and chemical aspects of the fate and transport of contaminants in soils and groundwater, including fundamental processes, multiphase flow, and groundwater remediation. Three lectures; one term Prerequisite: Credit or registration in EARTH SC 3W03 (GEO 3W03) or ENVIR SC 3W03 Cross-list: EARTH SC 4WB3
Antirequisite: EARTH SC 4WW3, ENVIR SC 4WW3, GEO 4WW3
Enrolment Capacity: 25
Enrolment Categories: GEO 80\%

Replaces EARTH SC 4WW3 which, due to its course code, students falsely assumed to be an Earth Science elective. This has been a source of complications for both the instructor and students. Also, changes to the description of the course content, as well as to the timetabling of the course were required.

## 3.6 <br> GEOG 3ME3 ENVIRONMENTAL STUDIES FIELD CAMP

Within the context of a field project, this field camp introduces students to field techniques in environmental science and to the potential effects of environmental issues on human health and well-being.
The field camp component occurs outside of the regular academic term, usually two weeks preceding the start of term in September. Details and applications are available in January, in the School of Geography and Earth Sciences.
Students enrolling in this course must pay both the incidental fees as prescribed by the School and the regular tuition fees.
Prerequisite: One of EARTH SC 2B03, 2E03, 2EI3, 2G03, 2Q03, ENVIR SC 2B03, 2E03, 2G03, 2Q03, GEO 2A03, 2B03, 2E03, 2G03, GEOG 2EI3; and registration in Level III or above of Honours Biology and Environmental Sciences, Honours Environmental Sciences, Honours Geography and Environmental Studies; and permission of the instructor
One of EARTH SC 2Q03, ENVIR SC 2Q03, GEO 2Q03 is recommended. Cross-list: ENVIR SC 3ME3

Enrolment Capacity: 30
Enrolment Categories: NIL 100\%
Justification:
Introduced as a more appropriate mandatory field experience in the Honours Geography and Environmental Studies program, and intended also for students in environmental science programs not eligible for EARTH SC 3FE3.
3.7 GEOG 4GH3 GEOMATICS OF HEALTH AND URBAN SOCIAL PROBLEMS

This course will introduce the ways in which geographic information and analysis can be applied to a variety of topics in health and urban social problems, particularly crime. Topics include risk estimation, hot-spot detection and investigation, and geographic profiling of serial crime.
Two lectures, one lab (two hours); one term.
Prerequisites: GEOG 2GI3, 2MB3; and one of GEOG 2HI3, 2UI3, 3HH3 or 3HP3

## Enrolment Capacity: 24

Enrolment Categories: GEO 80\%
OTH 20\%
Justification:
In addition to representing a new faculty's research interests, the course will further develop connections between the Health \& Population and Spatial Analysis streams in School of Geography and Earth Sciences. It will also help fill an important need for training in health and urban social geomatics in Canada.

### 4.0 NEW CROSS-LISTINGS TO EXISTING COURSE:

4.1 EARTH SC 2MB3 STATISTICAL ANALYSIS

```
An introduction to the nature of geographic data and organization, descriptive spatial statistics and inferential statistics.
Two lectures, one lab (two hours); one term
Prerequisite: One of ENVIR SC 1A03, 1B03, 1G03, GEO 1HS3, 1HU3, GEOG 1HA3,
1HB3, ISCI 1A24.
One of EARTH SC 2GI3, ENVIR SC 2GI3, GEO 2103, GEOG 2GI3 is strongly recommended.
Prerequisite (Beginning 2010-2011): One of EARTH SC 2GI3, ENVIR SC 2GI3, GEO 2I03, GEOG 2GI3
Cross-list: ENVIR SC 2MB3, GEOG 2MB3
Antirequisite: GEO 3S03, SOC SCI 2J03
```


### 4.2 EARTH SC 3SA3 APPLIED SPATIAL STATISTICS

```
Advanced treatment of geographic data and organization, descriptive and inferential spatial statistics.
Two lectures, one lab (two hours); one term
Prerequisite: One of EARTH SC 2MB3, ENVIR SC 2MB3, GEO 3S03, GEOG 2MB3, SOC
SCI 2J03, STATS 1CC3, 2B03
One of EARTH SC 2GI3, ENVIR SC 2GI3, GEO 2103, GEOG 2GI3; and one of EARTH SC
2MB3, ENVIR SC 2MB3, GEO 3S03, GEOG 2MB3 are strongly recommended.
Prerequisite (Beginning 2010-2011): One of EARTH SC 2MB3, ENVIR SC 2MB3, GEO
3S03, GEOG 2MB3
Cross-list: ENVIR SC 3SA3, GEOG 3SA3
Antirequisite: GEO 4S03
```


## Justification (4.1-4.2):

```
Courses have been deemed appropriate cross-lists to Geography/Environmental
Sciences courses introduced last year. Prerequisites must change to ensure students have sufficient background. In the interim, students are being warned of recommended prerequisites.
```


### 5.0 CHANGES TO EXISTING COURSES

### 5.1 EARTH SC 2G03 EARTH SURFACE PROCESSES

An examination of the many dynamic processes that shape the face of the earth, including fluvial, eolian, coastal, mass wasting, karst and weathering processes.
Two lectures, one lab (two hours); one term
Prerequisite: One of ENVIR SC 1A03, 1G03, ISCI 1A24
ENVIR SCI 1G03 is strongly recommended.
Prerequisite (Beginning 2010-2011): ENVIR SC 1G03 or ISCI 1A24
Cross-list: ENVIR SC 2G03
Antirequisite: GEO 2G03

## Justification:

More appropriate prerequisite. This change will be reflected in ENVIR SC 2G03.

### 5.2 EARTH SC 2 GI3 INTRODUCTION TO GIS

Introduction to the principles and techniques underlying the use of Geographic information systems (GIS) for capturing and visualizing geographically referenced information.
Databases, models and cartographic principles are also introduced emphasizing the production of effective thematic maps using GIS software.
Two lectures, one lab (two hours); one term
Prorequisite: One of MATH 1AA3, 1B03, 1D03, SOC SCI 2J03, STATS 1C63
Prerequisite (Beginning 2009-2010): One of ISCI 1A24, MATH 1A03, 1AA3, 1B03, 1D03,

1LS3, SOC SCI 2J03, STATS 1CC3, 2B03. One of ENVIR SC 1G03, GEO 1HS3, 1HU3, GEOG 1HA3, 1 HB3 is recommended.
Prerequisite (Beginning 2010-2011): One of ENVIR SC 1G03, GEOG 1HA3, 1HB3 (GEO 1HS3, 1HU3)
Cross-list: ENVIR SC 2GI3, GEOG 2GI3
Antirequisite: GEO 2103
Justification:
Housekeeping and reflects requirement of a prior knowledge in cartography. These changes will be reflected in ENVIR SC 2GI3 and GEOG 2GI3

### 5.3 EARTH SC 2MM3 GEMSTONES: ORIGINS AND CHARACTERISTICS

An examination of gemstones focusing on their geologic origin, mineralogy, colour, chemistry, economic value and historical significance.
Three lectures; one term
Prerequisite: Registration in Level II or above. ENVIR SC 1G03 is strongly recommended.
Prerequisite (Beginning 2010-2011): ENVIR SC 1 G03 and registration in Level II or above
Antirequisite: GEO 2MM3
Justification:
A more appropriate prerequisite is being introduced in response to student concerns that the course requires a background in earth sciences.

### 5.4 EARTH SC 2WW3 WATER AND THE ENVIRONMENT

Selected environmental issues related to water, including floods and droughts, irrigation, effects of water management projects and pollution. Examples from Canada and the world. Three lectures; one term
Prerequisite: Registration in Level II or above
One of BIOLOGY 1M03 (or 1AA3), ENVIR SC 1A03, 1B03, 1G03, ISCI 1A24 is strongly recommended.
Prerequisite (Beginning 2010-2011): One of BIOLOGY 1M03 (or 1AA3), ENVIR SC 1A03,
1B03, 1G03, ISCI 1A24
Antirequisite: GEO 2WW3
Justification:
A more appropriate prerequisite is being introduced in response to student concerns that the course requires an environmental science background.

### 5.5 EARTH SC 3CC3 EARTH'S CHANGING CLIMATE

The earth's climatic history including natural causes of past climate change and human influences on climate will be explored.
Three lectures; one term
Prerequisite: One of GEO 1HS3, 1HU3, GEOG 1HA3, 1HB3; ENVIR SC 1A03, 1B03, 1G03, ISCI 1A24; and registration in Level III or above
One of BIOLOGY 1M03 (or 1AA3), ENVIR SC 1A03, 1B03, 1G03, ISCI 1A24 is strongly recommended
Prerequisite (Beginning 2010-2011): One of BIOLOGY 1 M03 (or 1AA3), ENVIR SC 1A03,
1B03, 1G03, ISCI 1A24, and registration in Level III or above
Cross-list: ENVIR SC 3CC3
Antirequisite: GEO 3CC3
Justification:
A more appropriate prerequisite is being introduced in response to student concerns that the course requires an environmental science background. This change will be reflected in ENVIR SC 3CC3.
5.6 EARTH SC 3DD3 GEOARCHAEOLOGY OF THE UNDERWATER REALM

Methods in underwater exploration; geoarcheological record of human interaction with the marine environment and the effects of climate and sea level changes.
Three lectures; one term
Prerequisite: Registration in Level III or above
ENVIR SC 1G03 is strongly recommended.
Prerequisite (Beginning 2010-2011): ENVIR SC 1G03 or ISCI 1A24; and registration in
Level III or above
Antirequisite: GEO 3DD3
Justification:
A more appropriate prerequisite is being introduced in response to student concerns that the course requires a geology background.
5.7 EARTH SC 3L03 PHYSICAL AND CHEMICAL PROCESSES IN FRESHWATER ENVIRONMENTS AQUATIC BIOGEOCHEMISTRY
A multidisciplinary course emphasizing the interactions of chemical, physical, geological and biological factors in controlling the chemical distribution, composition and structure of freshwater systems. A mandatory weekend field trip will be held in September. This course introduces students to the chemical, physical, geological and biological interactions controlling lake behaviour, through lectures and direct hands-on sampling and analyses of samples.
A mandatory afternoon field trip (during laboratory period) is held in September to collect samples from Lake Ontario. Students enrolling in this course must pay both the incidental fees as prescribed by the School and regular tuition fees.
Two lectures, one lab (four hours); one term
Prerequisite: One of EARTH SC 2Q03, ENVIR SC 2Q03, GEO 2Q03; and one of EARTH SC 2E03, 2G03, 2W03, ENVIR SC 2E03, 2G03, 2W03, GEO 2E03, 2G03, 2W03; and permission of the School of Geography and Earth Sciences. Application must be received by March 31st of the academic year prior to registration.
Cross-list: ENVIR SC 3L03
Antirequisite: GEO 3L03, 4L03
Enrolment is limited.

Justification:
More accurately reflects course content and expectations. This change will be reflected in ENVIR SC 3L03.

### 5.8 EARTH SC 4MT6 SENIOR THESIS

Students will select research topics and prepare a thesis either individually or in teams. One seminar (two hours); two terms
Prerequisite: Registration in Level IV or above in an Honours program in the School of Geography and Earth Sciences; and a CA of 7.5 or higher; and permission of the instructor course coordinator. One of EARTH SC 3RD3, GEO 3R03, GEOG 3MR3 is strongly recommended.
Prerequisite (Beginning 2010-2011): One of EARTH SC 3RD3, GEO 3R03, GEOG 3MR3; and registration in Level IV or above in an Honours program in the School of Geography and Earth Sciences; and a CA of at least 7.5; and permission of the course coordinator. Students intending to enrol in this course must submit an application to the instructor course coordinator by March 1 of the academic year prior to registration. Application forms are available from the School of Geography and Earth Sciences main office after February 1. Students will be informed of acceptance of their application on March 15 subject to fulfillment of the CA requirement.
Cross-list: GEOG 4MT6

Antirequisite: EARTH SC 4MR3, GEO 4CC3, 4R06, GEOG 4MR3
Enrolment is limited.
Justification:
More accurately reflects required prerequisite. This change will be reflected on GEOG 4MT6. Housekeeping.
5.9 EARTH SC 4Z03 EXPLORATION MARINE GEOPHYSICS

Principles of subsurface exploration using seismic, magnetic and borehole geophysical methods. Applications in geological research and oil and gas exploration.
Principles of geophysical exploration of lakes and marine environments. Applications in geoscience research, resource exploration and underwater archaeology.
Two lectures, one lab (two hours); one term
Prerequisite: One of EARTH SC 2E03, ENVIR SC 2E03, GEO 2E03; and EARTH SC 3V03
or GEO 3V03
Antirequisite: GEO 4Z03, 4ZZ3
Justification:
More accurately reflects course content.
5.10 ENVIR SC 1A03 ATMOSPHERE AND HYDROSPHERE CLIMATE AND WATER

An introduction to the processes involved in weather, climate and surface and subsurface waters with a focus on the human impacts on these processes.
Iwo Three lectures, one tutorial, one lab (one hour); second term
Justification:
More accurately reflects emphasis/delivery of the course.

### 5.11 ENVIR SC 2MB3 STATISTICAL ANALYSIS

An introduction to the nature of geographic data and organization, descriptive spatial statistics and inferential statistics.
Two lectures, one lab (two hours); one term
Prerequisite: One of ENVIR SC 1A03, 1B03, 1G03, GEO 1HS3, 1HU3, GEOG 1HA3, 1HB3, ISCI 1A24.
One of EARTH SC 2 GI 3 (GEO 2103), ENVIR SC 2GI3, GEOG 2GI3 is strongly
recommended.
Prerequisite (Beginning 2010-2011): One of EARTH SC 2GI3 (GEO 2103), ENVIR SC
2GI3, GEOG 2GI3
Cross-list: EARTH SC 2MB3, GEOG 2MB3
Antirequisite: CMST 2A03, ECON 2B03, GEO 3S03, SOC SCI 2J03
Not open to students with credit or registration in PSYCH 2RA3.
Justification:
A more appropriate prerequisite is being introduced in response to student concerns that the course requires an environmental science background.
Housekeeping to reflect new cross-listing. These changes will be reflected in GEOG $2 M B 3$.
5.12 ENVIR SC 3SA3 APPLIED SPATIAL STATISTICS

Advanced treatment of geographic data and organization, descriptive and inferential spatial statistics and inferential statistics.
Two lectures, one lab (two hours); one term
Prerequisite: One of EARTH SC 2MB3, ENVIR SC 2MB3, GEO 3S03, GEOG 2MA3 2MB3,
STATS 1CC3, 2B03, SOC SCI 2J03. One of EARTH SC 2GI3, ENVIR SC 2GI3, (GEO
2103), GEOG 2GI3; and one of EARTH SC 2MB3, ENVIR SC 2MB3, GEOG 2MB3 (or GEO 3S03) are strongly recommended.
Prerequisite (Beginning 2010-2011): One of EARTH SC 2MB3, ENVIR SC 2MB3, GEOG 2MB3 (or GEO 3S03)
Cross-list: EARTH SC 3SA3, GEOG 3SA3
Antirequisite: GEO 4S03
Justification:
More accurately reflects appropriate background required. Housekeeping to reflect new cross-listing. These changes will be reflected in GEOG 3SA3.
5.13 ENVIR SC 4G03 GLACIAL SEDIMENTS AND ENVIRONMENTS

The development and movement of glaciers, glacial depositional processes and sedimentary successions in terrestrial, lacustrine and marine environments. A mandatory local field trip will be included. Students enrolling in this course must pay both the incidental fees as prescribed by the School and regular tuition fees.
Two lectures, one lab (two hours); one term
Prerequisite: One of EARTH SC 2E03, 2G03, ENVIR SC 2E03, 2G03, GEO 2E03, 2G03
Cross-list: EARTH SC 4G03
Antirequisite: GEO 3G03, 4G03
Justification:
More accurately reflects course content.

## GEOG 2HI3

GEOGRAPHIES OF DEATH: INTRODUCING
POPULATION AND MEDICAL GEOGRAPHY
Historical and contemporary trends and patterns of mortality and morbidity will be examined using ideas from demography, medicine, ecology and cultural studies, with examples from different parts of the world.
Two lectures, one lab (one hour); one term
Prerequisite: One of GEO 1HS3, 1HU3, GEOG 1HA3, 1HB3
Cross-list: HEALTHST 2HI3
Justification:
Appropriate cross-list given overlap with the Health Studies program.

GEOG 3HH3
GEOGRAPHY OF HEALTH AND HEALTH CARE
An understanding of traditions in health geography and an exploration of the determinants of health including the social environment, the physical environment and health care services.
Three lectures; one term
Prerequisite: One of GEO 1HS3, 1HU3, GEOG 1HA3, 1HB3
Cross-list: HEALTHST 3HH3
Antirequisite: GEO 3HH3
Justification:
Appropriate cross-list given overlap with the Health Studies program.

GEOG 3HP3
POPULATION GROWTH AND AGING
Differential growth of human populations and their changing age and sex structures with an emphasis on birth and death processes. The connections between population structures and processes and various aspects of environments and societies including aging, are emphasized.
Three lectures; one term

Prerequisite: One of GEO 1HS3, 1HU3, GEOG 1HA3, 1HB3
Prerequisite (Beginning 2009-2010): GEOG 2HI3, HEALTHST 2HI3
Cross-list: HLTH AGE 3HP3
Antirequisite: GEO 2HG3, GERONTOL 2HG3, HEALTHST 2HG3
Justification:
Housekeeping. Appropriate cross-lists given overlap with the Health Studies and Gerontology programs.

GEOG 3MF3
FIELD STUDY IN HUMAN GEOGRAPHY
Introduction to field research in Human Geography, usually in the Hamilton area.
Two lectures (two hours); one term
An introduction to field research in human geography.
Most of this course occurs outside the regular academic term, usually in one of the two
weeks prior to the start of term in September. Details and applications are available in
March. Students enrolling in this course must pay both the incidental fees as prescribed by the School as well as the regular tuition fee.
Prerequisite: GEO 2HR3 or GEOG 2MB3 2MA3; and registration in Level III or above of an Honours program in the School of Geography and Earth Sciences
Antirequisite: GEO 3HF3
Justification:
More accurately reflects course content/delivery. Correction of error in prerequisite.
5.18 GEOG 3RW3

GEOGRAPHY OF A SELECTED WORLD REGION
The study of an area outside of North America which will include topics in physical and human geography.
Three lectures; one term
Prerequisite: Completion of GEOG 1HA3 or 1HB3 is recommended.
Prerequisite (Beginning in 2010-11): Registration in Level III and above. Completion of GEOG 1HA3 or 1 HB 3 is recommended.
Antirequisite: GEO 3HR3
GEOG 3RW3 may be repeated, if on a different topic, with permission of the School of Geography and Earth Sciences.

Justification:
Recommendation/implementation of appropriate background/prerequisite.

### 6.0 COURSE DELETIONS:

| EARTH SC 3AA3 | GEOSCIENCE EXPLORERS AND ADVENTURERS |
| :--- | :--- |
| EARTH SC 3Q03 | ENVIRONMENTAL RECONSTRUCTION |
|  | USING STABLE ISOTOPES |
| EARTH SC 4WW3 | CONTAMINANT HYDROGEOLOGY |
| ENVIR SC 3Q03 | ENVIRONMENTAL RECONSTRUCTION |
|  | USING STABLE ISOTOPES |
| ENVIR SC 4WW3 | CONTAMINANT HYDROGEOLOGY |

## Integrated Science (iSci)

No substantive changes to programs or courses are proposed.

## Department of Kinesiology

### 1.0 NEW COURSES:

1.1 KINESIOL 3G03 OUTDOOR EDUCATION

An examination of skills, pedagogy and perspectives of outdoor (expeditionary) education, involving a nine day field component before classes begin in September. Three hours (lectures, tutorials, field experiences); one term Prerequisite: Registration in Level III or above of a Kinesiology program; or registration in Level III or above of a non-Kinesiology program and permission of the instructor Antirequisite: KINESIOL 4D03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program.
(Approximate cost of field component is \$425.00)
Enrolment capacity: 48
Enrolment categories: KIN: 75\%
OTH: 25\%

Justification:
More appropriate as a Level III offering.
1.2 KINESIOL 3U03 HUMAN GROWTH AND MATURATION

In depth analysis of growth and maturation influences on the morphological and functional development of fat, skeletal muscle and bone tissue during childhood, in the context of exercise performance and health.
Two hours (lecture), one hour (seminar); one term
Prerequisite: KINESIOL 2FO3 and registration in Level III or above of an Honours Kinesiology program

Enrolment capacity: 150
Enrolment categories: Nil

Justification:
Some of the content of KINESIOL 3D03 has been shifted to a required Level 2 offering (2F03). This new offering $3 \cup 03$ allows for more in-depth learning of this area of study.
1.3 KINESIOL 3V03 SPORT PSYCHOLOGY

This course examines how psychological factors influence and are influenced by participation and performance in sport. Topics include: personality, motivation, arousal, attitude, perception, aggression, competition, concentration confidence and goal setting.
Three lectures; one term
Prerequisite: Registration in Level III or above
Antirequisite: KINESIOL 4M03

This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program.

Enrolment capacity: 70
Enrolment categories: KIN: 75\%
OTH: 25\%
Justification:
More appropriate as a Level III offering.
1.4 KINESIOL 4A03 ADVANCED BIOMECHANICS

In-depth study of the mechanics of human movement including the topics of multi-linked segment analysis, individual muscle force estimation, 3-D forces and moments, fluid resistance, optimization, efficiency and power flow. The laboratory component covers the scientific method, data acquisition, instrumentation and numerical methods.
Three hours (lectures, labs); one term
Prerequisite: KINESIOL 2A03, 3AA3
Antirequisite: KINESIOL 4A06
1.5 KINESIOL 4AA3 APPLIED BIOMECHANICS

A combination of lectures and problem based learning on aspects of human movement facing the modern biomechanist. Topics and problems are taken from occupational, clinical and sport biomechanics.
Three hours (lectures, tutorials); one term
Prerequisite: KINESIOL 2A03, 3AA3
Antirequisite: KINESIOL 4A06
Enrolment capacity: 40 in each
Enrolment categories: NIL
Justification (1.4-1.5):
KINESIOL 4A06 has been split into 2-3 unit courses to allow timetabling flexibility and increase student interest.

### 2.0 CHANGES TO EXISTING COURSES AND DEPARTMENT NOTES:

2.1 KINESIOL 2C03 NEUROMUSCULAR EXERCISE PHYSIOLOGY

Examination of neuromuscular function during exercise, with an emphasis on factors limiting strength, speed and power performance. Adaptations to training will also be considered, as well as training methods used to induce adaptations.
Three hours (lectures), two hours (labs/tutorials); one term
Prerequisite: KINESIOL 1A03 and 1AA3 (or 1A06) 1603, 1E03, 1F03, 1 G 03 and registration in Level II of an Honours Kinesiology program; or both KINESIOL 1Y03; and 1YY3, or BIOLOGY 2 A03 and registration in Honours Biology (Physiology
Specialization). (See Department Note 8.)
Antirequisite: KINESIOL 2C06

### 2.2 KINESIOL 2CC3 CARDIORESPIRATORY AND METABOLIC

EXERCISE PHYSIOLOGY
Examination of cardiorespiratory function and metabolic regulation during exercise, with emphasis on factors limiting endurance-human performance. Adaptations to training will also be considered, as well as training methods used to induce adaptations. Three hours (lectures), two hours (labs/tutorials); one term Prerequisite: KINESIOL 1A03, 1AA3 (or 1A06) 1C03, 1E03, 1F03,-1G03 and registration
in Level II of an Honours Kinesiology program; or both KINESIOL 1Y03, ; and 1YY3, or BIOLOGY 2A03 and registration in Honours Biology (Physiology Specialization). (See Department Note 9.)
Antirequisite: KINESIOL 2C06
Justification (2.1-2.2):
In consultation with the Department of Biology, appropriate changes have been made to the prerequisites. Amended course description better reflects course content.

KINESIOL 3A03 HISTORY OF EXERCISE AND SPORTS MEDICINE
Selected topics in the social and cultural history of exercise and sports medicine in the Western World, with an emphasis on 19th- and 20th-century developments in North America.
Three hours (lectures and discussion/seminar); one term
Prerequisite: Registration in Level III or above of any Kinesiology, Health Studies or History program
Cross-list: HISTORY 3 S03
This course is administered by the Department of History.
Justification:
As part of the move of the Department of Kinesiology to the Faculty of Science, the faculty member who teaches this course has relocated to the Department of History. An agreement to cross-list this Kinesiology course with a new History offering (3S03) has been established.
2.4 KINESIOL 3B03 PHYSICAL ACTIVITY FOR CHALLENGED POPULATIONS

Introduction to developmental, emotional, behavioural, learning, and orthopedic disabilities with an emphasis on adapting physical activity to meet individual needs. Includes issues related to integration, objectives, and design of activity programs. special populations, together with an examination of issues related to integration, design, and objectives of special physical activity programming.
Three hours (lectures); one term
Prerequisite: KINESIOL 1A06, 2G03 Registration in Level III or above of an Honours Kinesiology program
Gorequisite: KINESIOL 3BPO
Students who do not successfully complete the required KINESIOL 3BPO placement will forfeit credit in KINESIOL 3 B03.

Justification:
Amended description better reflects course content. Housekeeping changes as KINESIOL 3BPO is no longer offered/required co-requisite.
2.5 KINESIOL 3E03 NEURAL CONTROL OF HUMAN MOVEMENT

The control of human movement studied in detail from neurophysiological, cognitive and dynamical perspectives. Topics include basic neurophysiology, mechanisms of sensation, reflexes, voluntary movement and theories of motor control.
Three hours (lectures); one term
Prerequisite: KINESIOL 1A03, 1AA3 (or 1A06), 1E03 and registration in Level III or above of a Kinesiology program; or PSYCH 2F03 and registration in Level III or above of an Honours Psychology program and permission of the instructor.
Antirequisite: LIFE SCI 3K03
Justification:
Amended description better reflects course content. Housekeeping changes to
prerequisite. This course will become administratively tied to LIFE SCI 3K03.

## KINESIOL 3MP3 COMMUNITY LEADERSHIP IN EDUCATION, SPORT AND PHYSICAL ACTIVITY

This placement course provides the essential links between classroom knowledge and professional practice. Working with special needs populations, children, adolescents, adults and the elderly, students will experience the challenges faced by community agencies that of delivering sport and physical activity programs in a broad range of environments.
Placement experience equivalent to one day per week ( 60 hrs .), seminars; one term Prerequisite: Credit or registration in KINESIOL 3M03 and registration in Level III or above
Antirequisite: SOC SCI 3MP3
Not open to students with credit or registration in KINESIOL 4EE3 if the placement is in the area of coaching or leadership.

Enrolment capacity will be increased to 35 to absorb the 10 seats previously set aside for SOC SCI 3EP3.

Justification:
Amended title and description better reflects course content. This course will no longer be administratively tied to SOC SCI 3MP3 as students typically want the course identified as a Kinesiology designation.

### 2.7 KINESIOL 3 Y03 HUMAN NUTRITION AND METABOLISM

An in-depth analysis of human nutrition and metabolism, with an emphasis on the impact of diet on human physical performance in both healthy and disease states.
Three hours (lectures and labs); one term
Prerequisite: BIOLOGY 2 A03 or Either both KINESIOL 1A03 and 1AA3 (or 1A06); or 1X06, or both KINESIOL 1 Y03 and 1YY3; and registration in Level III or above Antirequisite: KINESIOL 4Y03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited. Offered in alternate years.

## Justification:

Relaxing of requisite to allow students with BIOLOGY 2A03 into the course.
2.8 KINESIOL 4C03 INTEGRATIVE PHYSIOLOGY OF HUMAN PERFORMANCE

A detailed analysis of the physiological factors that regulate human physical performance. Emphasis is placed on the body's integrative response to exercise, and the influence of physical training, dietary manipulation and altered environmental conditions. including the control of energy demand and supply. Three hours (lectures, labs); one term Prerequisite: KINESIOL 2CC3 (or 2C06); or BIOLOGY 2A03, KINESIOL 2CC3 (or 2C06) and registration in Honours Biology (Physiology Specialization)

Justification:
Amended description better reflects course content. Housekeeping.
KINESIOL 4EE3 ADVANCED-PROFESSIONAL PLACEMENT IN KINESIOLOGY Students take part in a supervised practical experience that links classroom knowledge to professional practice. Placements are offered in all kinesiology sub-disciplines. aging, eardiac rehabilitation, sports injuries, dance, management, outdoor education, special needs populations and teaching and coaching.

Placement experience equivalent to one day per week ( 60 hrs .), seminars; one term
Prerequisite: One of KINESIOL 3B03, 3F03, З」১3, 3K03, 3M03, 4B03, 4D03, 4103, 4১১3, 4SS3; and rRegistration in Level IV of a Kinesiology program; and permission of the supervising instructor.
Antirequisite: KINESIOL 4X06
Justification:
Amended title and description better reflects course content. Appropriate changes to prerequisite.

KINESIOL 4KK3 FUNDAMENTALS OF REHABILITATION
This course will outline the basic principles of rehabilitation and explore the more common techniques and modalities. Application of principles will be explored in a number of impairments including acquired brain injury, amputee, spinal cord injury, neuromuscular disease, stroke, etc.
Three hours (lectures, lab); one term
Prerequisite: KINESIOL 1A06, 2E03 or 2C06; and registration in Level III or above of a
Kinesiology program. KINESIOL 3K03 is strongly recommended.
Prerequisite (Beginning 2010-11): KINESIOL 2E03 or 2C06; and 3K03; and registration in Level III or above of a Kinesiology program
(Approximately $\$ 25.00$ will be charged for supplies used in labs.)
Justification:
Phasing in of more appropriate prerequisite.
2.11 KINESIOL 4P03 THE BRAIN AND HUMAN MOVEMENT

A study of the role of the brain in movement control in normal and special populations using theories and methods based on modern cognitive neuroscience.
Three hours (lectures, neuroanatomy labs); one term
Prerequisite: KINESIOL 3E03 and registration in Level III or above of a Kinesiology or Honours Life Sciences or Psychology program: (See Note 5 above.).

Justification:
Better reflects course content. Requisite and enrolment categories will be amended to accommodate Honours Life Sciences students.

### 3.0 COURSE DELETIONS:

| KINESIOL 3BP0 | SPECIAL POPULATIONS PLACEMENT |
| :--- | :--- |
| KINESIOL 3D03 | GROWTH AND MATURATION |
| KINESIOL 3J03 | SKELETAL MUSCLE CELL AND MOLECULAR PHYSIOLOGY |
| KINESIOL 3KP0 | SPORTS INJURIES PLACEMENT |
| KINESIOL 4A06 | ADVANCED BIOMECHANICS |
| KINESIOL 4D03 | OUTDOOR EDUCATION |
| KINESIOL 4II3 | CANADIAN SPORT AND PHYSICAL ACTIVITY HISTORY |
| KINESIOL 4M03 | SPORT PSYCHOLOGY |

## Life Sciences

### 1.0 CHANGES TO EXISTING PROGRAMS:

1.1 Honours Life Sciences
\{2514\}
FORMERLY HONOURS SCIENCE (LIFE SCIENCE)
(Includes Biochemistry, Biology and Psychology)
ADMISSION NOTE (2008-2009 ONLY)
BIOLOGY 1A03, 1AA3 (or 1M03), PSYCH 1A03 (or $1 \times X 3$ ), 1AA3 (or $1 \times 03$ ) must be completed by the end of Levelll.

## ADMISSION

2008-2009 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0 including:
3 units MATH 1A03
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
9 units from BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3 with an average of at least 6.0

9 units from Science I Course List (See Admission Note above.)
ADMISSION NOTES (2009-2010 ONLY)

1. BIOLOGY 1A03, 1 M 03 (or 1AA3), PSYCH $1 \mathrm{X0} 0$ (or 1AA3), 1XX3 (or 1A03) must be completed by the end of Level II.
2. Completion of one of PHYSICS 1 B03 or 1 L03 will be is required by the end of Level II.
3. Completion of CHEM 1A03, 1AA3 is strongly recommended in Level I as these courses are prerequisites for CHEM 2OA3, LIFE SCI 2B03 and 2EE3 and a wide selection of Biochemistry, Biology, and Psychology courses.

## ADMISSION

EFFECTIVE 2009-2010 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0 including:
3 units from MATH 1A03, 1LS3
9 units from BIOLOGY 1A03, 1 M 03 (or 1AA3), PSYCH 1X03 (or 1AA3), 1XX3 (or 1A03) with an average of at least 6.0
12 units from Life Sciences I Course List (See Admission Notes 1 and 2 above.)

## ADMISSION NOTES (EFFECTIVE 2010-2011)

1. Completion of one of PHYSICS $1 \mathrm{B03}$ or 1L03 is required by the end of Level II.
2. Completion of CHEM 1 A03, 1AA3 is strongly recommended in Level I as these courses are prerequisites for CHEM 2OA3, LIFE SCI 2B03 and 2EE3 and a wide selection of Biochemistry, Biology, and Psychology courses.

## ADMISSION

EFFECTIVE 2010-2011: Completion of any Level I program with a Cumulative Average of at least 6.0 including:
3 units from MATH 1A03, 1LS3
12 units BIOLOGY 1A03, 1 M 03 (or 1AA3), PSYCH 1X03 (or 1AA3), 1XX3 (or 1A03) with an average of at least 6.0
9 units from the Life Sciences I Course List (See Admission Notes above.)

## PROGRAM NOTES

1. For students who entered the program in September 2007 or prior, at each academic review after completion of Level 1 , a Cumulative Average of at least 6.0 is required to continue in the Honours Life Sciences program.
2. Students whe intend to complete Biochemistry courses or who wish to be eligible for a wider selection of Biology and Psychology courses, must complete CHEM 1A03, 1AA3.
3. Registration in the Honours Life Sciences program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to
read course prerequisites carefully.
4. Students who entered the program prior to September 2008, may use the following courses toward the Honours Life Sciences Course List requirements: BIOCHEM 2B03, 2BB3, CHEM 2BA3, 2BB3, 2N03, 2R03, PSYCH 3AA3, 3K03, SCIENCE 1D03, $2 J 03$.
5. Students who entered the program prior to September 2007, are restricted to a maximum of 36 units of Level II, III or IV Psychology (maximum 12 units per Level) toward their elective.
6. Students with credit in Biology 1AA3 may substitute it for BIOLOGY 1M03.
7. Students interested in graduate school may wish to consider completion of a thesis or independent study course (see LIFE SCI 4A03, 4B06, 4C09, SCIENCE 4A03, 4B06, 4D09).
HONOURS LIFE SCIENCES COURSE LIST

| BIOCHEM | Levels II, III, IV Biochemistry courses for which prerequisites have been met |
| :---: | :---: |
| BIOLOGY | Levels II, III, IV Biology courses for which the prerequisites have been met |
| CHEM | 2BB3, 2BA3, 2E03, 2N03, 2OA3, 2OB3, 2R03 |
| CHEM BIO | 2A03, 2P03 |
| EARTH SC | 2EI3 |
| ENVIR SCI | Levels II, III, IV Environmental Sciences courses for which prerequisites have been met and their respective former Level II, III, IV GEO courses |
| HTH SCI | 3103, 3K03, 4113 |
| KINESIOL | 3E03, 3Y03, 4P03 |
| LIFE SCI | Levels II, III, IV Life Sciences courses for which the requisites have been met |
| MATH | 2E03 |
| MED PHYS | 2A03, 3R03, 4A03, 4B03, 4SZ3, 4XX3 |
| MOL BIOL | Levels II,III, IV Molecular Biology courses for which prerequisites have been met |
| ORIGINS | 2FF3, 3D03, 3E03, 3F03 |
| PSYCH | Levels II, III, IV Psychology courses for which the prerequisites have been met |
| SCIENCE | Levels II, III, IV Science courses for which the prerequisites have been met |
| STATS | 2B03 |

BIOCHEM 2EE3, 3G03, 3H03, 3N03, 4E03, 4Q03; BIOLOGY 2A03, 2B03, 2C03, 2D03, 2EE3, 2F03, 2G03, 2YY3, 2Z03, ЗAA3, 3B03, 3BB3, 3CC3, 3FF3, 3H03, 3HH3, 3103,
 ЗV03, ЗY03, ЗYY3, 4A03, 4AA3, 4B03, 4DD3, 4E03, 4EE3, 4J03, 4P03, 4PP3, 4R03, 4T03, $4 \cup 03,4 \times 03,4 Y 03$; CHEM 2E03, 2ОАЗ, 2OB3; CHEM BIO 2A03, 2P03; EARTH SC 2E13; ENVIR SC 2B03, 2G03, 3CG3, 3EP3, 3W03, 4EA3, 4WW3; GEO 2A03, 2B03, 2G03, 3A03, 3G63, 3W03, 4A03, 4WW3; HTH SCI 3103, 3K03, 4II3; KINESIOL 3E03, ЗY03; MATH 2E03; MED PHYS 2A03, 3R03, 4A03, 4B03, 4SZ3, 4XX3; MOL BIOL 4H03; PHYSICS 1BB3; PSYCH 2AA3, 2B03, 2C03, 2D03, 2E03, 2F03, 2H03, 2S03, $2 T T 3,3 A 03,3 B 03,3 B B 3,3 B N 3,3 C 03,3 D 03,3 F 03,3 F A 3,3 G G 3,3 H H 3,3113,3 J 03$, З」З3, ЗKK3, 3M03, 3N03, 3Q03, 3QQ3, 3T03, 3VV3, 3YY3, 4BN3, $4 Y 03,4 Z 03 ;$ SCIENCE 2A03, 2B03, 2K03, 2L03, 3S03, 4A03, 4B06, 4C09, 4SZ3, 4XX3; STATS 2B03
REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I

## LEVEL I

30 units (See Admission above.)

[^0]```
    0-3 units from BIOLOGY 1A03, 1M03 (or 1AA3), PSYCH 1X03 (or 1AA3), 1XX3 (or
        1A03) if not completed in Levell (See Admission Note above.)
    15 units from Faculty of Science courses which may include Honours Life Sciences
        Gourse List (See Program Note-4 above.)
    30-33 units Electives, oxcluding Psychology (See Program Note 5-above.)
    LEVELS II-IV: 90 UNITS (REQUIREMENTS FOR STUDENTS ENTERING IN
    SEPTEMBER 2009)
    3 units LIFE SCI 2A03
    9 units from LIFE SCI 2B03, 2C03, 2D03, 2EE3, 2F03, 2H03
    6 units from LIFE SCI 3A03, 3B03, 3C03, 3D03
    4236 units from the Honours Life Sciences Course List, of which at least 2418 units
    must be Levels III, IV
    0-3 units from BIOLOGY 1A03, 1M03 (or 1AA3), PSYCH 1X03 (or 1AA3), 1XX3
    (or 1A03) if not completed in Level I (See Admission Note 1 above.)
    0-3 units from PHYSICS 1B03, 1L03 if not completed in Level I (See Admission
    Note 2 above.)
    15 units from Faculty of Science courses which may include Honours Life
                        Sciences-Course List
    27-3330-36 units Electives, excluding Psychology (See Program Note 5-above.)
    LEVELS II-IV: 90 UNITS (REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR
    TO SEPTEMBER 2009)
    42 units from Honours Life Sciences Course List, of which at least }24\mathrm{ units must be
        Levels III, IV (See Program Note 2 above.)
    0-3 units from BIOLOGY 1A03, 1M03 (or 1AA3), PSYCH 1X03 (or 1AA3), 1XX3 (or
        1A03) if not completed in Level I (See Admission Note 1 above.)
    15 units from Faculty of Science courses, which may include Honours Life Sciences
        Course List
    30-33 units Electives
B.Sc. in Life Sciences
\{1312\}
(Includes Biochemistry, Biology, and Psychology)
ADMISSION NOTES (2009-2010 ONLY)
1. BIOLOGY 1A03, 1AA3 (or 1M03), PSYCH 1A03 (or 1XX3), 1AA3 (or 1X03) must be completed by the end of Level II.
2. Completion of CHEM 1A03, 1AA3 is strongly recommended in Level I as these courses are prerequisites for CHEM 2OA3, LIFE SCI 2B03 and 2EE3 and a wide selection of Biochemistry, Biology, and Psychology courses.
```


## ADMISSION

```
2008-2009 ONLY: Completion of any Level I program with a Cumulative Average of at least 3.5 including:
3 units MATH 1 A03
3 units from MATH 1AA3, 1B03, 1D03, STATS 1663
9 units from BIOLOGY \(1 \mathrm{~A} 03,1 \mathrm{AA} 3\), PSYCH 1A03, 1AA3 with an average of at least 4.0
9 units from Science 1 Course List (Seo Admission Note above.)
EFFECTIVE 2009-2010 ONLY: Completion of any Level I program with a Cumulative Average of at least 3.5 including:
3 units from MATH 1A03, 1LS3
9 units from BIOLOGY 1A03, 1 M 03 (or 1AA3), PSYCH 1X03 (or 1AA3), 1XX3 (or 1A03) with an average of at least 4.0
12 units from Life Sciences I Course List (See Admission Notes above.)
```


## ADMISSION NOTE (EFFECTIVE 2010-2011)

```
Completion of CHEM 1A03, 1AA3 is strongly recommended in Level I as these courses are prerequisites for CHEM 2OA3, LIFE SCI 2B03 and 2EE3 and a wide selection of Biochemistry, Biology, and Psychology courses.
```


## ADMISSION

EFFECTIVE 2010-2011: Completion of any Level I program with a Cumulative Average of at least 3.5 including:
3 units from MATH 1A03, 1LS3
12 units BIOLOGY 1A03, 1 M 03 (or 1AA3), PSYCH 1 X03 (or 1AA3), 1XX3 (or 1A03) with an average of at least 4.0
9 units from the Life Sciences I Course List (See Admission Note above.)
PROGRAM NOTES

1. Students who intend to complete Biochemistry courses or who wish to be eligible for a wider selection of Biology and Psychology courses must complete CHEM 1A03, 1AA3.
2. Registration in the B.Sc. Life Sciences program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to read course prerequisites carefully.
3. Students who entered the program prior to September 2008, may use the following courses toward the B.Sc. Life Sciences Course List requirements: BIOCHEM 2B03, 2BB3, CHEM 2BA3, 2BB3, 2N03, 2R03, PSYCH 3AA3, 3K03, 3Y03, SCIENCE 1D03, 2J03.

## B.SC. LIFE SCIENCES COURSE LIST

BIOCHEM 2EE3, 3G03, 3H03, 3N03, 4E03, 4Q03
BIOLOGY Levels II, III Biology courses for which prerequisites have been met
CHEM 2BB3, 2BA3, 2E03, 2N03, 2OA3, 2OB3, 2R03
EARTH SC 2EI3
ENVIR SC Levels II, III, IV Environmental Sciences for which prerequisites have been met and their respective former Levels II, III, IV GEO courses
$\mathrm{HTH} \mathrm{SCl} \quad 3103,3 \mathrm{~K} 03,4 \mathrm{II} 3$
KINESIOL 3E03, 3Y03, 4P03
LIFE SCI Levels II, III, IV Life Sciences courses for which prerequisites have been met
MATH 2E03
MED PHYS 2A03, 3R03, 4A03, 4B03
MOL BIOL Levels II, III Molecular Biology courses for which prerequisites have been met
ORIGINS 2FF3, 3D03, 3E03, 3F03
PHYSICS 1BB3
PSYCH Levels II, III Psychology courses for which prerequisites have been met
SCIENCE 1D03, 2A03, 2B03, 2J03, 2K03, 2L03, 3S03
STATS 2B03
BIOCHEM 2EE3, 3G03, ЗH03, 3N03, 4E03, 4Q03; BIOLOGY 2A03, 2B03, 2G03, 2D03, 2EE3, 2F03, 2G03, 2YY3, 2Z03, ЗAA3, 3B03, 3BB3, 3G63, 3FF3, 3H03, 3HH3, 3103, $3 K 03,3 \mathrm{MO3}, ~ З \mathrm{MM3}, 3003,3 P 03,3 Q 03,3 Q Q 3,3 R 03,3 S 03,3 S 53,3 T T 3,3 Y 03,3 Y Y 3$, 4J03, 4U03; CHEM 2E03, 2OA3, 2OB3; EARTH SC 2E13; ENVIR SG 2B03, 2G03, 3C63, 3EP3, 3W03, 4EA3, 4WW3; GEO 2A03, 3A03, 3C63, 3W03, 4A03, 4WW3; HTH SCI 3103, 3K03, 4II3; KINESIOL 3E03, 3Y03; MATH 2E03; MED PHYS 2A03, 3R03, 4A03, 4B03; PHYSICS 1BB3; PSYCH 2AA3, 2B03, 2C03, 2D03, 2E03, 2F03, 2H03, 2S03, 2TT3, 3A03, 3AB3, 3AC3, 3BA3, 3BB3, 3BN3, 3C03, 3CB3, 3CD3, 3F03, 3FA3, 3KK3, ЗM03, 3N03, 3Q03, 3QQ3, 3T03, ЗU03, 3UU3, $3 V V 3,3 Y Y 3 ; ~ S C I E N C E ~ 2 A 03, ~$ 2B03, 2K03, 2L03, 3S03; STATS 2B03
REQUIREMENTS
90 units total (Levels I to III), of which no more than 42 units may be Level I
LEVEL I
30 units (See Admission above.)

## LEVELS II-III: 60 UNITS (REQUIREMENTS FOR STUDENTS ENTERING IN SEPTEMBER 2009)

3 units LIFE SCI 2A03
9 units from LIFE SCI 2B03, 2C03, 2D03, 2EE3, 2F03, 2H03

| 6 units | from LIFE SCI 3A03, 3B03, 3C03, 3D03 |
| :--- | :--- |
| 12 units | from the B.Sc. Life Science Course List, of which at least 6 units must be |
|  | Levels III, IV (See Program Note 3 above.) |
| from BIOLOGY 1A03, 1M03 (or 1AA3), PSYCH 1X03 (or 1AA3), 1XX3 (or |  |
| $27-30$ units | 1A03) if not completed in Level I |
| Electives. |  |

## LEVELS II-III: 60 UNITS (REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2009)

24 units from B.Sc. Life Sciences Course List, of which at least 12 units must be Level III (See Program Note 3 above.)
9 units from Faculty of Science courses which may include B.Sc. Life Sciences Course List (See Program Notes 1 and 3 above.)
0-3 units from BIOLOGY 1A03, 1M03 (or 1AA3), PSYCH $1 \mathrm{X03}$ (or 1AA3), 1XX3 (or 1A03) if not completed in Level I (See Admission Note above.)
24-27 units Electives,-oxcluding Psychology
Justification:
Since July of 2007, The Faculty of Science Task Force on Undergraduate Education and Teaching in the Life Sciences has researched and developed integrated, stand-alone Hons. B.Sc. and B.Sc. Life Sciences programs that will better position the faculty for future growth, take advantage of our collective expertise, and allow us to better capture the excitement and emergent opportunities in the broad areas of life sciences today.

The membership of the Committee was drawn from departments with strong connections to the Life Sciences, and included research faculty, Teaching Professors, and student representatives. The first Task Force report was presented to the Dean a year ago and contained an analysis of the then-current situation in the courses that were commonly taken by students in the B.Sc. and Hons B.Sc. Life Sciences program, the requirements for department-based programs, and presented recommendations for changes to the Life Sciences course list. Those changes were approved in Fall 2007, and were included in the 2008/09 Undergraduate Calendar.

Over the past year, the Task Force has studied Life Sciences programs at other universities in the U.S. and Canada, and worked to determine the key elements of a strong "Life Sciences" program. Over the course of the curriculum development, the Task Force aimed to develop academically rigorous yet flexible programs. There is strong faculty-wide support for these interdisciplinary programs and when appropriately resourced may become flagship for our faculty.

### 2.0 NEW COURSES:

### 2.1 LIFE SCI 2A03 RESEARCH METHODOLOGIES IN LIFE SCIENCES

An examination and application of the scientific method. Selected research problems will be explored to experience different approaches to hypothesis formulation, testing, interpretation and communication in the Life Sciences.
Two lectures, one tutorial, one term.
Prerequisite: Registration in Level II or above of a Life Sciences program.
Enrolment Capacity: 500-600
Enrolment Categories: HLS and BLS - 100\%
LIFE SCI 2C03
NEURAL COMMUNICATION AND INFORMATION PROCESSING

This course covers the basic neuroanatomy, neurochemistry, principles of investigating the nervous system, nerve-communication, and sensory and motor mechanisms in normal and diseased brains.
Three lectures, one term.
Prerequisite: Nine units from BIOLOGY 1A03, 1M03 (or 1AA3), PSYCH 1X03 (or 1AA3),
1XX3 (or 1A03). Completion of BIOLOGY 1A03 is strongly recommended.
Prerequisite (Beginning 2010-2011): BIOLOGY 1A03, 1 M03 (or 1AA3), PSYCH 1 X03 (or
1AA3), 1XX3 (or 1A03) or ISCI 1A24
Antirequisite: PSYCH 2D03, 2F03, 2N03
Enrolment Capacity: 200-250
Enrolment Categories: HLS and BLS - 95\%
OTH - 5\% (space permitting)
LIFE SCI 2D03 BEHAVIOURAL PROCESSES
An examination of concepts that underpin animal behaviour and illustration of how selection pressures have operated to produce the diversity of behaviour that humans and other animals share.
Three lectures, one term.
Prerequisite: Nine units from BIOLOGY 1A03, 1M03 (or 1AA3), PSYCH 1X03 (or 1AA3), 1XX3 (or 1A03). Completion of BIOLOGY 1M03 is strongly recommended. Pre-requisites (Beginning 2010-2011): BIOLOGY 1A03, 1 M03 (or 1AA3), PSYCH 1 X03 (or 1AA3), 1XX3 (or 1A03) or ISCI 1A24
Antirequisite: PSYCH 2TT3
Enrolment Capacity: 200-250
Enrolment Categories: HLS and BLS - 95\%
OTH - $5 \%$ (space permitting)

## 2.4 <br> LIFE SCI 2H03 ENVIRONMENTAL LIFE SCIENCE

This course aims to understand the impact of environmental processes and changes on living organisms (including humans). Topics may include global warming, ecological degradation, elemental cycling, environmental analysis and management, environmental toxicology, bioremediation, and bioengineering.
Three lectures/seminars; one term
Prerequisite: One of BIOLOGY 1M03 (or 1AA3), ENV SCI 1A03, 1B03,1G03 or ISCI 1A24

Enrolment Capacity: 200-250
Enrolment Categories: HLS and BLS - 95\%

$$
\text { OTH - } 5 \% \text { (space permitting) }
$$

### 2.5 LIFE SCI 3A03 HEALTH AND DISEASES

A multidisciplinary approach to exploring the emergence, propagation, evolution, and impacts of diseases in human populations in the context of environmental change, natural selection, host-pathogen interactions, and lifestyle. Topics may include, parasitic disease, infectious disease, immunological disease, chronic disease, and lifestyle associated diseases. The influence of modern medicine and public health policy will be considered for each topic.
Three lectures/seminars; one term
Prerequisite: LIFE SCI 2A03, 2EE3
First offered in 2010-2011.
Enrolment Capacity: 200-250
Enrolment Categories: HLS and BLS - 100\%

LIFE SCI 3B03 NEUROBIOLOGICAL MECHANISMS OF BEHAVIOUR
This course applies a multidisciplinary approach to examining the neurobiological mechanisms of behaviour in both normal and 'maladaptive' functioning conditions. Three lectures/seminars; one term
Prerequisites: LIFE SCI 2A03, 2B03, 2C03
First offered in 2010-2011.
Enrolment Capacity: 200-250
Enrolment Categories: HLS and BLS - 100\%
LIFE SCI 3C03 BEHAVIOURAL AND EVOLUTIONARY ECOLOGY
This course applies a multidisciplinary approach to examining the behaviour of humans and other animals in light of evolutionary and ecological tenets and theories. Topics may include foraging theory, parent-offspring interactions, cross-species analysis and the reconstruction of behavioural phylogenies, and sex differences in psychology and behaviour.
Three lectures/seminars; one term
Prerequisites: LIFE SCI 2A03, 2D03, 2F03
First offered in 2010-2011.
Enrolment Capacity: 200-250
Enrolment Categories: HLS and BLS - 100\%
LIFE SCI 3D03 ENVIRONMENT AND GLOBAL SUSTAINABILITY
This course applies a multidisciplinary approach to studying how the global human population can grow sustainably. Topics will vary and may include environmental factors that influence population growth and development, food production, earth's carrying capacity, and impacts of climate change.
Two lectures, one workshop; one term
Prerequisite: LIFE SCI 2A03;, and LIFE SCI 2F03 or 2H03
First offered in 2010-2011.
Enrolment Capacity: 200-250
Enrolment Categories: HLS and BLS - 100\%
Justification (2.1-2-8):
Courses have been developed to support the new curriculum. The courses will be phased in over the next three years. Enrolment in some Level 2 courses will be restricted to students enrolled in a Life Sciences program, however, if and when space permits, access will be given to non-Life Sciences students. Access to Level III courses will be limited to Life Sciences students. For some courses, resource issues must be resolved prior to course offering.

LIFE SCI 3K03 NEURAL CONTROL OF HUMAN MOVEMENT
The control of human movement studied in detail from neurophysiological, cognitive and dynamical perspectives. Topics include basic neurophysiology, mechanisms of sensation, reflexes, voluntary movement and theories of motor control. Three hours (lectures); one term
Prerequisite: BIOLOGY 1 A03 or ISCI 1A24; and PSYCH $2 F 03$ or LIFE SCI 2C03; and registration in Level III or above
Antirequisite: KINESIOL 3E03
Not open to students registered in a Kinesiology program.
This course is administered by the Department of Kinesiology.
Enrolment Capacity: 200
Enrolment Categories: HLS and BLS - 70\%

SC2: 25\%

Justification:
Made available by the Department of Kinesiology, this course will be administratively tied to KINESIOL 3E03 (current capacity of 150) to provide an offering in an area of interest to Life Sciences and other Faculty of Science students.
2.10 LIFE SCI 4A03 INDEPENDENT STUDY

An independent study under the supervision of a faculty member.
One term
Prerequisite: Registration in Level IV of an Honours Life Sciences program and permission of the supervising faculty member
Antirequisite: LIFE SCI 4B06, 4C09 SCIENCE 4A03, 4B06, 4C09
Enrolment Capacity: 25
Enrolment Categories: HLS - 100\%
2.11 LIFE SCI 4B06 INDEPENDENT PROJECT

An independent study under the supervision of a faculty member.
Two terms
Prerequisite: Registration in Level IV of an Honours Life Sciences program and permission of the supervising faculty member
Antirequisite: LIFE SCI 4A03, 4C09, 4D03 SCIENCE 4A03, 4B06, 4C09, 4D03
Enrolment Capacity: 25
Enrolment Categories: HLS - 100\%
2.12 LIFE SCI 4C09 INDEPENDENT THESIS

An independent study under the supervision of a faculty member.
Two terms
Prerequisite: Registration in Level IV of an Honours Life Sciences program and permission of the supervising faculty member
Antirequisite: LIFE SCI 4A03, 4B06, 4D03, SCIENCE 4A03, 4B06, 4C09, 4D03
Enrolment Capacity: 25
Enrolment Categories: HLS - 100\%
2.13 LIFE SCI 4D03 DIRECTED RESEARCH IN LIFE SCIENCES

Directed study of a research problem through published materials and/or field inquiry and/or data analysis. Students will work in small groups and be expected to write up the results of their inquiry in scholarly form.
One term
Prerequisite: Registration in Level IV of an Honours Life Science program
Antirequisite: LIFE SCI 4B06, 4C09, 4L03, 4M03, 4N03, 4P03, SCIENCE 4B06, 4C09
Enrolment Capacity: 25
Enrolment Categories: HLS - 100\%
2.14 LIFE SCI 4LO3 RESEARCH SEMINAR A

Advanced seminar focusing on selected topics in an area of Life Sciences. Seminars and discussions in small groups.
One term
Prerequisite: Registration in Level IV of an Honours Life Science program.
Antirequisite: LIFE SCI 4D03

Not open to students with credit or registration in LIFE SCI 4B06, 4C09.
Enrolment is limited.
First offered in 2011-2012.
Enrolment Capacity: 25
Enrolment Categories: HLS - 100\%
2.15 LIFE SCI 4M03 RESEARCH SEMINAR B

Advanced seminar focusing on selected topics in an area of Life Sciences. Seminars and discussions in small groups.
One term
Prerequisite: Registration in Level IV of an Honours Life Science program.
Antirequisite: LIFE SCI 4D03
Not open to students with credit or registration in LIFE SCI 4B06, 4C09.
Enrolment is limited.
First offered in 2011-2012.
Enrolment Capacity: 25
Enrolment Categories: HLS - 100\%
2.16 LIFE SCI 4N03 RESEARCH SEMINAR C

Advanced seminar focusing on selected topics in an area of Life Sciences. Seminars and discussions in small groups.
One term
Prerequisite: Registration in Level IV of an Honours Life Science program.
Antirequisite: LIFE SCI 4D03
Not open to students with credit or registration in LIFE SCI 4B06, 4C09.
Enrolment is limited.
First offered in 2011-2012.
Enrolment Capacity: 25
Enrolment Categories: HLS - 100\%

### 2.17 LIFE SCI 4P03 RESEARCH SEMINAR D

Advanced seminar focusing on selected topics in an area of Life Sciences. Seminars and discussions in small groups.
One term
Prerequisite: Registration in Level IV of an Honours Life Science program.
Antirequisite: LIFE SCI 4D03
Not open to students with credit or registration in LIFE SCI 4B06, 4C09.
Enrolment is limited.
First offered in 2011-2012.

Enrolment Capacity: 25
Enrolment Categories: HLS - 100\%
Justification (2.10-2-17):
Courses have been developed to support the new curriculum. The courses will be phased in over the next three years and may be subject to resource issues.

### 3.0 NEW CROSS-LISTS TO EXISTING COURSES:

Basis treatment of cell structure and function, including transport and chemical signals; adaptation of structure and function in specialized cells.
Three lectures, one tutorial (two hours); one term
Prerequisite: BIOLOGY 1A03, CHEM 1AA3; or ISCI 1A24
Antirequisite: HTH SCI 2K03, MOL BIOL 2B03
Cross-list: BIOLOGY 2B03
Not open to students registered in Honours Molecular Biology or any Honours Molecular Biology and Genetics program.
This course is administered by the Department of Biology.
Enrolment Capacity: To be determined by Department of Biology
Enrolment Categories: To be determined by Department of Biology

### 3.2 LIFE SCI 2EE3 METABOLISM AND PHYSIOLOGICAL CHEMISTRY

A brief introduction to proteins, enzymes and gene expression followed by a more detailed treatment of energy and intermediary metabolism with emphasis on physiological chemistry.
Three lectures; one term
Prerequisite: One of CHEM 2BA3, 2E03, 2OA3, 2OC3
Antirequisite: BIOCHEM 3D03
Cross-list: BIOCHEM 2EE3
Not open to students registered in an Honours Biochemistry or Honours Molecular Biology program.
This course is administered by the Department of Biochemistry and Biomedical Sciences.
Enrolment Capacity: To be determined by Department of Biochemistry \& Biomedical Sci
Enrolment Categories: To be determined by Department of Biochemistry \& Biomedical Sci
3.3 LIFE SCI 2F03 FUNDAMENTAL AND APPLIED ECOLOGY

An introduction to fundamental ecological principles and illustration of how these are applied to current environmental problems at the level of organisms, populations and ecosystems.
Three lectures, one optional tutorial; one term
Prerequisite: BIOLOGY 1M03 (or 1AA3) or ISCI 1A24
Cross-list: BIOLOGY 2F03
This course is administered by the Department of Biology.
Enrolment Capacity: To be determined by Department of Biology
Enrolment Categories: To be determined by Department of Biology
Justification (3.1-3-3):
Appropriate cross-lists to existing courses have been added to support the new curriculum.

## Materials Science and Engineering

Appropriate program references directing students to the Faculty of Engineering section have been introduced.

## Department of Mathematics and Statistics

### 1.0 CHANGES TO EXISTING COURSES AND DEPARTMENT NOTES:

1.1 MATH 1K03 INTRODUCTORY CALCULUS FOR BUSINESS, HUMANITIES AND THE SOCIAL SCIENCES
An introduction to differential calculus and its applications.
Three lectures, one tutorial; one term
Prerequisite: OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics (Advanced)
Normally not open to students who have completed Grade 12 Calculus and Vectors, Grade 12 Advanced Functions or Grade 12 Advanced Functions and Introductory Calculus U.

Justification:
Housekeeping/correct omission from last year.
1.2 MATH 1LS3 MATHEMATICSCALCULUS FOR THE LIFE SCIENCES

Topics from differential and integral calculus, differential equations, discrete math, chosen for their relevance to the life sciences.
Three lectures, one tutorial; one term
Prerequisite: One of Grade 12 Calculus and Vectors U, Grade 12 Advanced Functions and Introductory Calculus U or MATH 1F03
Not open to students with credit or registration in ISCI 1A24 or to students with a grade of at least 10 in MATH 1AO3, 1M03, 1N03, 1X03, $1 Z 04$.
Students with a grade of at least 10 in MATH 1LS3 may use it as a substitute for MATH 1A03 for prerequisites and for consideration to a Level II program for which MATH 1A03 is normally required.

Justification:
Better reflects course content.

### 2.0 COURSES TEMPORARILY WITHDRAWN:

MATH 2U03 TEACHING MATHEMATICS

### 3.0 COURSE DELETIONS:

| MATH 2M03 | ENGINEERING MATHEMATICS II |
| :--- | :--- |
| MATH 2MM3 | ENGINEERING MATHEMATICS III |
| MATH 2P04 | DIFFERENTIAL EQUATIONS FOR ENGINEERING |
| MATH 2Q04 | ADVANCED CALCULUS FOR ENGINEERING |
| STATS 3DD3 | MATHEMATICAL STATISTICS II |
| STATS 4H03 | OPERATION RESEARCH |

## Medical Physics and Applied Radiation Sciences

### 1.0 NEW PROGRAMS/MINOR:

1.1 Minor in Radiation Sciences

REQUIREMENTS
24 units total
9 units from MED PHYS 1E03, 2A03, 3R03, 4XX3, MEDRADSC 1C03, 3X03, 3Y03, PHYSICS 4E03
15 units MED PHYS 4B03, 4R06, 4T03, MOL BIOL 4U03

### 2.0 CHANGES TO EXISTING PROGRAMS:

2.1 Honours Medical and Health Physics
\{2443\}
ADMISSION
2008-2009 ONLY: Completion of any Level I pregram with a Cumulative Average of at teast 6.0 including:
9 units MATH 1A03, 1AA3, 1B03 (or 1D03)
3 units BIOLOGY 1A03
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1 B03
3 units from BIOLOGY 1AA3, PHYSICS 1BA3 (or 1BB3) (Soe Program Note 1 below.)
6 units Levell electives
An average of at least 7.0 in MATH 1A03, 1AA3, 1B03 (or 1D03), PHYSICS 1B03 is required.
EFFECTIVE 2009-2010(2009-2010 ONLY): Completion of any Level I program with a
Cumulative Average of at least 6.0 including:
96 units MATH 1A03, 1AA3, 1 B03
3 units BIOLOGY 1A03
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1B03
3 units from BIOLOGY 1M03 (or 1AA3), MATH 1B03, PHYSICS 1BA3 (or 1BB3) (See Program Note 1 below.)
3 units from the Physical Sciences I Course List (See Program Note 1 below.)
An average of at least 7.0 in MATH 1A03, 1AA3, 1B03, PHYSICS 1 B03 is required. or a grade of at least $\mathrm{C}+$ in two of MATH 1A03, 1AA3, 1B03, PHYSICS 1B03, 1BA3 (1BB3) is required.
EFFECTIVE 2010-2011: Completion of any Level I program with a Cumulative Average of
at least 6.0 including:
6 units MATH 1A03, 1AA3
3 units BIOLOGY 1A03
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1B03
3 units from MATH 1B03, PHYSICS 1BA3 (or 1BB3) (See Program Note 1 below.)
3 units from the Physical Sciences I Course List (See Program Note 1 below.)
A grade of at least C+ in two of MATH 1A03, 1AA3, 1B03, PHYSICS 1B03, 1BA3 (1BB3) is required.

## PROGRAM NOTES

1. BIOLOGY 1AA3 (or1M03), MATH 1B03, and PHYSICS 1BA3 (or 1BB3) must be completed by the end of Level II. PHYSICS 1BA3 or 1BB3 is strongly recommended in Level I.
2.Psychology courses may require permission of the Psychology, Neuroscience and

Behaviour Departmental Academic Advisor or instructor.
3.MED PHYS 4103 will become a Level IV requirement for students who entered in 2007 or tater. It is strongly recommended for students who entered prior to 2007.

## REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVEL I: 30 UNITS
30 units (See Admission above.)

## LEVEL II: 31 UNITS

| 3 units | MED PHYS 2A03 |
| :---: | :---: |
| 3-6 units | CHEM 2E03; or both CHEM 2OA3 and 2OB3 |
| 9 units | MATH 2A03, 2C03, 2E03 |
| 13 units | PHYSICS 2B06, 2E03, 2H04 |
| 0-3 units | Electives |
| LEVEL III: 30 UNITS |  |
| 9 units | BIOLOGY 2B03, MATH 3C03, 3D03 |
| 6 units | MED PHYS 3R03, 4B03 |
| 12 units | PHYSICS 2C03, 3H03, 3MM3, 3N03 |
| 3 units | from BIOCHEM 3G03, BIOLOGY 2C03, MEDRADSC 3Y03, PSYCH 3A03, ЗAA3, 3FA3, 3J03, 3N03 (See Program Note 2 above.) |
| LEVEL IV: 30 UNITS (2008-2009 ONLY) |  |
| 3 units | BIOLOGY 4U03 |
| 15 units | MED PHYS 4A03, 4R06, 4T03, 4XX3 |
| 9 units | PHYSICS 4D06, 4E03 |
| 3 units | Electives (See Program Note 3 above.) |

LEVEL IV: 30 UNITS (EFFECTIVE 2009-2010)
3 units from BIOLOGY 4U03, MOL BIOL 4U03
15 units MED PHYS 4A03, 4R06, 4T03, 4XX3
9 units $\quad$ PHYSICS 4D06, 4E03
3 units MED PHYS 4103

### 2.2 Medical Radiation Sciences (Radiation Therapy Specialization) <br> PROGRAM NOTES

\{1408\}
1.Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk and, effective September 2007, the McMaster Bachelor of Medical Radiation Sciences degree.
Students who entered the Radiation Therapy Specialization prior to September 2008, will be given the option of graduating with either the McMaster Bachelor of Science (B.Sc.) degree or the McMaster Bachelor of Medical Radiation Science (B.M.R.Sc.) degree. 2. The timing of the Spring/Summer and the Level III and IV Fall/Winter sessions may not adhere to the Sessional Dates, as published in this Calendar.

```
ADMISSION
    2008-2009-ONLY: Enrolment in this program is limited and admission is by soloction
but requires, as a minimum, completion of Medical Radiation Sciences I with a Cumulative
Average of at least 5.0, including:
9 units MEDRADSC 1A03, 1B03,1C03
3units BIOLOGY 1A03
3 units CHEM 1A03
6 units KINESIOL 1Y03, 1YY3
3units MATH 1A03
3 units STATS 1CG3
```


## ADMISSION

```
EFFECTIVE 2009-2010:-Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Medical Radiation Sciences I with a Fall/Winter Sessional Average (on a minimum of 24 units) of at least 5.0 and a Cumulative
```

Average of at least 5.0 including:
12 units MEDRADSC 1A03, 1B03, 1C03, 1D03
3 units BIOLOGY 1A03
6 units KINESIOL 1Y03, 1YY3
3 units from MATH 1A03, 1LS3

## REQUIREMENTS

1530 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 7875 units of academic courses in Levels II to IV

## LEVEL I

30 units (See Admission above.)
LEVEL II (FALL AND WINTER): 33 UNITS (2008-2009 ONLY)
21 units MEDRADSG 2A03, 2B03, 2C03, 2D03, 2W03, 2X03, $2 Z 03$
9 units MEDRADSG 2S03, 2T03, 2U03
3 units PSYCH $1 \times 03$ (or 1AA3)
LEVEL II (FALL AND WINTER): 330 UNITS (EFFECTIVE 2009-2010)
185 units MEDRADSC 2A03, 2B03 2D03, 2W03, 2X03, 2 Z03
9 units MEDRADSC 2S03, 2T03, 2U03
3 units CHEM 1A03
3 units PSYCH 1X03 (or 1AA3)
LEVEL II (SPRING AND SUMMER): 15 UNITS
(See Program Note 2 above.)
15 units MEDRADSC 2V15 (Clinical Practicum I)
LEVEL III (FALL AND WINTER): 33 UNITS (2008-2009 ONLY)
3 units MED PHYS 4B03
12 units MEDRADSG 3 F03, $3103,3 \mathrm{K03}, 3 \times 03-$
9 units MEDRADSC $3503,3 T 03,3 \mathrm{VO3}$
3 units MEDRADSC 3 YO3
6 units Elactives
LEVEL III (FALL AND WINTER): 30 UNITS (2009-2010 ONLY)
3 units MED PHYS 4B03
9 units MEDRADSC 3I03, 3K03, 3X03
9 units MEDRADSC 3S03, 3T03, 3V03
3 units MEDRADSC 3Y03
6 units Electives
LEVEL III (FALL AND WINTER): 30 UNITS (EFFECTIVE 2010-2011)
3 units MED PHYS 4B03
9 units MEDRADSC 3103, 3K03, 3X03
9 units MEDRADSC 3S03, 3 T03, 3 V 03
3 units MEDRADSC 3 Y03
3 units STATS 2B03
63 units Electives
LEVEL III (SPRING AND SUMMER): 15 UNITS
(See Program Note 2 above.)
12 units MEDRADSC 3B03, 3E03, 3U03, 3W03
3 units from MEDRADSC 3DA3, 3DD3, 3DE3
9 units MEDRADSC 3E03, 3U03, 3W03
6 units MEDRADSC 3B03 and one of MEDRADSC 3DA3, 3DD3, 3DE3
or
MEDRADSC $3 Z 06$
LEVEL IV (FALL AND WINTER): 30 UNITS
15 units MEDRADSC 4E15 (Clinical Practicum II)
15 units MEDRADSC 4F15 (Clinical Practicum III)

## CHART APPEARS HERE

### 2.3 Medical Radiation Sciences (Radiography Specialization) <br> \{1406\}

## PROGRAM NOTES

1. Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk and, effective September 2007, the McMaster Bachelor of Medical Radiation Sciences degree.

Students who entered the Radiography Specialization prior to September 2008, will be given the option of graduating with either the McMaster Bachelor of Science (B.Sc.) degree or the McMaster Bachelor of Medical Radiation Science (B.M.R.Sc.) degree.
2. The timing of the Spring/Summer and the Level III and IV Fall/Winter sessions may not adhere to the Sessional Dates, as published in this Calendar.

## ADMISSION

2008-2009 ONLY: Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Medical Radiation Sciences I with a Cumulative Average of at least 5.0 including:
9 units MEDRADSC 1A03, 1B03, 1603
3 units BIOLOGY 1A03
3 units CHEM 1A03
6 units KINESIOL $1 \mathrm{YO}, 1 \mathrm{YYZ}$
3 units MATH 1 A03
3 units STATS 16G3

## ADMISSION

EFFECTIVE 2009-2010:-Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Medical Radiation Sciences I with a Fall/Winter Sessional Average (on a minimum of 24 units) of at least 5.0 and a Cumulative Average of at least 5.0 including:
12 units MEDRADSC 1A03, 1B03, 1C03, 1D03
3 units BIOLOGY 1A03
6 units KINESIOL 1 Y03, 1 YY 3
3 units from MATH 1A03, 1LS3

## REQUIREMENTS

1530 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 7875 units of academic courses in Levels II to IV
LEVEL I
30 units (See Admission above.)
LEVEL II (FALL AND WINTER): 33 UNITS (2008-2009 ONLY)
21 units MEDRADSC 2A03, 2B03, 2C03, 2D03, 2E03, 2F03, 2 X 03
9 units MEDRADSC 2G03, 2H03, 2103
3 units PSYCH $1 \times 03$ (or 1AA3)
LEVEL II (FALL AND WINTER): 330 UNITS (EFFECTIVE 2009-2010)
18 units MEDRADSC 2A03, 2B03, 2BB3, 2D03, 2E03, 2F03, 2X03
9 units MEDRADSC 2G03, 2H03, 2 I 03
3 units CHEM 1A03
3 units PSYCH $1 \times 03$ (or 1AA3)

## LEVEL II (SPRING AND SUMMER): 15 UNITS

(See Program Note 2 above.)
15 units MEDRADSC 2J15 (Clinical Practicum I)
LEVEL III (FALL AND WINTER): 33 UNITS (2008-2009 ONLY)
12 units MEDRADSC 3A03, 3F03, 3103, 3X03
12 units MEDRADSC 3G03, 3H03, 3J03, 3K03
3 units MEDRADSC 3 Y03
6 units Electives
LEVEL III (FALL AND WINTER): 30 UNITS (EFFECTIVE 2009-2010 ONLY)
96 units MEDRADSC 3A03, 3103, 3X03
12 units MEDRADSC 3G03, 3H03, 3J03, 3K03

```
3 units MEDRADSC 3Y03
3 units PSYCH 1X03 (or 1AA3)
6 units Electives
LEVEL III (FALL AND WINTER): 30 UNITS (EFFECTIVE 2010-2011)
96 units MEDRADSC 3A03, 3103, 3X03
12 units MEDRADSC 3G03, 3H03, 3J03, 3K03
3 units MEDRADSC 3Y03
3 units PSYCH 1X03 (or 1AA3)
3 units STATS 2B03
6 3 \text { units Electives}
LEVEL III (SPRING AND SUMMER): 15 UNITS
(See Program Note 2 above.)
12 units MEDRADSG 3B03, 3C03, 3E03, 3L03-
3 units from MEDRADSC 3DA3, 3DB3, 3DD3, 3DE3-
9 units MEDRADSC 3C03, 3E03, 3L03
6 units MEDRADSC 3B03 and one of MEDRADSC 3DA3, 3DB3, 3DD3, 3DE3
    or
    MEDRADSC 3Z06
LEVEL IV (FALL AND WINTER): }30\mathrm{ UNITS
15 units MEDRADSC 4A15 (Clinical Practicum II)
15 units MEDRADSC 4B15 (Clinical Practicum III)
```


## CHART APPEARS HERE

2.4 Medical Radiation Sciences (Ultrasonography Specialization) \{1407\}

## PROGRAM NOTES

1. Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk and, effective September 2007, the McMaster Bachelor of Medical Radiation Sciences degree.
Students who entered the Ultrasonography Specialization prior to September 2008, will be given the option of graduating with either the McMaster Bachelor of Science (B.Sc.) degree or the McMaster Bachelor of Medical Radiation Science (B.M.R.Sc.) degree.
2. The timing of the Spring/Summer and the Level III and IV Fall/Winter sessions may not adhere to the Sessional Dates, as published in this Calendar.

## ADMISSION

2008-2009 ONLY: Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Medical Radiation Sciences I with a Cumulative Average of at least 5.0 including:
9 units MEDRADSC 1A03, 1B03, $1 \mathrm{C03}$
3 units BIOLOGY 1A03
3 units CHEM 1A03
6 units KINESIOL 1 Y03, 1 YYZ
3 units MATH 1A03-
3 units STATS 1G63-

## ADMISSION

EFFECTIVE 2009-2010:-Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Medical Radiation Sciences I with a Fall/Winter Sessional Average (on a minimum of 24 units) of at least 5.0 and a Cumulative Average of at least 5.0 including:
12 units MEDRADSC 1A03, 1B03, 1C03, 1D03
3 units BIOLOGY 1A03
6 units KINESIOL 1Y03, 1YY3
3 units from MATH 1A03, 1LS3

## REQUIREMENTS

1530 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 7875 units of academic courses in Levels II to IV
LEVEL I: 30 UNITS
30 units (See Admission above.)
LEVEL II (FALL AND WINTER): 33 UNITS (2008-2009 ONLY)
9 units MEDRADSC 2A03, 2B03, 2C03
21 units MEDRADSC $2 \mathrm{KOO}, 2 \mathrm{LO} 03,2 \mathrm{MO3}, 2 \mathrm{NO3}, 2003,2 \mathrm{PO3}, 2 \mathrm{OO}$
3 units PSYCH $1 \times 03$ (or 1AA3)
LEVEL II (FALL AND WINTER): 330 UNITS (EFFECTIVE 2009-2010)
6 units MEDRADSC 2A03, 2B03 2BB3
21 units MEDRADSC 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 2Q03
3 units CHEM 1A03
3 units PSYCH 1 XO3 (or 1AA3)
LEVEL II (SPRING AND SUMMER): 15 UNITS
(See Program Note 2 above.)
15 units MEDRADSC 2R15 (Clinical Practicum I)
LEVEL III (FALL AND WINTER): 33 UNITS (2008-2009 ONLY)
6 units MEDRADSG 3 A03, $3 \times 03$
18 units MEDRADSC $3 \mathrm{MO3}, 3 \mathrm{NOO}, 3003,3 \mathrm{PO3}, 3 P A 3,3 Q 03$
3 units MEDRADSC 3 YO3
6 units Electives
LEVEL III (FALL AND WINTER): 30 UNITS (EFFECTIVE 2009-2010 ONLY)
63 units MEDRADSC 3A03, 3X03
15 units MEDRADSC 3M03, 3N03, 3O03, 3P03, 3Q03
3 units MEDRADSC 3Y03
3 units PSYCH 1X03 (or 1AA3)
6 units Electives
LEVEL III (FALL AND WINTER): 30 UNITS (EFFECTIVE 2010-2011)
63 units MEDRADSC 3A03, 3X03
15 units MEDRADSC 3M03, 3N03, 3O03, 3P03, 3Q03
3 units MEDRADSC 3 Y03
3 units PSYCH 1X03 (or 1AA3)
3 units STATS 2B03
63 units Electives
LEVEL III (SPRING AND SUMMER): 15 UNITS
(See Program Note 2 above.)
12 units MEDRADSC 3B03, 3C03, 3E03, 3R03-
3 units from MEDRADSC 3DC3, 3DF3, 3DG3
9 units MEDRADSC 3C03, 3E03, 3R03
6 units MEDRADSC 3B03 and one of MEDRADSC 3DC3, 3DF3, 3DG3
or
MEDRADSC $3 Z 06$
LEVEL IV (FALL AND WINTER): 30 UNITS
15 units MEDRADSC 4C15 (Clinical Practicum II)
15 units MEDRADSC 4D15 (Clinical Practicum III)

## CHART APPEARS HERE

Justification (2.2-2.4):
Requirements have been modified to reduce maximum load per Fall/Winter session to 30 units. New course offerings included in requirements.

### 3.0 NEW COURSES:

### 3.1 MED PHYS 1E03 PHYSICS IN MEDICINE AND BIOLOGY I

An introduction to the physics underlying techniques used in the diagnosis and treatment of disease. Topics will include atomic and nuclear structure, waves, electromagnetic fields, and application to x-radiography, ultrasonography, MRI, PET and radiation therapy. Three lectures; one term
Prerequisite: One of MATH 1A03, 1LS3, 1X03 and one of PHYSICS 1L03 or Grade 12 Physics U; or credit or registration in ISCI 1A24; or permission of the instructor Antirequisite: MEDRASC 1C03
Cross-list: SCIENCE $1 E 03$

Enrolment Capacity: 150
Enrolment Categories: Nil

Justification:
To increase student interest in Medical and Health Physics.
3.2 MEDRADSC 2BB3 DIGITAL IMAGING INFORMATICS

Using concepts of digital databases in healthcare, picture archiving and communication systems are examined, with attention to DICOM conformance standards and interconnectivity of medical imaging devices.
Three hours (lectures), one hour (lab or tutorial); one term
Prerequisite: Registration in Level II of a Medical Radiation Sciences Specialization

## Enrolment Capacity: 150

Enrolment Categories: Nil
Justification:
Offered in 2008-09 on Dean's Permission, this new offering is part of a curriculum change that decreased the requirements for the specializations from 153 units to 150.

### 3.3 MEDRADSC $3 Z 06$ RESEARCH PROJECT

Students conduct an individual research project under the supervision of a faculty member.
Students wishing to enrol in this course should contact the Department for further information. Students are expected to have a C.A. of at least 7.0.
Prerequisite: Permission of the Department
Antirerequisite: MEDRADSC 3B03, 3DA3, 3DB3, 3DC3, 3DD3, 3DE3, 3DF3, 3DG3

Enrolment Capacity: 10-20 (or as student demand dictates)
Enrolment Categories: Nil

Justification:
Provides students the opportunity to complete an independent research project.

### 4.0 CHANGES TO EXISTING COURSES:

4.1 MED PHYS 2A03 PHYSICS IN MEDICINE AND BIOLOGY II

Applications of introductory physics concepts to medicine and biology emphasizing the analytical techniques of mathematical physics. Centrifugation; chromatography and electrophoresis; ultrasonography; confocal microscopy; photomolecular interactions and optical diagnostic techniques.

Three lectures; one term
Prerequisite: One of MED PHYS 1E03, MEDRADSC 1C03, PHYSICS 1B03, SCIENCE
1E03 or permission of the instructor
Completion of MATH 1AA3 (or 1XX3, 1ZZ5) and one of PHYSICS 1BA3, 1BB3 are strongly recommended.
Prerequisite (Beginning 2010-2011): MATH 1AA3 (or 1XX3, 1ZZ5) and one of MED PHYS 1E03, MEDRADSC 1C03, PHYSICS 1B03, SCIENCE 1E03; or permission of the instructor One of MED PHYS 1E03, PHYSICS 1BA3, 1BB3 is recommended.
Cross-list: SCIENCE 2A03
Justification:
Title changed given introduction of MED PHYS 1E03. Amended description better reflects course content. Appropriate requisites and recommendations are being introduced in 2010-2011.
4.2 MED PHYS 4B03 RADIOACTIVITY AND RADIATION INTERACTIONS

Radioactivity and radiation phenomenology: interaction of radiations with matter, dosimetry, radiation in medicine, biological effects, radiation levels and regulations, radiation protection.
Three lectures; one term
Prerequisite: One of MED PHYS 1E03, MEDRADSC 1C03, PHYSICS 1BA3, 1BB3 (or
1E03), ISCI 1A24, SCIENCE 1E03 or permission of the instructor
Antirequisite: BIOL 3L03, MED PHYS 3T03,PHYSICS 3T03
Justification:
Appropriate prerequisite/housekeeping.

### 4.3 MEDRADSC 2K03 SONOGRAPHIC PHYSICS AND INSTRUMENTATION I

This course will examine the following topics: physical principles associated with
propagation of ultrasound in tissues, attenuation of sound in tissues, ultrasound instrumentation, image quality and bioeffects.
Examination of the following topics: principles of ultrasound in tissue, attenuation of sound, pulsed wave ultrasound, transducers, instrumentation, Doppler ultrasound, ultrasound artefacts and quality control.
Three hours (lectures), one hour (lab), one hour (tutorial); one term
Prerequisite: Registration in Level II of the Ultrasonography Specialization
Justification:
Better reflects course content.
4.4 MEDRADSC 3N03 VASCULAR ULTRASONOGRAPHY

Vascular anatomy, physiology, flow hemodynamics, sonographic technique of normal and pathologic flow states, relevant alternative methods of assessing the vasculature of the head, neck, abdomen and extremities.
A comprehensive study of vascular anatomy, physiology, hemodynamics, sonographic interpretation of normal and pathologic conditions in the assessment of the vasculature of the head, neck, abdomen and extremities.
Three hours (lectures); one term
Prerequisite: MEDRADSC 2K03, 2R15 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3003 SONOGRAPHIC SKILLS III
Emphasis is on performance of sonography of superficial structures, doppler of abdominal
and peripheral vasculature to include routine and alternate techniques, image recognition, patient care, communication and ergonomics.
Emphasis is on the performance of Doppler sonography in the evaluation of the extracranial arteries, abdominal and peripheral vasculature which includes routine and alternative scanning techniques. Image recognition and critique, communication and ergonomics are also emphasized.
This course is evaluated on a Pass/Fail basis.
One hour (lecture), four hours (lab); one term
Prerequisite: MEDRADSC 2R15; and credit or registration in MEDRADSC 3N03; and registration in Level III of the Ultrasonography Specialization

### 4.6 MEDRADSC 3Q03 SONOGRAPHIC PHYSICS AND INSTRUMENTATION II

 Recent and emerging technological advances in ultrasound instrumentation. Emphasis will be placed on the added diagnostic value provided by the technology and new applications for the instrumentation.Recent and emerging technological advances in ultrasound instrumentation such as advanced signal processing, contrast ultrasound imaging and 3D/4D imaging. Bioeffects associated with diagnostic ultrasound will also be covered.
Three hours (lectures), one hour (lab), one hour (tutorial); one term
Prerequisite: MEDRADSC 2K03, 2R15 and registration in Level III of the Ultrasonography Specialization

Justification (4.4-4.6):
Better reflects course content.

### 5.0 COURSE DELETIONS:

| MEDRADSC 2B03 | MEDICAL INFORMATICS |
| :--- | :--- |
| MEDRADSC 2C03 | INTRODUCTION TO PROFESSIONAL PRACTICE |
| MEDRADSC 3A03 | DIGITAL IMAGE MANAGEMENT |
| MEDRADSC 3F03 | RADIOBIOLOGY AND PROTECTION |
| MEDRADSC 3PA3 | OBSTETRICAL AND GYNECOLOGICAL |
|  | UTRASONOGRAPHY II |

## Origins Institute

No substantive changes made.

## Physical Sciences

No substantive changes made.

# Department of Physics and Astronomy 

### 1.0 CHANGES TO EXISTING PROGRAMS (AND PROGRAM NOTES):

1.1 Honours Physics
\{2440800\}
ADMISSION NOTE (2008-2009 ONLY)
Completion of MATH 1B03 (or 1D03) is required by the end of Level II and is recommended in Levell.

## ADMISSION

2008-2009 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units MATH 1A03, 1AA3 with an average of at least 6.0
3 units PHYSICS 1 B03 with a grade of at least $C$
3 units from PHYSICS 1BA3, 1 BB 3 with a grade of at least $\mathrm{C}+$
6 units CHEM 1A03, 1AA3
6 units from Science I Course List (Soe Admission Note above.)
ADMISSION NOTE (EFFECTIVE 2009-2010)
Completion of MATH 1 B03 is required by the end of Level II and is recommended in Level I.
ADMISSION
EFFECTIVE 2009-2010: Completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units MATH 1A03, 1AA3 with an average of at least 6.0
3 units PHYSICS 1B03 with a grade of at least C+
3 units from PHYSICS 1BA3, 1BB3 with a grade of at least C+
6 units CHEM 1A03, 1AA3
6 units from Physical Sciences I Course List (See Admission Note above.)

## PROGRAM NOTES

1. Students interested in computational and theoretical physics and especially those considering postgraduate studies in this area should take the following courses: MATH 2R03, 2T03, PHYSICS 2G03, 3A03, 3C03, 3N03, 4B03, 4F03, 4G03, plus six additional units from Levels III, IV Astronomy, Mathematics, Physics.
2. Students interested in experimental physics and especially those considering postgraduate studies in this area should take the following courses: PHYSICS 3BA3, 3BB3, 3N03, 4B03, 4F03, plus six additional units from Levels III, IV Astronomy, Mathematics, Physics.

## REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I

## LEVEL I

30 units (See Admission above.)

```
LEVEL II: 31 UNITS (2008-2009 ONLY)
16 units PHYSICS 2B06, 2C03, 2E03, 2H04
6 units MATH 2A03,2C03
0-3 units from MATH 1B03 (or 1D03) if not completed in Levoll (See Admission
                                    Note above.)
6-9units Electives
```

LEVEL II: 31 UNITS (EFFECTIVE 2009-2010)
16 units PHYSICS 2B06, 2C03, 2E03, 2H04
6 units
MATH 2A03, 2C03
0-3 units MATH 1B03 if not completed in Level I (See Admission Note above.)

6-9 units Electives (See Program Notes above.)


LEVEL III: 30 UNITS (EFFECTIVE 2009-2010)
912 units PHYSICS 3D03, 3H03, 3K03, ЗMM3
6 units MATH 3C03, 3D03
1512 units Electives (See Program Notes above.)
LEVEL IV: 30 UNITS (2009-2010 ONLY)
3 units PHYSICS 4A03
3-6 units from PHYSICS 4L03, 4P06
6 units from Levels III, IV Astronomy, Mathematics, Physics, EARTH SC 3V03, 4V03, 4Z03, GEO 3V03
15-18 units Electives (See Program Notes above.)
LEVEL IV: 30 UNITS (2010-2011 ONLY)
3-6 units from PHYSICS 4L03, 4P06
6 units from Levels III, IV Astronomy, Mathematics, Physics, EARTH SC 3V03, 4V03, 4Z03
18-21 units Electives (See Program Notes above.)
LEVEL IV: 30 UNITS (EFFECTIVE 2011-2012)
15 units from Levels III, IV Astronomy, Mathematics, Physics, EARTH SC 3V03, 4V03, 4Z03, including one of PHYSICS 4L03, 4P06
15 units Electives (See Program Notes above.)
Justification:
The Computation and Theory and Experimental Specializations have been cancelled. The introduction of Notes 1 and 2 will alert students to courses previously offered to satisfy requirements of these specializations.
PHYSICS 3D03, a new offering, provides students exposure to current research earlier in their studies and better prepares them for their thesis and independent reading courses in Level IV. This requirement will be phased in over the next two years. For Co-op students, 3D03 is divided into PHYSICS 3DA1 and 3DB2, with the second half being completed in Level $V$.
Beginning 2011-12, students in all Honours Physics programs will complete 3 additional units from Levels III, IV Astronomy, Mathematics, Physics, EARTH SC 3V03, 4V03, 4Z03 in Level IV.
1.2 Honours Physics (Computation and Theory Specialization) \{2440888\} The Honours Physics (Computation and Theory Specialization) program is being phased out. Registration in Level III Honours Physics (Computation and Theory Specialization) is last available in 2009-2010. Students who had intended to register in this program should refer to the Honours Physics program in this section of the Calendar. Students who registered in the program prior to September 2009 may see an Academic Advisor in the Office of the Associate Dean or refer to their degree audit for program requirements.

## ADMISSION NOTE

Completion of MATH 1B03 is required by the end of Level II and is strongly recommended in Levell.
ADMISSION
2008-2009 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units MATH 1A03, 1AA3 with an average of at least 6.0
3 units PHYSICS 1 B03 with a grade of at least $\mathrm{C}_{+}$
3 units from PHYSICS 1BA3, 1BB3 with a grade of at least $C_{+}$

```
6 units CHEM 1A03, 1AA3
6 units from Science 1 Course List (See Admission Note above.)
ADMISSION
EFFECTIVE 2009-2010: Completion of any Level I program with a Cumulative Average
    of at least 6.0 including:
6 units MATH 1A03, 1AA3 with an average of at least 6.0
3 units PHYSICS 1B03 with a grade of at least C+
3 units from PHYSICS 1BA3, 1BB3 with a grade of at least \(C+\)
6 units CHEM 1A03, 1AA3
6 units from Physical Sciences I Course List (See Admission Note above.) _
PROGRAM NOTE
Completion of MATH \(3 Q 03\) is recommended.
REQUIREMENTS
121 units total (Levels I to IV), of which no more than 48 units may be LevelH
LEVEL
30 units (See Admission above.)
LEVEL II: 31-34 UNITS
19 units PHYSICS 2B06, 2C03, 2E03, 2G03, 2H04
12 units MATH 2A03, 2C03, 2R03, 2T03
\(0-3\) units MATH 1 B03 if not completed in Levell (See Admission Note above.)
LEVEL III: 30 UNITS
15 units PHYSICS 3 A03, \(3 \mathrm{HO} 03,3 \mathrm{KO3}, 3 \mathrm{MM} 3,3 \mathrm{NO} 3\)
6 units MATH 3603, 3003
9 units Electives (See Program Note above.)
```


## LEVELIV: 30 UNITS

```
15 units PHYSICS 3C03, 4A03, 4B03, 4F03, 4G03
6 units from Levels III, IV Astronomy, Mathematics, Physics, EARTH SC 3V03, GEO 3 V 03
3-6 units from PHYSICS 4L03, 4P06
3-6 units Electives
1.3 Honours Physics (Experimental Specialization)
\{2440810\}
The Honours Physics (Experimental Specialization) program is being phased out.
Registration in Level III Honours Physics (Experimental Specialization) is last available in 2009-2010. Students who had intended to register in this program should refer to the Honours Physics program in this section of the Calendar. Students who registered in the program prior to September 2009 may see an Academic Advisor in the Office of the Associate Dean or refer to their degree audit for program requirements.
ADMISSION NOTE (2008-2009 ONLY)
Gompletion of MATH \(1 \mathrm{B03}\) (or 1D03) is required by the end of Level II and is strongly recommended in Level I.
```


## ADMISSION

```
2008-2009 ONLY: Completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units MATH 1A03, 1AA3 with an average of at least 6.0
3 units PHYSICS 1B03 with a grade of at least \(G\),
3 units from PHYSICS 1BA3, 1BB3 with a grade of at least \(C+\)
6 units CHEM 1A03, 1AA3
6 units from Science 1 Course List (See Admission Note above.)
ADMISSION NOTE (EFFECTIVE 2009-2010)
Completion of MATH 1 B 03 is required by the end of Lovel II and is strongly recommended in Levell.
```


## ADMISSION

EFFECTIVE 2009-2010: Completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units MATH 1A03, 1AA3 with an average of at least 6.0
3 units PHYSICS 1B03 with a grade of at least $C+$
3 units from PHYSICS 1BA3, 1BB3 with a grade of at least $C+$
6 units CHEM 1A03, 1AA3
6 units from Physical Sciences I Course List (See Admission Note above.)

## REQUIREMENTS

121 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVELI
30 units (See-Admission above.)
LEVEL II: 31 UNITS (2008-2009 ONLY)

| 16 units | PHYSICS 2B06, 2C03, 2E03, 2 HO |
| :--- | :--- |
| 6 units | MATH 2A03, 2C03 |
| $0-3$ units | from MATH 1B03 (or 1D03) if not completed in Level I (Soe Admission |
|  | Note above.) |
| $6-9$ units | Electives |

## LEVEL II: 31 UNITS (EFFECTIVE 2009-2010)



## LEVELIV: 30 UNITS

9 units PHYSICS 4A03, 4B03, 4F03
3-6 units from PHYSICS 4L03, 4P06
6 units from Levels III, IV Astronomy, Mathematics, Physics, EARTH SC 3V03, GEO 3V03
9-12 units Electives
Justification (1.2 and 1.3):
Low enrolment warrants the elimination of these specializations. Students will be able to complete similar courses through the Honours Physics program by following Program Note 1 or 2.

### 2.0 NEW COURSES:

2.1 PHYSICS 3D03 INQUIRY IN PHYSICS

Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.
Two lectures or seminars; two terms
Prerequisite: Registration in Level III or above of an Honours Physics program
Antirequisite: MED PHYS 4A03, 4AA1, 4AB2, PHYSICS 3DA1, 3DB2, 4A03, 4AA1, 4AA2
2.2 PHYSICS 3DA1 INQUIRY IN PHYSICS I

Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.
Two lectures or seminars; one term
Prerequisite: Registration in Level III of Honours Physics Co-op
Antirequisite: MED PHYS 4A03, 4AA1, 4AB2, PHYSICS 3D03, 4A03, 4AA1, 4AB2
2.3 PHYSICS 3DB2 INQUIRY IN PHYSICS II

The continuation of PHYSICS 3DA1.
Two lectures or seminars; one term
Prerequisite: PHYSICS 3DA1 or 4AA1
Antirequisite: MED PHYS 4A03, 4AA1, 4AB2, PHYSICS 3D03, 4A03, 4AB2

Justification (2.1-2.3):
PHYSICS 3D03 (3BA1 and 3DB2 for co-op students), will expose students to current research earlier and provide better preparation for Level IV thesis and independent reading courses. To accommodate the transition of this requirement to Level III, the Department will offer the existing inquiry course requirements PHYSICS 4A03 (and 4AA1 and 4AB2 for co-op students) for the last time in 2009-2010.

### 3.0 CHANGES TO EXISTING COURSES AND DEPARTMENT NOTES:

### 3.1 ASTRON 1F03 INTRODUCTION TO ASTRONOMY AND ASTROPHYSICS

Topics include orbital motion, electromagnetic radiation, the solar system, stars and stellar evolution, the Milky Way Galaxy, galaxies and quasars, the evolution of the universe.
Three lectures; one term
Prerequisite: One of Grade 12 Advanced Functions U, Grade 12 Advanced Functions and Introductory Calculus U, MATH 1K03; and one of Grade 12 Physics U, PHYSICS 1L03, 1 P03
Completion of one of Grade 12 Calculus and Vectors U, Grade 12 Advanced Functions and Introductory Calculus U, or MATH 1F03 is strongly recommended.
Prerequisite (Beginning 2010-2011): One of Grade 12 Calculus and Vectors U, Grade 12 Advanced Functions and Introductory Calculus U, MATH 1F03; and one of Grade 12
Physics U, PHYSICS 1L03, 1 P03
Cross-list: PHYSICS 1 F03
Antirequisite: SCIENCE 1D03
Not open to students with credit or registration in ISCI 1A24.
Justification:
In order for students to do well in this course, completion of Grade 12 Calculus and Vectors $U$ (or equivalent) is necessary and, therefore, an appropriate prerequisite is being warned/introduced.
3.2 ASTRON 3X03 GALAXIES AND COSMOLOGY

Stellar populations, star formation and the interstellar medium in galaxies. The Milky Way Galaxy; normal and active galaxies and large scale structure in the universe; observational and theoretical cosmology.
Three lectures and occasional lab periods; one term
Prerequisite: PHYSICS 2D03 or 2E03; and one of ENG PHYS 2A03, 2A04, PHYSICS
2A03, 2B06; and either one of CHEM BIO 2P03, CHEM 2R03, ENG PHYS 2HO4,
PHYSICS 2H04, or both CHEM 2PA3 and 2PB3
Alternates with ASTRON 3 Y03.
Not offered in 2008-2009.

### 3.3 ASTRON 3 Y03 STELLAR STRUCTURE

The physics of stellar interiors. The main sequence and the life cycle of a star. Stellar evolution, including white dwarfs, neutron stars, and black holes. Taught in an inquiry style. Three lectures; one term
Prerequisite: PHYSICS 2D03 or 2E03; and one of ENG PHYS 2A03, 2A04, PHYSICS

2A03, 2B06; and either one of CHEM BIO 2P03, CHEM 2R03, ENG PHYS 2H04, PHYSICS 2H04, or both CHEM 2PA3 and 2PB3. PHYSICS 2G03 is strongly recommended.
Alternates with ASTRON $3 \times 03$.
Not offered in 2009-2010.
Justification (3.2-3.3):
Thermodynamics prerequisite no longer required. New requisite also allows completion by Honours Math \& Physics students. Housekeeping.

### 3.4 PHYSICS 1B03 MECHANICS AND WAVES

Mechanics of a point particle, emphasising work and energy. Fluids. Simple Harmonic Motion and Waves, including properties of sound and light waves, interference and diffraction.
Three lectures, one lab (two hours) every week; one term
Prerequisite: One of Grade 12 Physics U, PHYSICS 1L03, 1P03; and one of Grade 12 Calculus and Vectors U, MATH 1F03; and credit or registration in one of MATH 1A03,
1LS3, 1X03, 1Z04, ARTS\&SCI 1D06; and SCIENCE 1A00
Not open to students with credit or registration in ISCI 1A24.
Justification:
This Math prerequisite was mistakenly dropped from the calendar last year and is now being restored.
3.5 PHYSICS 1F03 INTRODUCTION TO ASTRONOMY AND ASTROPHYSICS

Topics include orbital motion, electromagnetic radiation, the solar system, stars and stellar evolution, the Milky Way Galaxy, galaxies and quasars, the evolution of the universe. Three lectures; one term
Prerequisite: One of Grade 12 Advanced Functions U, Grade 12 Advanced Functions and Introductory Calculus U, MATH 1K03; and one of Grade 12 Physics U, PHYSICS 1L03, 1 P03
Completion of one of Grade 12 Calculus and Vectors U, Grade 12 Advanced Functions and Introductory Calculus U, or MATH 1F03 is strongly recommended.
Prerequisite (Beginning 2010-2011): One of Grade 12 Calculus and Vectors U, Grade 12
Advanced Functions and Introductory Calculus U, MATH 1F03; and one of Grade 12
Physics U, PHYSICS 1L03, 1P03
Cross-list: ASTRON 1F03
Antirequisite: SCIENCE 1 D03
Not open to students with credit or registration in ISCI 1A24.

Justification:
See 3.1.

PHYSICS 2A03 INTRODUCTORY ELECTRICITY AND MAGNETISM
Electrostatics; circuits; the magnetic field; Faraday's law of induction.
Three lectures; one term
Prerequisite: ARTS\&SCI 2D06 or PHYSICS 1B03, and one of ARTS\&SCI 1D06, MATH
1AA3, 1XX3, 1ZZ5; or ISCI 1A24
Antirequisite: PHYSICS 1E03, 2B06
Justification:
Appropriate prerequisite.
3.7 PHYSICS 2C03 MODERN PHYSICS

Special Relativity. Introductory quantum physics.

Three lectures; one term
Prerequisite: One of PHYSICS 1BA3, 1BB3, ARTS\&SCI 2D06, ISCI 1A24
Completion of one of MATH 1AA3, $1 \times X 3$ or 1 ZZ5 is strongly recommended.
Prerequisite (Beginning 2010-2011): One of PHYSICS 1BA3, 1BB3, ARTS\&SCI 2D06; and one of MATH 1AA3, 1XX3, 1ZZ5, ARTS\&SCI 1D06; or ISCI 1A24
Antirequisite: PHYSICS 3M03
Justification:
Reflects appropriate mathematics preparation required for this course.
Appropriate antirequisite.
3.8 PHYSICS 2G03 SCIENTIFIC COMPUTING

A comprehensive introduction to modern, scientific structured programming using FORTRAN 95. The course will discuss modules, operator overloading, scripting, program management, etc., and features a series of programming problems under Linux.
Three lectures; one term
Prerequisite: One of MATH 1A03, or 1X03, 1Z04, ARTS\&SCI 1D06, ISCI 1A24
Justification:
Appropriate prerequisite.

### 3.9 PHYSICS 3A03 RELATIVITY

An introduction to general relativity.
Three lectures; one term
Prerequisite: PHYSICS 2C03;, and credit or registration in MATH 3C03\%, and registration in any Honours program in the Faculty of Science or any program in the Faculty of
Engineering; or registration in Honours Mathematics and Physics
Alternates with PHYSICS 3C03.
Not offered in 2009-2010.

### 3.10 PHYSICS 3C03 ANALYTICAL MECHANICS

Motion of rigid bodies; coupled oscillators and normal modes; Lagrangian and Hamiltonian dynamics; transformation theory and action-angle variables; perturbation theory; nonintegrable systems and chaos.
Three lectures; one term
Prerequisite: PHYSICS 2D03 or 2E03, and credit or registration in MATH 3C03 and registration in any Honours program in the Faculty of Science or any program in the Faculty of Engineering; or registration in Honours Mathematics and Physics; or permission of the instructor
Alternates with PHYSICS $3 A 03$.
Not offered in 2008-2009.
Justification (3.9-3.10):
Housekeeping. Amended requisite allows Honours Math \& Physics students access to take this course (as they complete a different math course than MATH $3 \mathrm{CO3}$ ).

### 3.11 PHYSICS 3S03 SOFT CONDENSED MATTER PHYSICS

Soft materials include polymers, liquid crystals, surfactants and colloids. The course will cover structure, dynamics, phase transitions and self-assembly, and discuss applications and links to the life sciences.
Three lectures; one term
Prerequisite: One of CHEM 2R03, CHEM BIO 2P03, of PHYSICS 2H04 or registration in Honours Mathematics and Physics

## Justification:

Appropriate changes to prerequisite, including providing Honours Math \& Physics students access to the course.

### 3.12 PHYSICS 4A03 INQUIRY IN PHYSICS

Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.
Two lectures or seminars; two terms
Prerequisite: Registration in a program in which PHYSICS 4A03 is required or is a specified option
Antirequisite: MED PHYS 4A03, 4AA1, 4AB2, PHYSICS 3D03, 3DA1, 3DB2, 4AA1, 4AB2 Last offered in 2009-2010.
3.13 PHYSICS 4AA1 INQUIRY IN PHYSICS (I)

Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.
Two lectures or seminars; one term
Prerequisite: Registration in Level IV of Honours Physics Co-op
Antirequisite: MED PHYS 4A03, 4AA1, 4AB2, PHYSICS 3D03, 3DA1, 4A03
Last offered in 2009-2010.

### 3.14 PHYSICS 4AB2 INQUIRY IN PHYSICS (II)

The continuation of PHYSICS 4AA1.
Two lectures or seminars; one term
Prerequisite: PHYSICS 4AA1
Antirequisite: MED PHYS 4A03, 4AA1, 4AB2, PHYSICS 3D03, 3DA1, 3DB2, 4A03
Last offered in 2009-2010.
Justification (3.12-3.14):
Housekeeping as courses have been replaced by PHYSICS 3D03, 3DA1 and 3DB2.
3.15 PHYSICS 4G03 COMPUTATIONAL PHYSICS

A course using computers to solve selected problems in physics. The emphasis is in applying computational methods to physics, rather than numerical methods or computer programming.
Three lecturesOne lab (three hours); one term
Prerequisite: PHYSICS 2G03, 3MM3; or registration in Honours Physics Co-op

## Justification:

Course will now be a Term 1 offering. Requisite change is to accommodate coop students, as they will not have completed PHYSICS 3MM3.

PHYSICS 4S03 INTRODUCTION TO MOLECULAR BIOPHYSICS
A presentation of recent contributions made to the fields of molecular and cell biology by the use of physical approaches. In particular, the following topics are discussed: physical properties of biomolecules, protein folding, molecular motors, cell motion and cell adhesion. Emphasis on the critical evaluation of current research literature.
Three lectures; one term
Prerequisite: One of CHEM 2R03, CHEM BIO 2P03, MATLS 2B03, PHYSICS 2H04; or registration in Honours Mathematics and Physics. PHYSICS 3S03 is recommended. Cross-list: BIOCHEM 4S03

Justification:
Appropriate requisite changes, which includes allowing Honours Math \& Physics
students to take this course without the thermal physics prerequisite.

# Department of Psychology, Neuroscience \& Behaviour 

### 1.0 CHANGES TO EXISTING PROGRAMS (AND PROGRAM REFERENCES):

### 1.1 Honours Psychology, Neuroscience and \& Behaviour (B.Sc.) \{2463\} FORMERLY HONOURS PSYCHOLOGY (B.Sc.) <br> ADMISSION NOTES (2008-2009 ONLY)

1.It is recommended that students complete both CHEM 1A03 and PHYSICS 1B03.

Chemistry is particularly useful for neuroscience and biological aspects of psychology.
Physics is particularly useful for perception, olectrophysiology and mathematical modelling of psychological processes.
2. MATH $1 \mathrm{B03}$ is strongly recommended for students intending to pursue graduate work in psychology or neuroscience. COMP SCI 1MA3 or PHYSICS 2G03 is highly recommended for students interested in neuroscience, cognition and perception, and for students intending to pursue graduate work in psychology.
3. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS $2 D 03$ and 2MB3. In this case, students are advised to take MATH 1AA3 in Level $l$ and consult with a departmental advisor.
ADMISSION
2008-2009 ONLY: Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a-Cumulative Average of at least 6.0 including:
6 units PSYCH 1A03, 1AA3 with a grade of at least B-in each
3 units MATH 1A03
3 units from BIOLOGY 1A03, 1AA3
3 units from CHEM 1A03, PHYSICS 1B03 (See Admission Note 1 above.)
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Admission Notes 2 and 3 above.)
6 units from Science I Course List

## ADMISSION NOTES (EFFECTIVE 2009-2010)

1.One of CHEM 1A03, PHYSICS 1B03 or 1L03 is required for admission, however, completion of CHEM 1A03 and one of PHYSICS 1B03 or 1L03 is required by the end of Level II. It is strongly recommended that both CHEM 1A03 and one of PHYSICS 1B03 or 1 L03 be completed in Level I. Concepts from PHYSICS 1BB3 are particularly useful for understanding neuroscience, mathematical modelling, and perception. Students interested in these areas are encouraged to take PHYSICS 1B03 followed by PHYSICS 1BB3.
2. MATH 1B03 is strongly recommended for students intending to pursue graduate work in psychology or neuroscience. COMP SCI 1MA3 or PHYSICS 2G03 is highly recommended for students interested in neuroscience, cognition and perception, and for students intending to pursue graduate work in psychology.
3. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1AA3 in Level l and consult with a departmental advisor.

## ADMISSION

EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:

6 units PSYCH 1X03 (or 1AA3), 1XX3 (or 1A03) with a grade of at least B- in each
3 units from MATH 1A03, 1LS3
6 units BIOLOGY 1A03, 1M03 (or 1AA3)
3 units from CHEM 1A03, PHYSICS 1B03, 1L03 (See Admission Note 1 above.)
6 units from Life Sciences I Course List (See Admission Notes- 2 and 3 above.)

## PROGRAM NOTES

1. Prior to registering in PSYCH 4D06 or 4D09, students must complete a lab course.
2.1. The Department of Psychology, Neuroscience and \& Behaviour pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH ZQQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the fall term. Ballots can be obtained from the Department of Psychology, Neuroscience and \& Behaviour web site at http://www.mcmaster.ca/psychology. Priority will be given to students registered in Honours Psychology, Neuroscience and Behaviour and Combined Honours Psychology programs. 3. 2. A maximum of six units from PSYCH 3AB3, ЗAC3, 3BA3, 3CB3, 3CD3 may be used as electives.

## LAB COURSE LIST

PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03

## CAPSTONE COURSE LIST

PSYCH 3I06, 4B03, 4BN3, 4C03, 4D06, 4F03, 4J03, 4Q03, 4QQ3, 4R03, 4Y03
PSYCHOLOGY COURSE LIST
BIOLOGY 3P03, 4T03; HTH SCI 4BB3; KINESIOL 3E03, 4P03; MUSICCOG 2A03, 3A03, 3B03; all Level III and IV Psychology courses except PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3

## REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

## LEVEL I

30 units (See Admission above.)
LEVEL II: 30 UNITS (2008-2009 ONLY)
6 units PSYCH2RA3,2RB3
3 units from PSYCH 2D03, 2F03
9 units PSYCH 2E03, 2H03, 2TT3
3 units from Faculty of Science courses-
$g$ units Electives (Seo-Admission Notes 2 and 3 above.)
LEVEL II: 30 UNITS (EFFECTIVE 2009-2010)
6 units PSYCH 2RA3, 2RB3
3 units from PSYCH 2D03, 2F03, 2N03
9 units PSYCH 2E03, 2H03, 2TT3
0-3 units from CHEM 1A03, PHYSICS 1B03 or 1 L03 if not completed in Level I (See
Admission Note 1 above.)
9-12 units Electives (See Admission Note 2 above.)

## LEVEL III: 30 UNITS

12 units from Psychology Course List
3 units from Lab Course List (See Program Notes 1 and 2 above.)
15 units Electives (See Program Note 3-2 above.)

## LEVEL IV: 30 UNITS

6 units from Psychology Course List
9 units 6 units from Capstone Course List and 3 units from Psychology Course List or PSYCH 4D09 (See Program Note 31 above.)
15 units Electives (See Program Note 32 above.)
1.2 Honours Psychology, Neuroscience and \& Behaviour (B.Sc.) intending to pursue graduate work in psychology.
2. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2003 and 2MB3. In this case, students are advised to take MATH 1AA3 in Level $I$ and consult with a departmental advisor.

## ADMISSION

2008-2009 ONLY: Enrolment in this program is limited. Selection is based on acadomic achievement and written statement of interest but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including:
6 units PSYCH 1A03, 1AA3 with a grade of at least $B$ - in each
3 units MATH 1A03
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
3 units from BIOLOGY 1A03, 1AA3
3 units from CHEM 1A03, PHYSICS 1B03
6 units from Science 1 Course List (See Admission Note 1 above.)
6 units MUSIC 1A03, 1AA3
ADMISSION NOTES (EFFECTIVE 2009-2010)

1. One of CHEM 1A03, PHYSICS 1 B03 or 1L03 is required for admission, however, completion of CHEM 1A03 and one of PHYSICS 1B03 or 1L03 is required by the end of Level II. It is strongly recommended that both CHEM 1A03 and one of PHYSICS 1B03 or 1 L03 be completed in Level I. Concepts from PHYSICS 1BB3 are particularly useful for understanding neuroscience, mathematical modelling, and perception. Students interested in these areas are encouraged to take PHYSICS 1B03 followed by PHYSICS 1BB3.
2.MATH 1B03 is strongly recommended for students intending to pursue graduate work in psychology or neuroscience. COMP SCI 1MA3 or PHYSICS 2G03 is highly recommended for students interested in neuroscience, cognition and perception, and for students intending to pursue graduate work in psychology.
2. Students wishing to have more mathematical statistics may replace PSYCH 2 RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1AA3 in Levell and consult with a departmental advisor.
3. One of MUSIC 1A03 or 1AA3 is required for admission, however, both are required for degree completion.

## ADMISSION

EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and written statement of interest but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including: 6 units PSYCH 1X03 (or 1AA3), 1XX3 (or 1A03) with a grade of at least B- in each 3 units from MATH 1A03, 1LS3
6 units BIOLOGY 1A03, 1M03 (or 1AA3)
3 units from CHEM 1A03, PHYSICS 1B03, 1L03 (See Admission Note 1 above.)
6 units from Life Sciences I Course List (See Admission Notes 1, 2 and 31 and 2
above.)
63 units from MUSIC 1A03, 1AA3 (See Admission Note 3 above)
PROGRAM NOTES
1.Prior to registering in PSYCH 4D06 or 4D09, students must complete a lab course.

1. Entrance into MUSIC 1CC3 requires Grade 2 Rudiments from the Royal Conservatory of Music (a grade of $80 \%$ or above, within the last two years) or a grade of $65 \%$ or above on a qualifying music theory exam administered by the School of the Arts (SOTA).
Appointments can be made with SOTA to write the exam on specific dates between February and May. The content of the exam is summarized at: http://www.humanities.mcmaster.ca/audition/index.html
2. The Department of Psychology, Neuroscience and \& Behaviour pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the fall term. Ballots can be obtained from the Department of Psychology, Neuroscience and \& Behaviour web site at http://www.mcmaster.ca/psychology. Priority will be given to students registered in Honours Psychology, Neuroscience and Behaviour and Combined Honours Psychology programs. 3. A maximum of six units from PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3 may be used as electives.
3. PSYCH 3QQ3 or 4QQ3 may fulfill the Level III Lab requirement only if taken under the supervision or co-supervision of a faculty member in the Department of Psychology, Neuroscience and \& Behaviour.
4. Both Music 1A03 and 1AA3 must be completed for degree completion.

## LAB COURSE LIST

PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3QQ3, 3S03, 3V03, 4QQ3
CAPSTONE COURSE LIST
PSYCH 3I06, 4B03, 4BN3, 4C03, 4D06, 4F03, 4J03, 4Q03, 4QQ3, 4R03, 4Y03
PSYCHOLOGY COURSE LIST
BIOLOGY 3P03, 4T03; HTH SCI 4BB3; KINESIOL 3E03, 4P03; all Level III and IV Psychology courses except PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3

## REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I

## LEVEL I

30 units (See Admission above.)
LEVEL II: $\mathbf{3 0}$ UNITS (2008-2009 ONLY)
6 units PSYCH 2RA3, 2RB3
3 units from PSYCH 2D03, 2F03
9 units PSYCH 2E03, 2H03, 2TT3
3 units from Faculty of Science courses (See-Admission Note 2 above.)
6 units MUSIC 1C63, 1D03
3 units MUSIGCOG 2 A03
LEVEL II: 30 UNITS (EFFECTIVE 2009-2010)
6 units PSYCH 2RA3, 2RB3
3 units from PSYCH 2D03, 2F03, 2N03
9 units PSYCH 2E03, 2H03, 2TT3
0-3 units from CHEM 1A03, PHYSICS 1B03 or 1L03 if not completed in Level I (See
Admission Note 21 above.)
63 units MUSIC 1CC3-1D03-(See Program Note 1 above.)
3 units from MUSICCOG 2A03, PSYCH 2MA3
0-3-6 units Electives (See Program Note 5 above.)
LEVEL III: 30 UNITS
126 units from Psychology Course List (PSYCH 3A03 and 3H03 recommended)
3 units from Lab Course List (See Program Notes 1,2 and 4 above.)

6 units MUSIC 2H03, 2CC3
6 units from MUSICCOG 3A03, 3B03, PSYCH 3MA3, 3MB3
39 units Electives (See Program Notes 3 and 5 above.)

## LEVEL IV: 30 UNITS

6 units from Psychology Course List
9 units 6 units from Capstone Course List or MUSICCOG 4D06 and 3 units from Psychology Course List or PSYCH 4D09 (See Program Note 2 above.)
15 units Electives (See Program Notes 3 and 5 above.)

Justification (1.1-1.3):
The Department's name will become Honours Psychology, Neuroscience \& Behaviour (and has been replaced with \&). Requirements have been amended to include PSYCH 2NO3, a new course offering to replace 2D03, and the inclusion of BIOLOGY 3P03, which has been deemed appropriate for the Psychology Course List. All other changes are housekeeping. Appropriate changes will be reflected in the Origins Research Specialization.

### 2.0 NEW COURSES:

### 2.1 PSYCH 2N03 PRINCIPLES OF NEUROPSYCHOLOGY

This course deals with gaining insights into behaviour with the help of unfortunate "experiments of nature" in the form of disorders or syndromes. Prerequisite: Six units from PSYCH 1A03, 1AA3, 1X03, 1XX3 with a grade of at least $\mathrm{C}_{+}$ in each, and one of BIOLOGY 1A03, 1M03 (or 1AA3), 1P03 (or 1K03), or Grade 12 Biology U; and registration in a program in Psychology or the Faculty of Science; or ISCI 1A24; or registration in Arts \& Science, the Bachelor of Health Sciences (Honours), the Honours Linguistic Cognitive Science or the Honours Music (Music Cognition) program Antirequisite: LIFE SCI 2C03, PSYCH 2D03, 2 F03

Enrolment capacity: 250
Enrolment categories: HPY 111
PSY 39
HSC 12
OTH 27
HLS 36
BLS 25
Justification:
PSYCH 2DO3 has been replaced with 2NO3 and will be an anti-requisite to PSYCH 2F03 and LIFE SCI 2 C03.
2.2 PSYCH 4L03 COGNITIVE NEUROSCIENCE OF LANGUAGE

Brain imaging methods have provided remarkable insights into what areas of the brain are involved in linguistic processes. This course will survey the current scientific literature dealing with the neuroimaging of normal and pathological brain function as related to language processes.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a program in Linguistics or Honours
Psychology
Cross-list: LINGUIST 4F03
This course is administered by the Department of Linguistics and Languages.
Enrolment capacity: As determined by the Faculty of Humanities
Course categories: As determined by the Faculty of Humanities

Justification:
Reflects the introduction of LINGUIST 4FO3, by the Faculty of Humanities, which will be taught by John Connolly, Professor \& Chair of the Dept of Linguistcs and Director of the Hons Linguistic Cognitive Science program. He is also an Associate Member of the Department of Psychology, Neuroscience \& Behaviour. His major area of investigation is the cognitive neuroscience of language with particular emphasis on the use of brain imaging techniques.

### 3.0 NEW CROSS-LIST TO EXISTING COURSES:

3.1 PSYCH 2MA3 MUSIC COGNITION

This course presents an overview of music cognition, covering such topics as musical acoustics, melodic and rhythmic systems, and the mechanisms of perception and performance in music.
Three lectures; one term
Prerequisite: Registration in any Music Cognition program (B.A., B.Mus., B.Sc); or PSYCH 1 X 03 (or 1AA3), 1XX3 (or 1A03) and registration in an Honours program; or ISCI 1A24. Completion of Grade 2 Rudiments from The Royal Conservatory of Music is recommended. Cross-list: MUSICCOG 2A03

Enrolment capacity: 50
Enrolment categories: NIL
3.2 PSYCH 3MA3 NEUROSCIENCE OF MUSIC COGNITION

This course provides an advanced exploration of how the perception, development and experience of music are mediated by the brain.
Three lectures; one term
Prerequisite: MUSICCOG 2A03 or PSYCH 2MA3 and registration in any Music Cognition program (B.A., B. Mus., B.Sc.) or Honours Music; or MUSICCOG 2A03 or PSYCH 2MA3, two of PSYCH 2D03, 2E03, 2F03, 2H03, 2N03, 2TT3, and registration in any Honours program.
Antirequisite: PSYCH 3AA3
Cross-list: MUSICCOG 3A03
Enrolment capacity: 50
Enrolment categories: NiL

### 3.3 PSYCH 3MB3 COGNITIVE DEVELOPMENT AND MUSIC EDUCATION

This course examines the cognitive and perceptual development of auditory and musical abilities from before birth through to adulthood, and explores how this knowledge can be applied to music education.
Three lectures; one term
Prerequisite: MUSICCOG 2A03 or PSYCH 2MA3 and registration in any Music Cognition program (B.A., B. Mus., B.Sc.) or Honours Music; or MUSICCOG 2A03 or PSYCH 2MA3, two of PSYCH 2D03, 2E03, 2F03, 2H03, 2N03, 2TT3 and registration in any Honours program
Cross-list: MUSICCOG 3B03
This course is administered by the School of the Arts.
Enrolment capacity: As determined by the Faculty of Humanities
Enrolment categories: As determined by the Faculty of Humanities
Justification (3.1-3.3):

These courses are part of the Department's new Music Cognition Specialization. They were introduced last year under the MUSICCOG course designation and should have been cross-listed as PSYCH offerings at that time.
3.4 PSYCH 4L03 COGNITIVE NEUROSCIENCE OF LANGUAGE

Brain imaging methods have provided remarkable insights into what areas of the brain are involved in linguistic processes. This course will survey the current scientific literature dealing with the neuroimaging of normal and pathological brain function as related to language processes.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a program in Linguistics or Honours
Psychology and permission of the Department of Linguistics and Languages
Cross-list: LINGUIST 4F03
This course is administered by the Department of Linguistics and Languages.
Enrolment capacity: As determined by the Faculty of Humanities
Enrolment categories: As determined by the Faculty of Humanities
Justification:
Appropriate cross-listing.

### 4.0 CHANGES TO EXISTING COURSES AND NOTES:

### 4.1 PSYCH 1X03 INTRODUCTION TO PSYCHOLOGY,

 NEUROSCIENCE \& BEHAVIOURThis course introduces the scientific methods used to study the psychology of higher order processes and interpersonal behaviour.
Three hours (seminars), web modules; one term Three hours (web modules, tutorials, discussion/review); one term
Antirequisite: PSYCH 1AA3
It is strongly recommended that students without Grade 12 Biology U complete BIOLOGY 1P03 concurrent with this course.
Not open to students with credit or registration in ISCI 1A24 or students registered or in the B.Sc.N. (D) Stream (Mohawk College and Connestoga site).
4.2 PSYCH 1XX3 FOUNDATIONS OF PSYCHOLOGY, NEUROSCIENCE \& BEHAVIOUR

This course builds on the scientific methods of PSYCH 1 X03 and introduces important themes as the foundations to investigate psychology, neuroscience and behaviour with an emphasis on sensory systems, and behaviours critical to survival.
Three hours (seminars), web modules; one term Three hours (web modules, tutorials, discussion/review); one term
Prerequisite: PSYCH 1 X03 and credit or registration in Grade 12 Biology U or BIOLOGY 1 P03
Antirequisite: PSYCH 1A03
Not open to students with credit or registration in ISCI 1A24 or in the Bachelor of Health Sciences (Honours) program-students registered in the B.Sc.N. (D) Stream (Mohawk College and Connestoga site).

Justification (4.1-4.2):
Better reflection of course delivery. B.Sc.N. students are now able to complete this course.

Fundamentals of nervous system function in humans and animals, including neurophysiology, neural transmission and neuroanatomy.
Prerequisite: PSYCH 1A03, 1AA3 with a grade of at least $C+$ in each, and BIOLOGY 1A03, and registration in a program in Arts \& Science, Psychology or the Faculty of Science; or registration in the Bachelor of Health Sciences (Honours) program; or credit or registration in BIOLOGY 1A03, and registration in the Honours Linguistic Cognitive Science program; or credit or registration in BIOLOGY 1A03, and registration in the Honours Music (Music Cognition) program
Prerequisite (Beginning 2009-2010): Six units from PSYCH 1A03, 1AA3, 1X03, 1XX3 with a grade of at least C+ in each, and BIOLOGY 1A03, and registration in a program in Arts \& Science, Psychology or the Faculty of Science; or registration in the Bachelor of Health Sciences (Honours) program; or registration in the Honours Linguistic Cognitive Science program; or credit or registration in BIOLOGY 1A03, and registration in the Honours Linguistic Cognitive Science or in the Honours Music (Music Cognition) program Antirequisite: Effective 2008-2009: PSYCH 2D03 LIFE SCI 2C03, PSYCH 2N03

Enrolment capacity: 250 (from 500)

## Justification:

Appropriate changes to requisites are reflected. Capacity is being reduced given the introduction of LIFE SCI 2C03, intended for Hons and B. Sc. Life Sciences students.

### 4.4 PSYCH 2S03 PSYCHOLOGY AND AGING

A survey of changes in behaviour and cognitive functioning in the elderly.
A survey of sensory, cognitive, personality, and social changes that occur during the normal aging process.
Three lectures: one term
Prorequisite: PSYCH 1A03, 1AA3
Prerequisite (Beginning 2009-2010): One of PSYCH 1AA3, One of PSYCH 1X03 (or
1AA3), ISCI 1A24 or registration in the Bachelor of Health Sciences (Honours) program
Antirequisite: GERONTOL 3D03,PSYCH 3GG3
Not open to students with credit or registration in PSYCH 3GG3.
Offered in alternate years.
Not offered in 2008-2009.-Offered in 2009-2010.

## Justification:

Amended description better reflects course content. Appropriate/housekeeping changes to requisites are reflected.

## PSYCH 2TT3 ANIMAL BEHAVIOUR

A discussion of the major classes of behaviour shared by most animals including humans. The course will integrate evolutionary analyses with an in-depth discussion of the genetic and cognitive mechanisms that generate behaviour.
Three lectures; one term
Prerequisite: PSYCH 1A03, 1AA3 with a grade of at least $G$, in each, and one of BIOLOGY
$1 \mathrm{AA3}$ (or 1 M 03 ), 1 K 03 (or 1 P 03 ), and registration in a program in Arts \& Science, Psychology or the Faculty of Science; or registration in the Bachelor of Health Sciences (Honours) program; or credit or registration in BIOLOGY 1 AA 3 (or 1 MO 03 ) or $1 \mathrm{KO3}$ (or 1P03), and registration in the Honours Music (Music Cognition) program
Prerequisite (Beginning 2009-2010): Six units from PSYCH 1A03, 1AA3, 1X03, 1XX3 with a grade of at least $C+$ in each, and one of BIOLOGY 1M03 (or 1AA3), 1P03 (or 1K03) or Grade 12 Biology U, and registration in a program in Arts \& Science, Psychology or the Faculty of Science; or ISCI 1A24; or registration in Arts \& Science, the Bachelor of Health Sciences (Honours) program; or credit or registration in BIOLOGY 1M03 (or 1AA3) or 1P03 (or 1 K 03 ) or Grade 12 Biology U, and registration in the Honours Music (Music Cognition)
program
Antirequisite:PSYCH 2T03, 3R03-LIFE SCI 2D03

## Enrolment capacity: 250 (from 500)

## Justification:

Appropriate changes to requisites are reflected. Capacity is being reduced given the introduction of LIFE SCI 2D03, intended for Hons and B.Sc. Life Sciences students.

### 4.6 PSYCH 3AC3 HUMAN SEXUALITY

This course will survey research and theory on human sexuality from biological, evolutionary, social and cultural perspectives.
Three lectures; one term
Prerequisite: One of PSYCH 2AA3, or 2C03 or 3GG3

## Justification:

PSYCH 3GG3 has been deemed an appropriate prerequisite.

### 4.7 PSYCH 3BB3 PSYCHOLINGUISTICS

The course discusses biological foundations of language and the way language is fepresented and processed in the brain (in norm and pathology). Special attention is paid to methods of psycho- and neurolinguistic research and to their connection with theoretical linguistics.
The study of how the human mind understands and produces sounds, words and sentences. The emphasis is on how evidence from psycholinguistics research relates to theoretical linguistics.
Three lectures (lectures and discussion); Three hours; one term
Prerequisite: LINGUIST 1A03, and 1AA3 (or 1A06); or PSYCH 2 H 03
Cross-list: LINGUIST 3B03
Alternates with PSYCH 3 CO3.
This course is administered by the Department of Linguistics and Languages.

## Justification:

Amended description/delivery better reflects course content. Appropriate/ housekeeping changes to requisites are reflected.

### 4.8 PSYCH 3CC3 FORENSIC PSYCHOLOGY

Provides students with advanced knowledge of Forensic Psychology. Includes topics such as criminal responsibility, fitness to stand trial, duty to warn, homicide and psychopathy. Introduces students to applications of psychology to the law. Includes topics such as eyewitness testimony, criminal profiling, assessment of criminal responsibility, jury psychology, and psychopathy.
Three lectures; second one term
Prerequisite: Registration in Level III or IV of a Psychology program

## Justification:

Amended description/delivery better reflects course content. Housekeeping.

### 4.9 PSYCH 3N03 ABNORMAL PSYCHOLOGY:

## FUNDAMENTALS AND MAJOR DISORDERS

Provides students with a current and comprehensive survey of psychopathology and the fundamentals of clinical psychology, including viewpoints on the nature of behavioural disorders and diagnostic systems.

Provides students with a survey of the fundamentals of psychopathology, focusing on the description and etiology of major disorders.
Three lectures; one term
Prerequisite: Six units from PSYCH 2D03, 2E03, 2F03, 2H03, 2T03, 2N03, 2TT3; or nine units of Psychology; or HTH SCI 1G03 and six units of Psychology and registration in the Bachelor of Health Sciences (Honours) program.
Antirequisite: PSYCH 3NN3

## Justification:

Amended description better reflects course content. Housekeeping.
PSYCH 4Z03 FOPICS IN PSYCHOLINGUSTICS- PSYCHOLINGUISTICS LAB
Topics include: First Language Acquisition; Brain and Language. Consult the Department of Linguistics and Languages for topics to be offered. Students collaborate to conduct an experiment investigating a psycholinguistic question.
Seminar (two hours); one term
Prerequisite: Any Level III course in Linguistics; or PSYCH 3BB3 or 3UU3- One of
LINGUIST 3B03, 3C03, PSYCH 3BB3, 3C03, 3U03, 3UU3; and LINGUIST 2D03 or
PSYCH 2RA3; and permission of the Department of Linguistics and Languages
Cross-list: LINGUIST 4Z03
PSYCH $4 Z 03$ may be repeated if on a different topic to a total of six units.
Offered in alternate years.
Offered in 2008-2009.
This course is administered by the Department of Linguistics and Languages.

## Justification:

Amended title/description better reflects course content. Changes to prerequisite may be made without phase-in, as course will not be offered in 2009-10. All other changes are housekeeping.

### 5.0 COURSE DELETIONS:

PSYCH 2D03 NEUROPSYCHOLOGY

## SCIENCE

### 1.0 NEW COURSES:

1.1 SCIENCE 1E03 PHYSICS IN MEDICINE AND BIOLOGY I

An introduction to the physics underlying techniques used in the diagnosis and treatment of disease. Topics will include atomic and nuclear structure, waves, electromagnetic fields, and application to $x$-radiography, ultrasonography, MRI, PET and radiation therapy. Three lectures; one term
Prerequisite: One of MATH 1A03, 1LS3, 1X03 and one of PHYSICS 1L03 or Grade 12
Physics U; or credit or registration in ISCI 1A24; or permission of the instructor
Antirequisite: MEDRADSC 1C03
Cross-list: MED PHYS 1E03

This course is administered by the Department of Medical Physics and Applied Radiation Sciences.

Enrolment Capacity: As per Department of Medical Physics \& Applied Radiation Sciences Enrolment Categories: As per Department of Medical Physics \& Applied Radiation Sciences

Justification:
Cross-list aims to maximize exposure of course to students.

### 2.0 CHANGES TO EXISTING COURSES:

2.1 SCIENCE 2A03 PHYSICS IN MEDICINE AND BIOLOGY II

Applications of introductory physics concepts to medicine and biology emphasizing the analytical techniques of mathematical physics. Centrifugation; chromatography and electrophoresis; ultrasonography; confocal microscopy; photomolecular interactions and optical diagnostic techniques.
Three lectures; one term
Prerequisite: One of MEDRADSC 1C03, PHYSICS 1B03 or permission of the instructor Completion of MATH 1AA3 (or $1 \times X 3,1 Z Z 5$ ) and one of PHYSICS 1BA3, 1BB3 is strongly recommended.
Prerequisite (Beginning 2010-2011): MATH 1AA3 (or 1XX3, 1ZZ5) and one of MEDRADSC
$1 \mathrm{C03}$ or PHYSICS 1B03; or permission of the instructor
PHYSICS 1BA3, 1BB3 is recommended.
Cross-list: MED PHYS 2A03

Justification:
Reflect changes made by leader course.
2.2 SCIENCE 2K03 HEREDITY, EVOLUTION AND THE ENVIRONMENT

Introduction to the principles of human genetics and evolutionary biology, the adaptation of organisms to their environment, biological diversity and integrated ecosystems.
Three lectures or two lectures and one tutorial; one term
Prerequisite: Registration in Level II or above
Antirequisite: BIOLOGY 1A03, 1A06, 1AA3
Not open to students with credit or registration in BIOLOGY 1A03 (1A06), 1M03 (1AA3).
Offered in alternate years.
Not offered in 2009-2010.
Justification:
More appropriate as a 'not open to statement'.
2.3 SCIENCE 4A03 INDEPENDENT STUDY

An independent study under the supervision of a faculty member.
One term
Prerequisite: Registration in Level IV of an Honours program in the Faculty of Science and
permission of the supervising faculty member
Antirequisite: INQUIRY 4SJ3, 4SK6, LIFE SCI 4A03, 4B06, 4C09,SCIENCE 4B06, 4C09

### 2.4 SCIENCE 4B06 INDEPENDENT STUDY

An independent study under the supervision of a faculty member.
Two terms
Prerequisite: Registration in Level IV of an Honours program in the Faculty of Science and
permission of the supervising faculty member
Antirequisite: INQUIRY 4SJ3, 4SK6, LIFE SCI 4A03, 4B06, 4C09, 4D03, SCIENCE 4A03, 4C09
2.5 SCIENCE 4C09

INDEPENDENT STUDY
An independent study under the supervision of a faculty member.
Two terms
Prerequisite: Registration in Level IV of an Honours program in the Faculty of Science and permission of the supervising faculty member
Antirequisite: INQUIRY 4SJ3, 4SK6, LIFE SCI 4A03, 4B06, 4C09, 4D03, SCIENCE 4A03, 4B06

Justification (2.3-2.5):
Adding appropriate antirequisites.

### 3.0 COURSES TEMPORARILY WITHDRAWN:

INQUIRY 1SC3 INQUIRY IN SCIENCE
SCIENCE 2L03 TEACHING AND LEARNING FOR TUTORS
SCIENCE 3S03 TEACHING INQUIRY (PEER TUTORING)

## FACULTY OF SOCIAL SCIENCES

# UNDERGRADUATE ACADEMIC PLANNING AND POLICY COMMITTEE CURRICULUM REPORT 

## FOR THE 2009-2010 UNDERGRADUATE CALENDAR

November 2008
Revised December 9, 2008

## Faculty of Social Sciences

## Summary of 2009-2010 Undergraduate Curriculum Changes

Subject to the approval of the Ministry of Training, Colleges and Universities, beginning in the 2010-2011 academic year the faculty of Social Sciences is introducing a new limited enrolment BA Honours Social Psychology in response to growing student demand for a Social Sciences Honours degree that addresses the field of Social Psychology.

As of January 2009 the Department of Kinesiology will move to Science. The Hons B.Kin. program is being phased out, effective 2009-2010

Revisions to existing programs and revisions such as changes in course title, course description or prerequisites have been made in calendar copy for academic units listed within the report.

## DEPARTMENT OF ANTHROPOLOGY

### 1.0 REVISIONS TO EXISTING PROGRAMS:

1.1 Honours Arts \& Science and Anthropology (B.Arts.Sc.; See Arts \& Science Program) ANTHROPOLOGY SUBFIELDS
(Applicable to all Anthropology programs)
Anthropology includes the four major subfields of Social/Cultural Anthropology, Physical/Biological Anthropology, Archaeology, and Linguistics. It should be noted that each subfield has its own sequence of courses and prerequisites. (See the Course Listings section in this Calendar.)
Cultural/Social Anthropology
ANTHROP 2B03, 2F03,2G03, 2GG3, 2H03, 2P03, 2R03, 2X03, 3F03, 3G03, 3HI3, 3L03, 3P03, 3RR3, 3T03, 3V03, 3Y03, 3Z03, 3ZZ3, 4AE3, 4D03, 4I03, 4M03, 4N03, 4Q03
Physical/Biological Anthropology
ANTHROP 2AN3, 2D03, 2DD3, 2E03, 2FF3, 2U03, 3C03, 3H03, 3N03, 3PP3, 3R03, 4H03, 4J03, 4JJ3, 4R03, 4S03 (Relevant courses are also offered by Biology and Kinesiology.)
Archaeology
ANTHROP 2C03, 2O03, 2PA3, 2PC3, 2RP3, 2VV3, 2W03, 3AS3, 3CA3, 3CC6, 3DD3, 3E03, 3EE3, 3K03, 3X03, 4E03, 4EE3, 4F03, 4HF3, (Relevant courses are also offered by the School of Geography and Earth Sciences, History and Classics.)
Linguistics
ANTHROP
2LC3, 2L03, 2LL3, 2LP3, 3A03, 3I03, 3II3, 3M03, 4LB3, 4LC3, 4XX3
Other courses
Courses not distinguished by subfield include the independent study course ANTHROP 3IS3; topic courses ANTHROP 3W03, 4G03, 4GG3, as well as the seminar courses ANTHROP 4B03 and 4BB3.
In planning a program, it is important for students to take note of the prerequisites of certain upper-level courses.
1.2 Honours Anthropology \{2010\}

## Admission

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from ANTHROP 1A03, 1B03, 1 Z03.
Requirements
120 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I program completed prior to admission to the program. (See Admission above.)
129 units ANTHROP 2E03, 2F03, 2PA3, 3L03
3 units from ANTHROP 2D03, 2DD3, 2FF3, 2ZO3, 3H03, 3K03, 3P03
3 units ANTHROP 4103
9 units Level IV Anthropology
2427 units Levels II, III or IV Anthropology
3 units from SOC SCI 2J03 or STATS 1CC3*
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.
*If requirement completed in Level I, these units will be taken as electives.
Justification:
Housekeeping tasks - 2GG3, 2P03, 2Z03 have been deleted. ANTHROP 3L03, 3N03, 3Z03, 3ZZ3, are new proposals for deletion. This change will also be reflected in the Combined Honours Program.

### 2.0 NEW COURSES:

### 2.1 ANTHROP 3F03 ANTHROPOLOGY AND THE "OTHER"

As a discipline, anthropology is effectively predicated on the notion of the "other". This course asks about the constructions, representations, and political uses of the "other."
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2F03
Justification:

This course is based on some of the material already covered in ANTHROP 3L03, History of Anthropology. This new course will move beyond the materials dealt with in ANTHROP 3 L03 to engage students in more current debates and questions. At the same time, it will build on foundational texts in the discipline that are not only of historical value but also related to current debates.

Anticipated Enrollment: 60

### 2.2 ANTHROP 3HI3 THE ANTHROPOLOGY OF HEALTH, ILLNESS AND HEALING

This course examines health, illness and healing in cross-cultural perspective and introduces students to medical anthropology concepts, including the cultural construction of illness and health.
Three hours (lectures and small and large group discussion)
Prerequisite: Registration in Level III or above. ANTRHOP 2E03 or 2F03 is strongly recommended.
Antirequisite: ANTROP 3Z03,3ZZ3
Justification:
This course replaces Anthropology $3 Z 03$ and 3ZZ3. It should appeal to students in social sciences, health studies, nursing, kinesiology and health science, while offering anthropology majors an introduction to an established and growing subfield of medical anthropology.

Anticipated enrolment: 180, with 100 seats reserved for SocSci students

### 3.0 REVISIONS TO EXISTING COURSES:

### 3.1 ANTHROP 3RR3 THE ANTHROPOLOGY OF GENDER- SEX, GENDER AND INEQUALITIES

Selected topics relating to the construction and practice of gender in various cultural contexts.
Gender is a window into culturally specific definitions and values, such as the division of labour,
opportunities and resource allocation. This course is a cross cultural examination of gender.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Lovel III or IV of any Anthropology program-ANTHROP 1 A03 and registration in Level III or above

Justification:
The new description provided is more specific to course content. We have removed the prerequisite "registration in the Anthropology program" because we believe this course will have wide appeal across academic units and we wish to increase enrolment, which has decreased in recent years.

### 3.2 ANTHROP 3T03 POWER AND RESISTANCE

A critical examination of power in post-colonial conflicts. Examines concepts and case studies of local resistance to economic globalization, the re-defining of nationalities and the spread of universalizing cultures. Three hours (lectures and discussion); one term
Prerequisite: Six units of Social/Cultural Anthropology ANTHROP 2F03 and registration in any program in Anthropology

Justification:
Non-anthropology students are currently taking it, but the focus of the course is such that it should be more anthropology-major specific.

### 3.3 ANTHROP 4R03 SKELETAL BIOLOGY OF EARLIER HUMAN POPULATIONS

The analysis of human skeletal samples, including such topics as paleopathology, paleodemography, paleonutrition and biological distance analyses.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2FF3
Antirequisite: ANTHROP 3006
Justification:
ANTHROP 3006 no longer offered or listed in course calendar

# ANTHROP 3L03 HISTORY OF ANTHROPOLOGY <br> ANTHROP 3N03 PRIMATE EVOLUTION <br> ANTHROP $3 Z 03$ MEDICAL ANTHROPOLOGY: THE BIOMEDICAL APPROACH <br> ANTHROP 3ZZ3 MEDICAL ANTHROPOLOGY: SYMBOLIC HEALING 

$$
\diamond \diamond \diamond
$$

## DEPARTMENT OF ECONOMICS

### 1.0 REVISIONS TO EXISTING PROGRAMS:

### 1.1 Honours Arts \& Science and Economics \{2027152\}

 ADMISSIONCompletion of Arts \& Science I with a cumulative average of at least 6.0 including an average of at least 7.0 in ECON 1B03, 1 BB3.
NOTE:

1. Students considering an M.A. in Economics should take ECON $4 T 03$ and $4 T T 3$. ECON 3GO3 (or a Math equivalent) is a proquite for ECNMTO3 and 4 TT3. Some, but not all graduate programs in Economics require ECON 3G03, 4T03 and 4TT3. For this reasons students interested in an M.A. in Economics are advised to consult a departmental advisor for more detailed information.
2. Alternate admission to upper Level Economics programs requires a Cumulative Average of at least 6.0 including an average of at least 6.0 in ECON 2G03, 2GG3, 2H03 and 2HH3 with a grade of at least $C$ - in each.

Justification:
The alternative entry requirement using Level 2 economics grades has been used by the
Department of Economics for at least 4 years. Note will clarify wording for counselling purposes.
Honours Economics \{2150\}
Admission
Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in ECON 1B03 and 1BB3. Gredit in Grade 12 Advanced Functions and Introductory Calculus U-OF Grade 12 Galculus and Vectors UO MATH 1 KO 3 (or 1 FO ) or equivalon is required.
Notes

1. COMMERCE 2FA3 may be substituted for ECON 2103 and COMMERCE 2QA3 may be substituted for ECON $2 B 03$.
2. Many graduato programs in Economics require ECON $3 G 03,4 T 03$ and 4TT3. Students interested in an M.A. in Economics are advised to consult a departmontal advisor for more detailed information Some, but not all graduate programs in Economics require ECON 3G03, 4T03 and 4TT3. For this reason students interested in an M.A. in Economics are advised to consult a departmental advisor for more detailed information.
3. Alternate admission to upper Level Economics programs requires a Cumulative Average of at least 6.0 including an average of at least 6.0 in ECON 2G03, 2GG3, 2H03 and 2 HH 3 with a grade of at least $C$ - in each.

Justification
The alternative entry requirement using Level 2 economics grades has been used by the Department of Economics for at least 4 years. The requirement that Math 1 M 03 be taken prior to or concurrently with Economics 2G03 makes this redundant. Notes clarify wording for counselling purposes. These changes will be reflected in all Honours Economics Programs.
B.A. in Economics

Admission
Completion of any Level I program with a Cumulative Average of at least 3.5 and an average of at least 4.0 in ECON 1B03 and 1BB3.
Gredit in Grade 12 Advaneed Functions and Introductory Caloulus Uor Grade-12Galeulus andVectors Uof MATH 1 KOO (or $1 \mathrm{F03}$ ) or equivalent is required.

Notes
1.

COMMERCE 2FA3 may be substituted for ECON 2103 and COMMERCE 2QA3 may be substituted for ECON $2 B 03$.
3. Alternate admission to upper Level Economics programs requires a Cumulative Average of at least 3.5 including an average of at least 4.0 in ECON 2G03, 2H03.

Justification:
The alternative entry requirement using Level 2 economics grades has been used by the Department of Economics for at least 4 years. The requirement that Math 1M03 be taken prior to or concurrently with Economics 2G03 makes this redundant. Note will clarify wording for counselling purposes.
1.4 Minor in Economics

Notes
2. COMMERCE 2QA3 (or another statistics course equivalent to ECON 2B03) may be substituted for ECON 2B03.

## Justification:

This clears up a misunderstanding. The course must be equivalent to ECON 2B03, not COMM 2QA3. It makes a difference. There is an engineering course that is accepted as equivalent to COMM 2QA3 but not ECON $2 B 03$.
2.0 NEW COURSES:
2.1 ECON 3R03 The History of Economic Growth.

The study of the growth of per capita incomes from 1000 to 2000 A.D. Institutional change, trade, and science and technology are emphasized.
Three hours (lectures and discussion); one term
Prerequisite ECON 2H03
Not open to students with credit in ECON 3 Y03 if the topic was "History of Economic Growth".

## Justification

This course seeks to understand how a world of nearly universal poverty was transformed into one in which the citizens of many (but not all) nations experience a level of material well-being that could not even be imagined a few hundred years ago.

Anticipated enrolment: Total of 60-48 Social Science and 12 others. The proposed enrolment limit is 60, with 48 for students in the Faculty of Social Sciences category (most of whom will be in programs in Economics) and 12 for students from other programs. These are the same limits that have been set this year as the course is run as a Topics course. It is expected that registration will approach the limit.

Economics already has 5 level III courses that have enrolment limits of 100 or more. We believe that we need some courses with enrolment of around 60 so that a student has a reasonable opportunity to get some personal attention from the instructor (desirable both for learning and for such matters as reference letters). All our courses of that size are consistently full.

REVISIONS TO EXISTING COURSES:

ECON 1B03 INTRODUCTORY MICROECONOMICS
An introduction to the method and theory of microeconomics, and their application to the analysis of contemporary economic problems.

Three lectures; one term.
Antirequisite: ECON 1A06
ECON 1B03 and 1BB3 can be taken either concurrently or either order
Justification:
Objective is to inform students and achieve a more even distribution of enrolments across terms. Currently large majority of students take 1B03 in Term 1 and 1BB3 in Term 2. This change will be made in ECON 1BB3.

ECON 2B03 ANALYSIS OF ECONOMIC DATA
Application of statistical concepts to the analysis of economic data, with attention to Canadian sources. Regression analysis and the use of spreadsheets are included. Topics may also include index numbers.
Three lectures; one term
Prerequisite: ECON 1B03, 1BB3; and one of MATH 1F03, 1K03, Grade 12 Advanced Functions and Introductory Calculus U or Grade 12 Calculus and Vectors U; and STATS 1L03 or Grade 12 Mathematics of Data Management U
Antirequisite: COMMERCE 2QA3, EARTH SC 2MB3, ENVIR SC 2MB3, GEO 2S03, 3S03, GEOG 2MB3, HTH SCI 1F03, SOC SCI 2J03, STATS 1A03, 1CC3
Not open to students with credit or registration in ARTS\&SCI 2R06, CHEM ENG 4C03, HTH SCI 2A03, POL SCI 3N06, PSYCH 2R03, 2RA3, 2RB3, 2RR3, SOCIOL 3H06, STATS 2D03, 2MB3, 3N03, 3Y03, or if COMMERCE 2QA3 is a program requirement.

ECON 2X03 APPLIED BUSINESS ECONOMICS
The economic analysis of the strategy of managerial decision-making. The role of technology, costs, government intervention and market structure on output and pricing decisions.
Three lectures; one term
Prerequisite: 1B03 (or 1A06); and one of Grade 12 Advanced Functions and Introductory Calculus U, MATH
1K03 or equivalent; and credit or registration in MATH 1M03 or equivalent
Antirequisite: ECON 2G03
Aopen to students registered in Commerce programs only.
Justification:
Our objective is to have only Commerce students in this course.
ECON 3F03 METHODS OF INQUIRY IN ECONOMICS
This course develops skills for investigating a research question in economics, through workshops (eg. writing, library, internet, data), and the subsequent application of the skills to an economic issue.
Three hours; one term
Prerequisite: ECON 2B03; and either registration in Level III or Level IV of an Honours Economics program or an average of 7.0 in ECON 2G03, 2GG3, 2H03 and 2 HH 3 with a grade of at least C in each.

Justification:
This formalizes a practice with which we have experimented in the past 2 years. These courses are offered only once each academic year and are required for Honours Economics. The purpose is to open up these courses to students whose poor Level 1 grades, often in Engineering, are keeping their cumulative average below 6 but who have performed at the honours level in economics.

ECON 3T03 TOPICS IN ECONOMIC DEVELOPMENT
Topics may include the measurement of structural change, dual economies, agriculture and production, technical and institutional change, and health and nutrition.
Three lectures; one term
Prerequisite: ECON 2G03 or 2X03; an ECON 2H03
Antirequisite: ECON 3J06
Justification:
Opinion of recent instructors is that this course does not need 2 H 03 .
ECON 3U03 ECONOMETRICS I

Elaboration of regression techniques developed in ECON 2B03. Problems of inference and interpretation in the analysis of economic data. Introduction to forecasting in economics.
Three lectures; one term
Prerequisite: ECON 2 G 03 or 2 X 03 ; and ECON 2 H 03 ; and ECON 2 B 03 or one of CHEM ENG 4C03, COMMERCE 2QA3, ENVIR SC 2MB3, GEO 2S03, GEOG 2LL3, 2MB3, 2N03, POL SCI 2F06, 3N06, PSYCH 2G03, 2R03, 2RA3, 2RB3, 2RR3, SOC SCI 2J03, SOCIOL 2Y03, 3H06, STATS 1A03, 1CC3, 2D03, 2R06 or another course that is approved by a departmental counselor as equivalent to ECON 2B03 Not open to students with credit in ECON 3O06, STATS 2MA3, 2MB3, 3D03, or 3DD3 or credit or registration in ECON 4G03.

### 3.7 ECON 4A03 HONOURS SEMINAR IN ECONOMICS

Students prepare, present and discuss papers under supervision of a faculty member. Several sections will normally be offered. Topics for each section will be announced in January.
Three hours (seminars); one term
Prerequisite: ECON 2GG3, 2HH3, 3F03; and ECON 3U03 or 3O06; and either registration in an Honours Economics program program or an average of 7.0 in ECON 2G03, 2GG3, 2 H 03 and 2 HH 3 with a grade of at least C in each.

Justification:
This formalizes a practice with which we have experimented in the past 2 years. These courses are offered only once each academic year and are required for Honours Economics. The purpose is to open up these courses to students whose poor Level 1 grades, often in Engineering, are keeping their cumulative average below 6 but who have performed at the honours level in economics.

### 3.8 ECON 4G03 ECONOMETRICS II

Development of regression models appropriate to economics. Illustrations from applied micro- and macroeconomics.
Three lectures; one term
Prerequisite: ECON 2G03 or 2X03; and ECON 2H03; and at least B--G-in ECON 3006 or 3 O 03 or another


Justification:
The previous grade requirement for ECON 3003 was letting insufficiently prepared students in the course. Also there are so many possible equivalent courses to ECON $3 \cup 03$ that we prefer to leave the wording more general in this regard.

### 4.0 REVISIONS TO DEPARTMENTAL NOTES:

4. Many graduate programs in Economics require ECON 3G03, 4 TO3 and $4 T T 3$. Students interested in an M.A. in Economics are advised to consult a-departmental advisor for more detailed information-Some, but not all graduate programs in Economics require ECON 3G03, 4T03 and 4TT3. For this reason students interested in an M.A. in Economics are advised to consult a departmental advisor for more detailed information.

Justification
Clarify wording for counselling purposes.

$$
\diamond \diamond \diamond
$$

## SCHOOL OF GEOGRAPHY AND EARTH SCIENCES

### 1.0 REVISIONS TO EXISING PROGRAMS:

1.1 (See Minor in Geography and Earth Sciences in the Faculty of Science section of the calendar)

Justification:

## DEPARTMENT OF HEALTH, AGING \& SOCIETY

## REVISIONS TO EXISTING PROGRAMS:

### 1.1 Honours Health Studies $\{2273\}$ <br> Admission

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Cumulative Average of 6.0 including a grade of at least $B$ - in 3 units from HEALTHST 1A03, 1E03, 1 S03.
Notes

1. Application for admission must be made by April 1. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Courses other than those listed below in the Course List may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society.
3. Students who previously completed SCIENCE 2G03 may use these units to fulfill Course List requirements.
4. Students who entered the program prior to September 2004 may substitute HEALTHST 3A03 for 3AA3.
5. Students who entered the program prior to September 2004 may replace HEALTHST 3G03 with three units of Level II, III or IV Health Studies.
6. Students who have completed HEALTHST 2 B03 are not required to complete HLTH AGE 2A06and will complete three additional units of Levels II, III or IV Health, Aging and Society.
7. 5. Students who have completed HEALTHST 2B03 and 3G03 or HLTH AGE 2A06 (or an equivalent research methods) are not required to complete HLTH AGE 3 A03 $3 Z 06$
8.6. Students who completed GERONTOL 2B03 or 3Q03, prior to September 2005, may use these units to fulfill Course List requirements.
Course List
(Students are responsible for ensuring that course prerequisites are fulfilled.)
ANTHROP 2AN3, 2U03, 3C03, 3HI3, 3Y03, 3Z03, 3ZZ3
ECON $3 Z 03$
GEOG 2HI3, 3HH3 (GEO 3HH3), 3HP3 (GEO 2HG3)
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI 2G03, 2J03
HISTORY 3V03
INDIG ST 3H03, 3HH3
KINESIOL 3A03, 3S03, 3SS3
PHILOS 2D03, 3C03
PSYCH 3B03, 3N03,
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3003
SOCIOL 3G03, 3HH3
WOMEN ST 2HH3
Requirements
120 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I program completed prior to admission to the program. (See Admission above.)
3 units from HEALTHST 2A03, 2AA3
3 units HEALTHST 3AA3 (See Note 4 above.)
1518 units from Levels II, III, IV Health Aging and Society, Health Studies or GERONTOL 4 I03
3 units HEALTHST 4A03
69 units from Level IV Health Aging and Society or Health Studies
12 units from Course List (See Notes 3 and 86 above.)
6 units HLTH AGE 2A06 (Seo Note 6-above.) HLTH AGE $3 Z 06$ (See Note 5 above)
3 units HLTH AGE 3 A03 (See Note 7 above.)

3 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent statistics course
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.
*If requirement completed in Level I, these units will be taken as electives.
Justification:
Faculty felt six units of methods would better serve students in Level III. This change will be reflected in all Honours Program in Health Studies and Gerontology. Changes to course lists will be made in all programs.

### 1.2 B.A. in Health Studies \{1273\}

Admission
Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Cumulative Average of 3.5 including a grade of at least C- in 3 units from HEALTHST 1A03, 1E03 or 1S03.

## Notes

1. Application for admission must be made by April 1. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Courses other than those listed below in Course List may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society.
3. Students who previously completed SCIENCE 2G03 may use these units toward Course List.
4. Students who entered the program prior to September 2004 may substitute HEALTHST 3A03 for 3AA3.
5. Students who completed GERONTOL 2B03 or 3Q03, prior to September 2005, may use these units to fulfill Course List requirements.
6. Students who completed HEALTHST 2B03 are not required to complete HLTH AGE 2A06 and will complete three additional units of Levels II, III or IV Health Aging and Society or Health Studies. While it is not a requirement, it is strongly recommended that BA students complete HLTH AGE $3 Z 06$.

## Course List

(Students are responsible for ensuring that course prerequisites are fulfilled.)
ANTHROP 2AN3, 2U03, 3C03, 3HI3, 3Y03, 3Z03, 3ZZ3
ECON 3Z03
GEOG 2HI3, 3HH3 (GEO 3HH3), 3HP3 (GEO 2HG3)
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI
2G03, 2J03,
HISTORY
INDIG ST $3 \mathrm{H} 03,3 \mathrm{HH3}$
KINESIOL 3A03,3S03, 3SS3
PHILOS 2D03, 3C03
PSYCH 3B03, 3N03,
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3003
SOCIOL 3G03, 3HH3
WOMEN ST 2HH3
Requirements
90 units total (Levels I to III), of which 42 units may be Level I
30 units from the level I program completed prior to admission to the program (See Admission above.)
3 units from HEALTHST 2A03, 2AA3
3 units HEALTHST 3AA3 (See Note 4 above.)
6 units HLTH AGE 2A06 (See Note 6 above.)
612 units Levels II or III Health Aging and Society or Health Studies, of which at least three units must be
at Level III
6 units from Course List (See Notes 3 and 5 above.)
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Justification:

Introduction of new note advising recommending B.A. students take HLTH AGE $3 Z 06$.

## NEW COURSES:

## HEALTHST 2HI3 GEOGRAPHIES OF DEATH: INTRODUCING POPULATION AND MEDICAL GEOGRAPHY

Historical and contemporary trends and patterns of mortality and morbidity will be examined using ideas from demography, medicine, ecology and cultural studies, with examples from different parts of the world. Two lectures, one lab (one hour); one term
Prerequisite: One of GEO 1HS3, 1HU3, GEOG 1HA3, 1HB3
Cross-list: GEOG 2HI3
This course is administered by the School of Geography and Earth Sciences.
Justification:
New cross-listing with Geography
Anticipated enrolment: 20 Gerontology and Health Studies students
2.1 HLTH AGE $3 Z 06$ RESEARCH METHODS IN HEALTH, AGING \& SOCIETY

A systematic investigation of research methods in Health, Aging and Society. This course will examine quantitative and qualitative methods. Topics covered include research design, measurement, techniques of data collection and data analysis. Special attention will be given to how research methods may be applied in the study of health and aging.
Three hours (lectures and discussion): two terms
Prerequisite: Registration in Level II or above of a Gerontology or Health Studies program Antirequisite: ANTHROP 2Z03, CMST 2A03, GEO 2HR3, GEOG 2MA3, GERONTOL 2C03, 3R03, HEALTH ST 2B03, 3G03, HLTH AGE 2A06, 3A03, SOCIOL $2 Z 03$

Justification:
Faculty felt 6 units of methods would better serve students in level 3
Anticipated enrolment: 100
HLTH AGE $4 Z 06$ HEALTH, AGING \& SOCIETY THESIS
Provides opportunity for students to integrate knowledge, practice, and research in a project related to their area of interest. Students may work with individual faculty members or community-based supervisors
Prerequisite: six units of research methods (GERONTOL 2C03, 3R03 or HLTH AGE 3A03; or HEALTHST St 2B03, 3G03 or HLTH AGE 3A03) or HLTH AGE 2A06, and SOC SCI 2J03 or another approved statistics course and registration in Level IV of any Honours Gerontology or Health Studies program.
Prerequisite (Beginning 2010-2011): six units of research methods (GERONTOL 2C03, 3R03 or HLTH AGE 3A03; or HEALTHST St 2B03, 3G03 or HLTH AGE 3A03) or HLTH AGE 2A06, 3Z06, and SOC SCI 2J03 or another approved statistics course.
Antirequisite: GERONTOL 4A06
Justification:
Opening up Gerontology thesis course to Health Studies students.
Anticipated enrolment: 45
3.0 REVISIONS TO EXISTING COURSES:

HEALTHST HLTH AGE 2HG3 3HP3 POPULATION, SOCIETIES, AGING AND THE ENVIRONMENT POPULATION GROWTH AND AGING
Differential growth of human populations and their changing age and sex structures with an emphasis on birth and death processes. The connections between population structures and processes and various aspects of environments and societies including aging, are emphasized.
Three lectures; one term

Prerequisite: One of GEOG 2HI3, HEALTHST 2HI3
Cross-list: GEOG 3HP3, GERONTOL 2HG3
Antirequisite: GEO 2HG3, GERONTOL 2HG3, HEALTHST 2HG3
This course is administered by the School of Geography and Earth Sciences.

Health, Aging and Society
Note:
While it is not a requirement, it is strongly recommended that BA students complete HLTH AGE $3 Z 06$.
Justification:
Introduction of new note advising recommending B.A. students take HLTH AGE $3 Z 06$.
$\diamond \diamond \diamond$

## DEPARTMENT OF KINESIOLOGY

### 1.0 REVISIONS TO EXISTING PROGRAMS:

DEPARTMENT OF KINESIOLOGY
WEB ADDRESS: http://www.mcmaster.ca/kinesiology/
Honours Kinesiology (B.Sc.)
(See B.Sc. program in Kinesiology, Faculty of Science, Department of Kinesiology)
Honours B.Sc. Kinesiology
(See B.Sc. Kinesiology, Faculty of Science, Department of Kinesiology)
KINESIOLOGY I \{0309\}
Note
All students admitted to Kinesiology I register in the Faculty of Science in Levol I. See Department of Kinesiology in the Faculty of Science section of this calendar. The Department of Kinesiology offers two Honours program options beyond Lovell; an Honours Bacholor of Kinesiology and an Honours Bachelor of Science. The required Kinesiology courses are identical for both programs and are differentiated only by the elective courses. Both programs allow for the completion of prerequisites for various professional degreeprograms. For further information and program requirements for Honours Bachelor of Science Kinesiology, See Department of Kinesiology in the Faculty of Science section of this calendar.
Honours Bachelor of Kinesiology (B.Kin.)
\{2303\}
THIS PROGRAM IS BEING PHASED OUT AND ADMISSION TO LEVEL II WILL BE LAST AVAILABLE IN SEPTEMBER 2009.
Admission (LAST AVAILABLE SEPTEMBER 2009)
Completion of Kinesiology I with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A03, 1AA3, 1C03, 1E03, 1F03, 1 G03.

Note

Kinesiology courses may not be used toward the elective component of the degree.
Requirements (for students who entered kinesiology Iin September 2007
120 units total (Levels I to IV), of which 48 units may be Level I
Level I: 30 units
30 units from Kinesiology I completed prior to admission to the program. (See Admission above.)
Level II: 30 units (Effective 2008-2009)
18 units KINESIOL 2A03, 2C03, 2CC3, 2E03 2F03, 2G03
3 units from SOC SCI 2J03, STATS 2B03
9 units Electives
Levels III and IV: 60 units (Effective 2009-2010)
36 units Levels III or IV Kinesiology of which at least nine units must be Level IV
24 units Electives (See Note above.)

Honours Bachelor of Kinesiology (B.Kin.)
\{2303\}

## REQUIREMENTS FOR STUDENTS WHO ENTERED KINESIOLOGY I IN SEPTEMBER 2005 OR 2006

Notes

1. Students may register in a maximum of $\mathbf{1 5}$ units of Levels III or IV Kinesiology courses in Level III of their program.
2. Kinesiology courses may not be used toward the elective component of the degree.

Requirements
120 units total (Levels I to IV), of which 48 units may be Level I
Levell: 30 units
30 units from Kinesiology I completed prior to admission
Level II: 30 units
15 units KINESIOL 2A03, 2C06, 2G03, 2H03
3 units from SOC SCI 2J03, STATS 2B03
12 units Electives
Levels III and IV: 60 units
30 units Levels III or IV Kinesiology (See Note 1 above.)
30 units Electives (See Note 2 above.)

- If requirement completed in Level I these units may be taken as electives.

Justification:
To notify students that the Hons B.Kin. program is being phased out, effective 2009-2010.
Housekeeping changes have been included/amended to reflect curriculum changes.
$\diamond \gg$

## LABOUR STUDIES PROGRAMME

### 1.0 NEW COURSES:

1.1 LABR ST 2W03 Human Rights and Social Justice

An introduction to the growing national and international discussion of human rights, exploring the value and limitations of universal rights, equality under the law and social justice.
Three hours; lectures; one term
Prerequisite WOMEN ST 1A03 or 1AA3; or PEACE ST 1A03, 1B03; or registration in any Labour Studies program.
Cross-List WOMEN ST 2A03, PEACE ST 2B03
This course is administered by Women's Studies
Justification:
A new cross-list to an existing Women's Studies course to expedite Labour Studies enrolment
Anticipated enrolment: 5 Labour Studies students per offering
2.0 REVISIONS TO EXISTING COURSES:

### 2.1 LABR ST 2A03 UNIONS

Examines unions' structure, internal decision making and economic, political and social environment. Students explore collective bargaining, political action, union democracy, diversity and renewal by simulating internal union life and participating in a union convention.
Lecture and group work/simulation; one term
Prerequisite: Registration in a Labour Studies program or permission of the instructorDirector
Justification:
Housekeeping: Calendar wording not consistent with University enrolment management policy. This change will also be reflected in LABR ST 2C03, 2E03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03 and 4E03

### 3.0 REVISIONS TO DEPARTMENTAL NOTES:

Note:
The following courses may be taken for elective credit by qualified students registered in any program, however, space for such students is limited and permission of the instructor Director is required.

Justification:
Housekeeping. Calendar wording not consistent with University enrolment management policy.

$$
\diamond \gg
$$

DEPARTMENT OF POLITICAL SCIENCE
1.1 FIELDS OF STUDY
(Students are responsible for ensuring that course prerequisites are fulfilled.)
CANADIAN POLITICS
POL SCI 2D03, 2DD3, 2F03, 2L03, 3C03, 3FF3, 3GG3, 3HH3, 3J03, 3JJ3, 3K03, 3NN6, 3S03, 3SP3, 3Z03, 4O06, 4T06
COMPARATIVE POLITICS
POL SCI 2A06, 2B03, 2C03, 2M03, 2N03, 2XX3, 2Z03, 3BB3, 3D03, 3EE3, 3F03, 3G03, 3GG3,
3H03, 3I03, ЗK03, ЗKK3, 3LL3, 3M03, 3MM3, 3O03, 3 T 03 , 3U03, 3V03, 3Y03, 3YY3, 4A03, 4AA6, 4D06, 4G06, 4L03, 4Q06, 4R06
INTERNATIONAL RELATIONS
POL SCI 2BB3, 2C03, 2H03, 2I03, 2J03, 2XX3, 3AA3, 3B03, 3E03, 3EE3, 3FF3, 3K03, $3 \mathrm{KK} 3,3$ 3 03 ,
3Q03, 3QQ3, 3X03, 3Y03, 4D06, 4M06, 4MM6
POLITICAL THEORY
POL SCI 2O06, 3CC3, 3O03, 4C06, 4E06, 4P06
PUBLIC POLICY
POL SCI 2L03, 3B03, 3D03, 3E03, 3FF3, 3H03, 3J03, 3LL3, 3M03, 3S03, 3SP3, 3U03, 3YY3, 3Z03,
4A03, 4G06, 4L03, 4O06, 4R06

The following courses while satisfying the requirements of the program are not specific to any field of study:
POL SCI 1G06, 3N06, 3UU3, 4Z06, 4ZZ6
Honours Arts \& Science and Political Science \{2027450\}
ADMISSION
Completion of Arts \& Science I with a cumulative average of at least 6.0 including an average of at least 7.0 in six units of Political Science courses.
NOTES:
(Also, see notes under Faculty of Social Sciences, Political Science section in the Undergraduate

Calendar): 1. Prerequisites: A number of Level III and IV courses have Level II prerequisites. Students who wish to enter courses but who lack the necessary prerequisites must obtain permission of the instructor. 2. The mathematics requirement for this combined honours program may be fulfilled by either ARTS\&SCI $2 R 06$ (taken in Level II) or POL SCI 3N06 (taken in Level III).

## Course List 1

ARTS\&SCI 1E03; BIOLOGY 1A03, 1AA3; CHEM 1A03, 1AA3; ENVIR SC 1A03, 1B03, 1G03
Course List 2
ARTS\&SCI 3A06, 3B03, 3BB3, 3L03, 3S03
REQUIREMENTSLevel I: 30 units
24 units ARTS\&SCI 1A06, 1B06, 1C06, 1D06*
6 units Course List 1 Level II: 30 units
12 units ARTS\&SCI 2A06, 2D06
6 units ARTS\&SCI 2R06 (See Note 2 above.)
12 units Level II or III Political Science Level III: 30 units
6 units Course List 2
6 units Upper-level Inquiry
96 units Level III Political Science
9 units Electives (or POL SCI 3N06 if ARTS\&SCI 2R06 not already completed)
3 units POL SCI 2D03, 2DD3, 2F03, 2L03, 3C03, 3FF3, $3 \mathrm{GG} 3,3 H H 3,3 \mathrm{JJ3}, 3 \mathrm{NN6}, 3 \mathrm{SO3}, 3703,4006$
Level IV: 30 units
6 units Course List 2
6 units Level III or IV Political Science
6 units Level IV Political Science approved to replace ARTS\&SCI 4A06 or 4C06
12 units Electives

## Justification:

To give the students more options and to avoid having to revise the list every year. Fields of study reflects new courses and course changes as discussed and justified below.

### 1.1 Combined Honours in Political Science and Another Subject

Admission
Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least Bin POL SCI 1G06. Satisfaction of the admission requirements for the Honours program in the other subject.

## Notes

1. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
2. Effective 2009-2010 for students entering Level II of an Honours B.A. or B.A. program in Political Science, one course from Canadian Politics Fiold of Study will be required (See Fields of Study above). For students who entered the program prior to 2009-2010, three units of Canadian Politics is strongly
recommended.For students who entered the program prior to 2009-2010, one course from Canadian Politics is strongly recommended but not required
3. Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
4. POL SCI 2 O 06 and 3 NO 06 are required for students enrolled in Honours Political Science programs and they are recommended for students in the B.A. program.
5. Students may take a maximum of 12 units Level IV Political Science.

Requirements
120 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I program completed prior to admission to the program. (See Admission
above.)
6 units POL SCI 2006
9 units Level III Political Science-
918 units Levels II, III, Political Science of which a maximum of nine units may be Level II; including at least one course from the Canadian Politics Field of Study(See Note 2 above.)
6 units Level IV Political Science (See Note 45 above.)
36 units courses specified for the other subject
6 units POL SCI 3N06 or in combined programs within the Faculty of Social Sciences, the Research

Methods/Statistics course specified for the other subject.
18 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Political Science with Arts \& Science, or with a Humanities subject, are exempt from this requirement. (The maximum Political Science courses to be taken is 54 units).

Justification:
To reflect new Canadian Politics Field of study requirement. This change will be added to all Political Science programs and to correct an error from the previous calendar.
2.1 POL SCI 2M03

A systematic introduction to comparing the politics of industrialized and post-industrial countries including electoral and government institutions, parties, ideologies and values, and political economy.
Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 2A06
POL SCI 3B03 HONOURS TOPICS IN INTERNATIONAL RELATIONS AND GLOBAL PUBLIC POLICY
Recommended for honours political science students interested in this field of study.
Three hours; one term
Prerequisite: Registration in Level III or above of an Honours Political Science Program
Antirequisites: POL SCI 3H03, 3J03
Students may take only one of POL SCI 3B03, 3HO3 and 3JO3
(See Notes 6 and 8 above.)
2.3 POL SCI 3H03 HONOURS TOPICS IN COMPARATIVE POLITICS AND PUBLIC POLICY

Recommended for honours political science students interested in this field of study.
Three hours; one term
Prerequisite: Registration in Level III or above of an Honours Political Science Program
Antirequisites: POL SCI 3B03, 3J03
Students may take only one of POL SCI 3BO3, 3H03 and 3JO3
(See Notes 6 and 8 above.)
2.4 POL SCI 3J03 HONOURS TOPICS IN CANADIAN POLITICS AND CANADIAN PUBLIC POLICY

Recommended for honours political science students interested in this field of study.
Three hours; one term
Prerequisite: Registration in Level III or above of an Honours Political Science Program
Antirequisites: POL SCI 3B03, SCI 3H03
Students may take only one of POL SCI 3B03, 3H03 and 3J03
(See Notes 6 and 8 above.)

POL SCI 3K03 MIGRATION AND CITIZENSHIP: CANADIAN, COMPARATIVE AND GLOBAL PERSPECTIVES
This course examines immigration as a local, national and global phenomenon. It considers the process of incorporation of immigrants into receiving societies, and the implications of migration for our understanding of citizenship and the nation-state.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 6 above.)

POL SCI 3VV3 THE POLITICAL THEORY OF DEMOCRACY
An examination of historical and contemporary debates about democracy and its challenges.
Three hours; (lectures and discussion); one term
Prerequisite: POL SCI 2006 and registration in Level III or above.
POL SCI 4C06
COSMOPOLITANISM AND ITS CRITICS

An examination of historical and contemporary debates about the idea that we should think and act as citizens of the world.
Three hours (seminar); two terms
Prerequisite: POL SCI 2 O 06 and registration in Level IV Honours Political Science. (See Note 7 above.)
Justifications:
POL SCI 2M03: COMPARATIVE POLITICS OF ADVANCED INDUSTRIAL NATIONS reflects our intent to have two three unit comparative politics courses at Level II instead of our current POL SCI 2A06 COMPARATIVE POLITICS course. This 3 unit course is conceived as the first of these two. The second will be accounted for by our current POL SCI 2XX3 POLITICS OF THE THIRD WORLD. We have found the flexibility of 3 unit courses to be an advantage for students and for planning instructors' teaching. Our other fields have moved from six unit courses to this two 3 unit course format at Level II in recent years. We hope that this will increase enrolments in this course, which historically have lagged behind our other Level II courses despite its importance as an introduction to this major field of political science. We estimate enrolments to be 120. We are not asking for a restriction on enrolment for this course.

The three new honours topics courses at Level III are directed at Honours students. With the very high proportion of our courses that are taught by non-permanent faculty (well over 50\% at the undergraduate level in some years) it has been hard for students to find permanent instructors who know them well enough to write letters of recommendation in the fall of their Level IV year, when they begin applying to graduate schools. We understand that at least one graduate school has refused to accept letters from non-permanent faculty. Student dissatisfaction at this state of affairs has been sufficient that complaints about it were lodged with the Provost. Our plan is to staff these new honours topics courses with permanent faculty. Faculty may choose a topic that matches their research specialization. This will facilitate a linking of current research and our training of honours students. The topic will be announced on our website in the spring before the course will be offered. Differentiating the educational experience of honours students relative to other BA students is an expectation that has been set out by the Ontario Council of Academic Vice Presidents in their "Guidelines for University Undergraduate Degree Level Expectations" and is consistent with the government's higher BIU funding of honours students. By only allowing each honours student to take one of these courses the Department aims to keep class sizes manageable enough to allow enough instructor interaction with the student for instructors to be able to write meaningful letters of recommendation. The courses aim to match most of our fields of study and this should enhance preparation for more specialized study in Level IV and at the graduate level. We estimate enrolments to be 40 in each course. We have added a Departmental Note \#8 to explain this to students, and this appears below. We wish to restrict the enrolments in these three courses to 50 students each. To allow the permanent faculty member to know the students well enough to write letters it is important to keep the numbers to this level. It will ease course planning since the students will distribute more easily and predictably across the three courses than if we had no enrolment restrictions.

The proposal for a Level III Migration and Citizenship course responds to a strong interest among undergraduate students for courses addressing migration issues. The course reflects the research and teaching interests of two faculty members (Nyers and Bird), and is flexible enough to be taught with a focus on International Relations, Comparative Politics, or Canadian Politics. We are not asking for a restriction on enrolment in this course.

The final two courses listed above reflect the hiring last year of a new permanent faculty member, James Ingram, who specializes in these areas of political theory. Prerequisites are needed to ensure adequate preparation, especially background knowledge in political theory. We estimate the enrolment of the Level III course to be 50 and the LeveI IV course to be 18. The level IV course will be restricted to 18 students to maintain a seminar format.

REVISIONS TO EXISTING COURSES:

An introduction to the study of concept and theory formation, and an overview of the scope, research methods and statistical techniques of political science.
Three hours; two terms
Prerequisite: Registration in Level III or above
Antirequisite: POL SCI 2F06
Not open to students with credit or registration in COMMERCE 2QA3, ECON 2B03, 3006, 3U03,
GEO 2S03, HTH SCI 1F03, 2A03, KINESIOL 3C03, POL SCI 2F06, PSYCH 2G03, 2RA3, 2RB3,
2R03, 2RR3, SOC SCI 2J03, STATS 1A03, 1 CC3 or any Level II, III or IV statistics course.
(See Notes 4 and 6 above.)
Justification:
Significant overlap with SOC SCI 2 JO3 should prohibit student from obtaining credit in both
3.2 POL SCI 3NN6 PUBLIC LAW

A study of the nature and function of public law, with special reference to constitutional law and judicial behaviour.
Three hours; two terms
Prerequisite: Registration in Level III or above
Priority will be given to students registered in a Political Science program. (See Note 6 above.)
Justification:
This tends to draw the interest of many students from outside our Department who are contemplating a law degree. There is always high demand for it. We wish to remove enrolment limits on it. This should lead to significant increases in enrolments in this course: perhaps from 50 to over 100.
3.3 POL SCI 4E06 ISSUES IN LIBERAL-DEMOCRATIC THEORY

An analysis of liberal and liberal-democratic approaches to a select issue, such as justice, religion, education, political authority or community.
Three hours (seminar); two terms
Prerequisite: A course in Political TheoryPOL SCI 2O06; and registration in Level IV Honours Political Science. (See Note 7 above.)
Not open to students with credit in POL SCI $4 \cup 06$ PROBLEMS OF POLITICAL PHILOSOPHY if taken in 1995-1996.
3.4 POL SCI 4Z06 HONOURS ESSAY

A major research paper, supervised by a faculty member. The subject matter is to be different from that covered in 3UU3, if the student is registered or has credit in that course.
Prerequisite: Registration in Level IV Honours Political Science normally with a minimum C.A. of 9.0; and written permission of the faculty member supervising the student's Honours Essay; and permission of the Department

Justification:
"normally" was supposed to have been included in the change we made to the wording of this course prerequisite last year but was not. It provides the flexibility to allow exceptions under particular circumstances.

### 4.0 COURSE DELETIONS:

## POL SCI 2A06 COMPARATIVE POLITICS

Justification:
Political Science 2A06 will be replaced with two 3-unit courses: POL SCI 2M03 and POL SCI 2XX3. POL SCI 2M03: COMPARATIVE POLITICS OF ADVANCED INDUSTRIAL NATIONS reflects our intent to have two three unit comparative politics courses at Level II instead of POL SCI 2A06: COMPARATIVE POLITICS course. This 3 unit course is conceived as the first these two. The second will be accounted for by our current POL SCI 2XX3 POLITICS OF THE THIRD WORLD. We have found the flexibility of 3 unit courses to be an advantage for students and for planning instructors' teaching. Our other fields have moved from six unit courses to this two 3 unit course format at Level II in recent years. We hope that this will increase enrolments in this course,
which historically have lagged behind our other Level II courses despite its importance as an introduction to this major field of political science. We estimate enrolments to be 120. We are not asking for a restriction on enrolment for this course.

COURSES TEMPORARILY WITHDRAWN:

```
POL SCI 2B03
POL SCI 2C03
POL SCI 2Z03 POLITICS AND THE MEDIA CROSS-LIST: CMST 2Z03
POL SCI 3T03 PROBLEMS OF POSTCOMMUNIST TRANSITION
```

REVISIONS TO DEPARTMENTAL NOTES:

## Department Notes:

8. Political Science Honours and Combined Honours students are encouraged but not required to take one of the Level III Honours Topics courses (POL SCI 3B03, 3H03, and 3J03). Each student may only take one of these Honours Topics courses. The topics of the courses will be described on the Department's website in advance of the date on which registration for them begins. Normally they will correspond to the research interests of the permanent faculty members who will teach them.

## Fields of Study

(Students are responsible for ensuring that course prerequisites are fulfilled.)

## CANADIAN POLITICS

POL SCl2D03, 2DD3, 2F03, 2L03, 3C03, 3FF3, 3GG3, 3HH3, 3J03, 3JJ3, 3K03, 3NN6, 3S03, 3SP3, 3Z03, 4O06, 4T06
COMPARATIVE POLITICS
POL SCI 2A06, 2B03, 2C03, 2M03, 2N03, 2XX3, 2Z03, 3BB3, 3D03, 3EE3, 3F03, 3G03, 3GG3, 3H03, 3I03, 3K03, 3KK3, 3LL3, 3M03, 3MM3, 3O03, 3T03, 3U03, 3V03, 3Y03, 3YY3, 4A03, 4AA6, 4D06, 4G06, 4L03, 4Q06, 4R06

INTERNATIONAL RELATIONS
POL SCI2BB3, 2C03, 2H03, 2I03, 2J03, 2XX3, 3AA3, 3B03, 3E03, 3EE3, 3FF3, 3K03, 3KK3, 3P03, 3Q03, 3QQ3, 3X03, 3Y03, 4D06, 4M06, 4MM6

POLITICAL THEORY
POL SCI2O06, 3CC3, 3O03, 4C06, 4E06, 4P06
PUBLIC POLICY
POL SCI2L03, 3B03, 3D03, 3E03, 3FF3, 3H03, 3J03, 3LL3, 3M03, 3S03, 3SP3, 3U03, 3YY3, 3Z03, 4A03, 4G06, 4L03, 4O06, 4R06

The following courses while satisfying the requirements of the program are not specific to any field of study:

POL SCI1G06, 3N06, 3UU3, 4Z06, 4ZZ6

Justification:
See justifications under NEW COURSES listings for these courses above.

```
                                    \diamond\diamond\diamond
```

DEPARTMENT OF PSYCHOLOGY, NEUROSCIENCE \& BEHAVIOUR

### 1.0 CHANGES TO EXISTING PROGRAMS:

### 1.1 DEPARTMENT OF PSYCHOLOGY,

 NEUROSCIENCE AND \& BEHAVIOUR
## WEB ADDRESS: http://www.mcmaster.ca/psychology

Honours Arts \& Science and Psychology
(B.Arts.Sc.; See Arts \& Science Program)

Honours Biology and Psychology (B.Sc.)
(See B.Sc. programs in Biology, Faculty of Science, Department of Biology)
Honours Integrated Science and Psychology, Neuroscience \& Behaviour (B.Sc.)
(See Faculty of Science, Integrated Science)
Honours Linguistic Cognitive Science (B. A.)
(See Faculty of Humanities, Department of Linguistics and Languages)
Honours Multidisciplinary Social Psychology (B.A.)
(See.
Honours Psychology, Neuroscience
and \& Behaviour (B.Sc.) (Formerly Honours Psychology)
(See Faculty of Science, Department of Psychology, Neuroscience and Behaviour)

## Honours Psychology, Neuroscience and \&

Behaviour (B.Sc.) (Music Cognition Specialization)
(See Faculty of Science, Department of Psychology, Neuroscience and Behaviour)
Honours Psychology, Neuroscience \{2460\}
and \& Behaviour (B.A.)
formerly Honours Psychology (B.A.)
Admission
2008-2009 ONLY: Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 ; a grade of at least Bin each of PSYCH 1A03 and 1AA3; credit in one of BIOLOGY 1A03, 1AA3 or 1 KO 3 ; and credit in MATH 1A03 or a grade of at least $C$ - in MATH 1 MO3.
EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1 X03 and 1 XX3 ( or PSYCH 1 A03 and 1AA3); credit in one of BIOLOGY 1 A03, 1 M03 (or 1AA3), 1P03 (or 1K03) or Grade 12 Biology U; and credit in MATH 1A03, 1LS3 or a grade of at least C- in MATH 1M03. Notes

1. Application for admission must be made by April 1. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Students who entered the program prior to September 2008 but after September 2002, must have successfully completed BIOLOGY 1A03, 1 AA3 or $1 \mathrm{K03}$ by the end of Level 11.
3. Students with credit in PSYCH 2RR3, do not need to complete PSYCH 2RA3 and 2RB3. Beginning September 2006, students with credit in STATS 16G3 but not PSYCH 2RR3 must complete both PSYCH 2RA3 and 2RB3 for any Honours B.A. Psychology program.
4. Students wishing to have more mathematical statistice may replace PSYCH2RA3 and 2RB3 with STATS 2003 and 2MB3. In this case, students are advised to take MATH 1AA3 in Levell and consult a departmental advisor. 5. 2.Students considering applying to graduate school should complete a course with a strong research component such as PSYCH 3QQ3, 4QQ3, 4D06, 4D09.
5. 3. Students who completed PSYCH 3QQ3 or 4QQ3 prior to September 2007, may use this credit toward the Level III lab requirement. Beginning September 2007, PSYCH 3QQ3 and 4QQ3 no longer fulfill this requirement. 7. Effective September 2008, students mustcomplete a Psycholegy lab course prior to registering in PSYCH 4D06 or 4D09.
1. Students who previously completed NEURCOMP 3W03 (NeuralComputation) or PSYCH3BL3 (Laboratory
in Human Electrophysiology) may use these units as three units of Course List 1.
2. 4. MATH 1B03 (Linear Algebra I) is strongly recommended for students intending to pursue graduate work in psychology or neuroscience. COMP SCI 1MA3 (Computer Based Problem Solving) or PHYSICS 2G03 (Scientific Computing) is strongly recommended for students interested in neuroscience, cognition and perception, and for students intending to pursue graduate work in psychology.
1. Students who entered the program prior to September 2002 , may replace six units of courses chosen from the-Course List 2 (Capstone Courses) with any six units of Levels III or IV Psychology.
2. 5. A maximum of six units from PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3 may be used as electives.
1. 6. The Department of Psychology, Neuroscience and \& Behaviour pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09) and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses ( PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the fall term. Ballots can be obtained on the Department of Psychology, Neuroscience and \& Behaviour web site at: http://www.mcmaster.ca/psychology-Priority will be given to students in Honours Psychology, Neuroscience and Behaviour, and Combined Honours Psychology programs.
Course List 1 (Lab Courses)
PSYCH 3EE3, 3LL3, 3L03, 3MM3, 3S03, 3V03
Course List 2 (Capstone Courses)
PSYCH 3I06, 4B03, 4BN3, 4C03, 4D06, 4F03, 4J03, 4Q03, 4QQ3, 4R03, 4Y03
Course List 3 (Psychology Course List)
All Levels III and IV Psychology courses (except PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3)
BIOLOGY 3P03, 4T03

HTH SCI
KINESIOL
MUSICCOG

4BB3
3E03, 4P03
2A03, 3A03, 3B03

Requirements
120 units total (Levels I to IV), of which 48 units may be Level I
Level I: 30 units
30 units from the Level I program completed prior to admission to the program. (See Admission above.)
Level II: 30 units
6 units PSYCH 2RA3, 2RB3 (See Notes 3 and 4 above.)
9 units PSYCH 2E03, 2H03, 2TT3
3 units from PSYCH 2D03, 2F03, 2N03
12 units Electives
Level III: 30 units
12 units from Course List 3
3 units from Course List 1 (See Notes 6, 7 and 123 and 6 above.)
15 units Electives (See Notes 9 and 114 and 5 above.)

## Level IV: 30 units

15 units nine units from Course List 3 and six units from Course List 2; or six units from Course List 3 and PSYCH 4D09 (See Note 12 Notes 2 and 6 above.)
15 units Electives (See Notes 9and 114 and 5 above.)

## REQUIREMENTS FOR STUDENTS WHO ENTERED

## LEVEL II PRIOR TO 2007-2008

## Level II: 30 units

6 units PSYCH 2RA3, 2RB3 (See Notes 3 and 42 above.)
9 units PSYCH 2D03, 2E03, 2F03, 2H03, 2N03, 2TT3 (Students interested in completing a specialization should review admission requirements below.)
3 units * from BIOLOGY 1A03, 1AA3, (or 1M03), 1K03 (or 1P03) or Grade 12 Biology U
12 units Electives
*If requirement completed in Level I, these units will be taken as electives.

## Level III: 30 units

12 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2N03, 2TT3 and nine units from Course List 3
3 units from Course List 1 (See Notes 6, 7 and 123 and 6 above.)
15 units Electives (See Notes 9 and 114 and 5 above.)
Level IV: 30 units

15 units nine units from Course List 3 and six units from Course List 2; or six units from Course List 3 and PSYCH 4D09 (See Note 12 Notes 2 and 6 above.)
15 units Electives (See Notes 9and 114 and 5 above.)

### 1.2 Honours Psychology, Neuroscience <br> \{2460371\} <br> and Behaviour (B.A.)(Music Cognition Specialization)

Subject to approval by the Ministry of Training, Colleges and Universities, beginning in the 2008-2009academic year, an Honours Bachelor of Arts program in Psychology, Neuroscience and Behaviour (Music Cognition Specialization) will be-offered.


#### Abstract

Admission 2008-2009 ONLY: Enrolment in this program is limited. Selection is based on academic achievement and a written statement of interest but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 ; a grade of at least B-in each of PSYCH 1 A03 and 1AA3; credit in one of BIOLOGY 1A03, 1AA3 or 1K03; credit in MATH 1A03 or a grade of at least C- in MATH 1M03; and credit in MUSIC 1A03 and 1ААЗ. EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement-and a written statement of interest but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1 X03 and 1XX3 (or 1A03 and 1AA3); credit in one of BIOLOGY 1A03, 1 M 03 (or 1AA3) 1P03 (or 1K03) or Grade 12 Biology U; and credit in MATH 1A03 or 1LS3, or a grade of at least C- in MATH 1M03; and credit in MUSIC 1A03 or 1AA3 (See Note 2 below.).


## Notes

1. Application for admission must be made by April 1. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. One of MUSIC 1A03 or 1AA3 is required for admission, however, completion of both are required by the end of Level IV.
3. Entrance into MUSIC 1CC3 requires Grade 2 Rudiments from the Royal Conservatory of Music (a grade of $80 \%$ or above, within last 2 years) or a grade of $65 \%$ or above on a qualifying music theory exam
administered by the School of the Arts (SOTA). Appointments can be made with SOTA to write the exam on
specific dates between February and May. The content of the exam is summarized at: http://www.humanities.mcmaster.ca/audition/index.html
4. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2003 and 2 MB 3 . In this case, students are advised to take MATH 1 AA 3 in Level I and consult a departmental advisor.
3.4. Students considering applying to graduate school should complete a course with a strong research component such as MUSICCOG 4D06, PSYCH 3QQ3, 4D06, 4D09, 4QQ3.
5. Prior to registering in PSYCH 4D06, 4D09, students must complete a Psychology lab course.
6. 5. PSYCH 3QQ3 or 4QQ3 will only fulfill the lab requirement if taken under the supervision or cosupervision of a faculty member in the Department of Psychology, Neuroscience and Behaviour.
1. 6. MATH 1B03 (Linear Algebra I) is strongly recommended for students intending to pursue graduate work in psychology or neuroscience. COMP SCI 1MA3 (Computer Based Problem Solving) or PHYSICS 2G03 (Scientific Computing ) is strongly recommended for students interested in neuroscience, cognition and perception, and for students intending to pursue graduate work in Psychology.
1. 7. A maximum of six units from PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3 may be used as electives.
1. 8. The Department of Psychology, Neuroscience and \& Behaviour pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09) and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses ( PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the fall term. Ballots can be obtained on the Department of Psychology, Neuroscience and \& Behaviour web site at: http://www.mcmaster.ca/psychology.-Priority will be given to students in Honours. Psychology Nouroscience and Behaviour, and Combined Honours Psychology programs.
Course List 1 (Lab Courses)
PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3QQ3, 3S03, 3V03, 4QQ3
Course List 2 (Capstone Courses)
PSYCH 3I06, 4B03, 4BN3, 4C03, 4D06, 4F03, 4J03, 4Q03, 4QQ3, 4R03, 4Y03

## Course List 3 (Psychology Course List)

All Levels III and IV Psychology courses (except PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3)
BIOLOGY 3P03, 4T03
HTH SCI 4BB3
KINESIOL
3E03, 4P03
Requirements
120 units total (Levels I to IV), of which 48 units may be Level I
Level I: 30 units
30 units from the Level I program completed prior to admission to the program. (See Admission above.)
Level II: 30 units
6 units PSYCH 2RA3, 2RB3 (See Note 2 above.)
9 units PSYCH 2E03, 2H03, 2TT3
3 units from PSYCH 2D03, 2F03, 2N03
3 units MUSICCOG 2A03/ PSYCH 2MA3
63 units MUSIC 1CC3,1D03 (See Note 3 above)
36 units Electives (See Notes 2 and 6 above)
Level III: 30 units
126 units from Course List 3 (PSYCH 3A03, 3H03 are recommended)
3 units from Course List 1 (See Notes 4,5 and 85 and 8 above.)
6 units from MUSICCOG 3A03 3B03, PSYCH 3MA3, 3MB3
6 units MUSIC 2CC3, 2H03
39 units Electives (See Notes 6 and 7 2, 6 and 7 above.)
Level IV: 30 units
6 units from Course List 3
9 units three units from Course List 3, and six units from Course List 2 or MUSICCOG 4D06; or PSYCH 4D09 (See Notes 84 and 8 above.)
15 units Electives (See Notes 6 and 7 2, 6 and 7 above.)

### 1.3 Honours Psychology Specializations

The Honours Specialization programs are being phased out. Registration in Level II IV of each of these PROGRAMS WILL BE LAST AVAILABLE IN SEPTEMBER 2008-2009. 2009-2010.
Upon satisfactory completion of Level HIII Honours Psychology, and subject to meeting the admission requirements, students may choose to register in one of the following four specializations. Students who choose not to specialize will remain registered in the Honours Psychology, Neuroscience \& Behaviour program.

## Course List 1 (Lab Courses)

PSYCH 3EE3, 3LL3, 3L03, 3MM3, 3S03, 3V03
Course List 2 (Capstone Courses)
PSYCH 3I06, 4B03, 4BN3, 4C03, 4D06, 4F03, 4J03, 4Q03, 4QQ3, 4R03, 4Y03
Course List 3 (Psychology Course List)
All Levels III and IV Psychology courses (except PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3)
BIOLOGY 3P03, 4T03
HTH SCl 4BB3

KINESIOL
3E03, 4P03
MUSICCOG
2A03, 3A03, 3B03

## Behavioural Neuroscience $\{\mathbf{2 4 6 0 8 7 4}\}$

Specialization
Admission
Completion of Level HIII Honours Psychology, including PSYCH $2 F 03$.

## Requirements

## LEVEL III: 30 UNITS

9 units from PSYCH 2D03, 3A03, ЗAA3, 3BN3, 3D03, 3FA3, ЗHH3, З $033,3 \mathrm{MO3}, 3 \mathrm{Y} 03-$
6 units from Course List 3 ; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2 TT 3 and three units from Course List 3

3 units from Course List 1. PSYCH 3EE3, 3L03, 3MM3 or 3V03 is recommended.
12 units Electives

## Level IV: 30 units

6 units from PSYCH 2D03, 3A03, 3AA3, 3BN3, 3D03, 3FA3, 3HH3, 3J03, 3M03, 3Y03, 4BN3, 4F03, 4Y03, BIOLOGY 4T03
12 units six units from Course List 3 and six units from Course List 2
or
three units from Course List 3 and PSYCH 4D09
12 units Electives

## Cognition and Perception \{2460882\} <br> Specialization

Admission
Completion of Level HIII Honours Psychology, including PSYCH 2E03, 2H03.

## Requirements

## Level III: 30 units

12 units from PSYCH 3A03, ЗAA3, 3BB3, 3BN3, 3D03, 3FA3, 3HH3, 3113, 3J03, 3U03, 3UU3, 3VV3
3 units from Course List 3; or three additional units from PSYCH 2DO3, 2E03, 2F03, 2H03, 2TT3
3 units from Course List 1. PSYCH 3EE3, 3LL3, 3MM3 or 3V03 is recommended.
12 units Electives
Level IV: 30 units
6 units from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3D03, 3FA3, 3HH3, 3II3, 3J03, 3U03, 3UU3, 3VV3, 4BN3, 4C03, 4Z03
12 units six units from Course List 3 and six units from Course List 2
or
three units from Course List 3 and PSYCH 4D09
12 units Electives

## Developmental Specialization <br> \{2460878\}

## Admission

Completion of Level IIIII Honours Psychology.

## Requirements

## Level III: 30 units

3 units PSYCH 3GG3
6 units from PSYCH $3 \mathrm{HH}_{3} 3,3 \mathrm{H} 3,3 \mathrm{~J} 3$
6 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, $2 \mathrm{H} 03,2 \mathrm{TT} 3$ and three units from Course List 3
3 units from Course List 1. PSYCH 3EE3, 3LL3 or $3 \mathrm{VO3}$ is recommended.
12 units Electives

## Level IV: 30 units

6 units from PSYCH 3HH3, 3II3, 3JJ3, (if not already taken) 3B03, 3C03, 3Z03, 3ZZ3, 4C03
12 units six units from Course List 3 and six units from Course List 2
or
three units from Course List 3 and PSYCH 4D09
12 units Electives

## Evolution and Social $\{2460880\}$

## Behaviour Specialization

Admission
Completion of Level HIII Honours Psychology, including PSYCH 2 TT3.

## Requirements

Level Ill: 30 unis
9 units PSYCH $2 \mathrm{CO3}, 3 \mathrm{AO}, 3 \mathrm{FO3}, 3 \mathrm{JJ}, 3 \mathrm{MO3}, 3 \mathrm{TO3}, 3 \mathrm{YO3}, 3 \mathrm{YY3}$
6 units from Course List 3 ; or three additional units from PSYCH $2 \mathrm{D} 03,2 \mathrm{E} 03,2 \mathrm{~F} 03,2 \mathrm{H} 03,2 \mathrm{TT} 3$ and three units from Course List 3
3 units from Course List 1. PSYCH 3LL3 or 3 S03 is recommended. (See Notes 7 and 8 above.)

12 units Electives

## Level IV: 30 units

6 units PSYCH 2C03, 3A03, 3F03, 3JJ3, 3M03, 3T03, 3Y03, 3YY3, 4R03, 4Y03
12 units six units from Course List 3 and six units from Course List 2
or
three units from Course List 3 and PSYCH 4D09
12 units Electives

## Combined Honours in

Psychology and Another Subject (B.A.)

## Admission

2008-2009 ONLY: Enrolment in this program is limited. Selection is based on acadomic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 ; a grade of at least $B$ in each of PSYCH 1A03 and 1AA3; credit in one of BIOLOGY 1A03, 1 AA3 or $1 \mathrm{K03}$; and credit in MATH 1A03 or a grade of at least $G$ - in MATH 1 M03.
EFFECTIVE 2009-2010: Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH $1 \times 03$ (or PSYCH 1AA3) and 1XX3 (or PSYCH 1A03) for 1A03 and 1AA3); credit in one of BIOLOGY 1A03, 1M03 (or 1AA3), 1P03 (or 1K03) or Grade 12 Biology U; and credit in one of MATH 1A03, 1LS3 or a grade of at least C- in MATH 1 M03.

## Notes

1. Application for admission must be made by April 1. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Students who entered the program prior to September 2008 but after September 2002, must have suecessfully completed BIOLOGY 1A03, 1AA3 or $1 \mathrm{K03}$ by the end of Level II.
3.2. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B. A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with Arts and Science Programs.
4.Students with credit in PSYCH2RR3, do not need to complete PSYCH 2 RA3 and 2RB3. Beginning September 2006, students with credit in STATS 1CC3 but not PSYCH 2RR3 must complete both PSYCH 2 RA3 and 2RB3 for any Honours B.A. Psychology program.
3. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2 D03 and 2MB3. In this case, students are advised to take MATH 1AA3 in Lovel I and consult with a departmental advisor.
6.3. Students considering applying to graduate school should complete a course with a strong research component such as PSYCH 3QQ3, 4QQ3, 4D06, 4D09.
4. 4. Students who completed PSYCH 3QQ3 or 4QQ3 prior to September 2007, may use this credit toward the Level III lab requirement. Beginning September 2007, PSYCH 3QQ3 and 4QQ3 no longer fulfill this requirement. 8.Effective September 2008, students must complete a Psychology lab course prior to registering in PSYCH 4D06, 4009.
9.Students who previously completed NEURCOMP 3 W03 (NeuralComputation) or PSYCH 3BL3 may use these units as three units of Course List 1.
1. 5. MATH 1B03 (Linear Algebra I) is strongly recommended for students intending to pursue graduate work in psychology or neuroscience. COMP SCI 1MA3 (Computer Based Problem Solving) or PHYSICS 2G03 (Scientific Computing) is strongly recommended for students interested in neuroscience, cognition and perception, and for students intending to pursue graduate work in psychology.
1. 6. A maximum of six units from PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3 may be used as electives.
1. 7. The Department of Psychology, Neuroscience and \& Behaviour. pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the fall term. Ballots can be obtained on The Department of Psychology, Neuroscience and \& Behaviour web site at: http://www.mcmaster.ca/psychology.-Priority will be given to students in Honours Psychology, Nouroscience and Behaviour and Combined Honours Psychology programs.
COURSE LIST 1 (LAB COURSES)
PSYCH3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03

COURSE LIST 2 (Psychology Course List)
All Levels III and IV Psychology courses (except PSYCH 3AB3, 3AC3, 3BA3, 3CB3, 3CD3)
BIOLOGY 3P03, 4T03
HTH SCI 4BB3
KINESIOL
3E03, 4P03
MUSICCOG
2A03, 3A03, 3B03
Requirements
120 units total (Levels I to IV), of which 48 units may be Level I
Level II: 30 units
6 units PSYCH 2RA3, 2RB3 (See Notes 4 and 5 above.)
3 units from PSYCH 2D03, 2F03, 2N03
3 units PSYCH 2E03, 2H03, 2TT3
12 units courses as specified for the other subject
6 units Electives

## Level III: 30 units

3 units Course List I (See Notes 7, 8, 9 and 124 and 7 above.)
3 units from PSYCH 2E03, 2H03, 2TT3
6 units from Course List 2
12 units courses as specified for the other subject
6 units Electives (See Notes 10 and 115 and 6 above.)

## Level IV: 30 units

12 units from Course List 2
12 units courses as specified for the other subject
6 units Electives (See Notes 10 and 115 and 6 above.)

## REQUIREMENTS FOR STUDENTS WHO ENTERED

LEVEL II PRIOR TO 2007-2008

## Level II: 30 units

6 units PSYCH 2RA3, 2RB3 (See Notes 4 and 5 above.)
6 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2N03, 2TT3
3 units* from BIOLOGY 1A03, 1AA3 (or 1M03), 1K03 (or 1P03) (Soo Note 2above.)
12 units courses as specified for the other subject
3 units Electives
*If requirement completed in Level I, these units will be taken as electives.

## Level III: 30 units

3 units from Course List 1 (See Notes 7, 8, 9 and 124 and 7 above.)
6 units from Course List 2
3 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2N03, 2TT3
12 units courses as specified for the other subject
6 units Electives (See Notes 10 and 115 and 6 above.)

## Level IV: 30 units

12 units Course List 2
12 units courses as specified for the other subject
6 units Electives (See Notes 10 and 115 and 6 above.)

### 1.2 B.A. in Psychology \{1460\}

## Admission

2008-2009 ONLY:Completion of any Levell program with a Cumulative Average of at least 3.5 and an average of at least 4.0 in PSYCH $1 \mathrm{~A} 03,1 \mathrm{AA3}$.
EFFECTIVE 2009-2010:Completion of any Level I program with a Cumulative Average of at least 3.5 and a grade of at least C- in PSYCH 1X03 (or PSYCH 1AA3).

## Notes

1. One of MATH 1A03, 1F03, 1K03, 1LS3 or 1 M 03 must be completed by the end of Level II. Completion in Level I is strongly recommended.
2. SOC SCI 2J03 must be completed by the end of Level II. As of September 2008, STATS 1A03 or 1CC3 will no longer be offered. Students with credit in STATS 1A03 or 1CC3 may use the credit towards fulfilling this requirement.
3. PSYCH 1 XX 3 and one of BIOLOGY 1A03, 1 M 03 (or 1 AA 3 ) or 1 P 03 (or 1K03) or Grade 12 Biology $U$ are strongly recommended and serve as prerequisites for some upper-level Psychology courses. Students are
strongly encouraged to check requisites carefully.
4. Students wishing to take PSYCH 3Q03 and 3QQ3 must complete and submit a pre-registration ballot by mid February. Students will be informed of the outcome by mid March. Specific dates will be announced during the fall term. Ballots can be obtained on the Department of Psychology, Neuroscience and \& Behaviour web site at: http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology, Neuroscience and Behaviour and Combined Honours Psychology programs.
5. Students who entered Level II B.A. Psychology in September 2007 must complete at least six units of Level III Psychology.
COURSE LIST 1 (PSYCHOLOGY COURSE LIST)
PSYCH 2AA3, 2B03, 2C03, 2I03, 2S03, 3AB3, 3AC3, 3BA3, 3BB3, 3C03, 3CB3, 3CC3, 3CD3, 3F03, 3FA3, 3K03, 3M03, 3N03, 3Q03, 3QQ3, 3T03, 3U03, 3UU3, 3VV3, 3YY3

## Requirements

90 units total (Levels I to III), of which 42 units may be Level I
Level II: 30 units
3 units SOC SCI 2J03 (See Note 2 above.)
9 units Level II Psychology where at least six units must be from PSYCH 2AA3, 2B03, 2C03, 2l03, 2 S03
3 units* from MATH 1A03, 1F03, 1K03, 1LS3, 1M03 (See Note 1 above.)
9 units Electives, excluding Psychology (See Note 3 above.)
6 units Electives If not completed in Level I, a minimum of six units must be from the Faculty of Humanities or the Department of Religious Studies.
*If requirement completed in Level I, these units will be taken as non-psychology electives.
Level III: 30 units
12 units from Course List I, of which at least nine units must be from Level III
12 units Electives, excluding Psychology
6 units Electives
REQUIREMENTS FOR STUDENTS WHO ENTERED

## LEVEL II PRIOR TO 2007-2008

Level II: 30 units
3 units from STATS 1A03, 1CC3*, SOC SCI 2J03 (See Note 2 above.)
9 units Level II Psychology where up to six units may be from PSYCH 2D03, 2E03, 2F03, 2H03, 2N03, 2TT3
3 units* from MATH 1A03, 1F03, 1K03, 1LS3, 1M03 (See Note 1 above.)
6 units Humanities or Science Religious Studies,oxcluding Psychology
6 units Electives, excluding Psychology
3 units Electives
*If requirement completed in Level I, these units will taken as electives.

## Level III: 30 units

12 units Level II or III Psychology, including at least nine units from Level III Psychology (See Note 5 above.)
12 units Electives, excluding Psychology
6 units Electives

### 1.3 Minor in Psychology

## Notes

1. As all courses have enrolment capacities, the Faculty cannot guarantee registration in courses, even when prerequisites have been met. Therefore, completion of the Minor in Psychology may not be possible.
2. When choosing Level II Psychology courses, students should consider the prerequisites for Level III courses.
3. Students who have completed ISCI 1A24 do not need to take PSYCH 1X03 (or PSYCH 1AA3).

## Requirements

24 units total
3 units PSYCH 1AA3, 1X03
21 units PSYCH 1A03, 1XX3, Levels II or III Psychology courses of which at least six units must be from Level III

### 4.0 CHANGES TO EXISTING COURSES AND NOTES:

### 4.1 Department Notes:

1. The University reserves the right to limit enrolment in any course. Where priorities have to be established, first consideration will be given to students registered in an Honours program in the Department of Psychology, Neuroscience and \& Behaviour.
2. The Psychology, Neuroscience and \& Behaviour Department pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09, 4DD6), and the Individual Study courses (PSYCH 2QQ3, 3Q03, 3QQ3, 4Q03, 4QQ3). Students wishing to take these courses must complete and submit a ballot by mid February. Students will be informed of the outcome of the first phase by mid March. The second phase will include lab courses (PSYCH 3EE3, 3L03, 3LL3, 3MM3, 3S03, 3V03). Students wishing to take these courses must complete and submit a ballot by mid April. Specific dates will be announced during the fall term. Ballots can be obtained from the Psychology, Neuroscience and \& Behaviour Department web site at http://www.mcmaster.ca/psychology. Priority will be given to students registered in Honours Psychology, Honours Psychology, Nouroscience and Behaviour and Combined Honours Psychology programs.

## Justification:

Housekeeping

$$
\leftrightarrow \diamond \diamond
$$

## DEPARTMENT OF RELIGIOUS STUDIES

REVISIONS TO EXISTING PROGRAMS:

### 1.1 Fields of Study

The Department offers courses in four fields of study. Students are encouraged to specialize in any one of these fields. Levels II, III and IV courses are allocated to the fields as follows:

## I. Asian Religions

RELIG ST 2E03, 2F03, 2103, 2K03, 2L03, 2P06, 2TT3, 3AA3, 3E03, 3L03, 3P03, 3RR3, 3S03, 3U03, 3UU3, 3V03, 4H03
SANSKRIT 3A06, 4B06
II. Biblical Studies

RELIG ST 2B03, 2DD3, 2EE3, 2GG3, 2HH3, 2VV3, 2YY3, 2Z03, 3DD3, 3GG3, 3J03, 3K03, 3M03, 3N03, 3R03, 3T03, 4 I03
HEBREW 2A03, 2B03, 3A03, 3B03
III. Western Religious Thought

RELIG ST 2C03, 2EA3, 2EB3, 2FF3, 2G03, 2ll3, 2J03, 2JJ3, 2KK3, 2LL3,2MM3, 2NN3, 2Q03, 2U03, 2V03, $2 \mathrm{X} 03,2 \mathrm{ZZ3}, 3 \mathrm{~A} 03,3 \mathrm{~B} 03,3 \mathrm{C} 03,3 \mathrm{CC} 3,3 \mathrm{D} 03,3 G G 3,3 K K 3,3 L L 3,3 M M 3,3 N N 3,3 W 03,3 X 03,3 Y 03,3 Z 03$, 3ZZ3, 4N03
IV. Contemporary and Comparative Religions

RELIG ST 2BB3, 2H03, 2M03, 2N03, 2QQ3, 2SS3, 2TT3, 2W03, 2WW3, 3EE3, 3FF3, 4P03
Honours Religious Studies
\{2475\}
Admission
Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course.

## Notes

1. All honours students are encouraged to consult a departmental undergraduate advisor in the selection of their Levels III and IV courses.
2. Part-time students should note that RELIG ST 3 F03 is regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling program requirements should consult a departmental undergraduate advisor as early as possible in their program.
3. With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.
4. Students who entered the program prior to September 2004 may use RELIG ST 2EA3, 2EB3, 2Q03 or 2 V 03 toward the Contemporary and Comparative Fields of Study.
5. RELIG ST 4R06 is strongly recommended for students considering graduate work in Religious Studies.
6. Since not all Level IV seminars are offered each year, students in the Honours program are encouraged to take at least three units one Level IV seminar in during Level III.

Justification:
Present wording sounds as though Level III courses could be taken in fulfilment of our Level IV requirement

### 1.2 Minor in Japanese Studies

(See Minor in Japanese Studies in the Faculty of Humanities section of the calendar)

## Minor in Religious Studies

## Requirements

24 units total
24 units Religious Studies courses with no more than six units from Level I
Justification:
To alert students to availability of Japanese Studies Minor due significant overlap with Religious Studies courses.

### 2.0 NEW COURSES:

2.1 RELIG ST 2J03 INTRODUCTION TO JUDAISM

Survey of major facets of Jewish religion and identity from antiquity to the present, including foundational texts, major historical developments, and central beliefs and practices.
Two lectures, one tutorial; one term

## Justification:

Fills a gap in our curriculum; newly/recently appointed faculty.
Anticipated Enrolment: 90

### 3.0 REVISIONS TO EXISTING COURSES:

### 3.1 RELIG ST 1E03 3Y03

LOVE IN WESTERN CIVILIZATION
A discussion of the variety of accounts of love in Western civilization from the time of the ancient Greeks and the rise of Christianity to modernity.
Two lectures, one tutorial; one term
Antirequisite: RELIG ST 1E03, 1E06
Justification:
Instructor has found that students require more preparation for this course than they generally have during Level I.
Anticipated enrollment: 60-120.

### 3.2 RELIG ST 2B03 <br> WOMEN IN THE BIBLICAL TRADITION

This course will focus on the portrayal of women in the Hebrew Scriptures and the New Testament. Among the texts to be dealt with are examples of biblical narrative and legal material, the gospels, the letters of Paul and extra-biblical material.
Two lectures, one tutorial; one term
Cross-list: WOMEN ST 2B03
Justification:
See 3.4
3.3 RELIG ST 2BB3

IMAGES OF THE DIVINE FEMININE
An examination of goddesses and female religious symbols in a variety of cultures: tribal, eastern and western.
Two lectures, one tutorial; one term
Cross-list: WOMEN ST 2BB3
Justification:

See 3.4
3.4 RELIG ST 3FF3

## GENDER AND RELIGION

A study of gender in several religions, such as Hinduism, Buddhism, Confucianism, Christianity, Judaism, and Islam. Important female religious figures and feminist theology will also be studied.
Two lectures, one tutorial; one term
Antirequisite: RELIG ST 2SS3
Cross-list: WOMEN ST 3FF3
Justification:
We have agreed to cross list this course with Women's Studies.

### 3.4 RELIG ST 3M03 SONGS OF DAVID: POETRY IN THE HEBREW BIBLE PSALMS AND WISDOM IN THE BIBLE

A study of poetry in the Hebrow Bible (in transtation). The course will give primary attention to the study of the psalms. Some examples of early epic poetry and wisdom poetry will also be included.
A study of selected texts from Psalms, Job, and Proverbs with attention to how poetic and wisdom literature in the Hebrew Scriptures has functioned in Jewish and Christian worship and everyday life.
Two lectures, one tutorial; one term
Justification:
Due to declining enrollments in past years, we are opting for a more broadly framed title and description that more adequately convey the course's content. We expect with this change to draw more students by reflecting a wider selection of primary texts as well as a socio-historic perspective.

$$
\leftrightarrow \diamond \diamond
$$

## SCHOOL OF SOCIAL WORK

No Changes for Social Work

$$
\leftrightarrow \diamond \gg
$$

DEPARTMENT OF SOCIOLOGY

### 1.0 REVISIONS TO EXISTING COURSES:

1.1 SOCIOL 2L03

MEDIA INSTITUTIONS
An examination of the institutional structure and production processes of the press, television, and radio. Topics include news gathering, television and radio program production and the relationship between media production and management.
Three hours (lectures); one term
Prerequisite: CMST 1A03 and 1B03; or SOCIOL 1A06
Antirequisite: CMST 2L03
Justification:
Current Prerequisites for this course are SOCIOL 1A06 or CMST 1A03 and 1B03. CMST 1B03 was restructured to a Level II course. Students with CMST 1A03 only are currently admitted to SOCIOL 2 LO3 on a waiver. Numbers seeking waivers are small enough to require only SOCIOL 1A06. In other words, we don't anticipate a larger number of CMST students enrolling in our SOCIOL 1A06 if we limit the pre-requisite to our course.

SOCIOL 3H06 RESEARCH TECHNIQUES AND DATA ANALYSIS
A comprehensive introduction to statistical principles of research design and data analysis in the social
sciences.
Three hours (lectures and labs); two terms
Prerequisite: Registration in any program in Sociology. Students in Honours Anthropology, Gerontology and Labour Studies will have second priority.
Not open to students with credit or registration in any six units of Research Methods as prescribed by all other Social Sciences programs; SOCIOL 2Y03; all Statistics courses except STATS 1A03, 1L03, 2D03, 3S03, 3U03, 4H03.

Justification:
SOCIOL 2 Y03 is in cold storage. STATS 1A03 is no longer offered.
We are also requesting that Social Sciences remove this course, SOCIOL 3H06, from their description of antirequisites for SOC SCI 2J03. We don't consider these courses equivalent and we have agreed with the Associate Dean's office to accept SOC SCI 2J03 as an elective for our honours students required to take SOCIOL 3H06.

### 2.0 COURSES TEMPORARILY WITHDRAWN:

## SOCIOL 3LL3 SOCIOLOGY OF WORK AND LABOUR MARKETS <br> SOCIOL 4D03 PERSPECTIVES ON SOCIOLOGICAL THEORY <br> SOCIOL 4JJ3 SOCIOLOGY OF CYBERSPACE/INTERNET

$$
\diamond \diamond \diamond
$$

## FACULTY OF SOCIAL SCIENCES

1.0 NEW PROGRAM;<br>BA Honours Social Psychology<br>Subject to the approval of the Ministry of Training, Colleges and Universities, beginning in the 20102011 academic year a BA Honours Social Psychology will be offered<br>\section*{Purpose:}<br>Students study various aspects of social psychology from a multidisciplinary perspective to gain an understanding of how individuals behave, how small groups and communities interact, and how societies develop practices and priorities. Students will learn how to locate themselves in the complex fabrics of their cultures, their geographies and their power relationships. Students who are interested in many social science perspectives on how people develop over the lifespan and how they behave both individually and socially in different environments and circumstances should consider this program.<br>\section*{Admission:}<br>Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in each of PSYCH 1X03 and SOCIOL 1A06 and credit in at least 9 units of other Social Sciences courses from at least two disciplines from the following list:<br>Anthrop 1A03, 1B03, 1 Z03<br>Econ 1B03, 1BB3<br>Geog 1HA3, 1HB3<br>Health, Aging, and Society (Gerontol 1A03, HealthSt 1A03)<br>Inquiry 1SS3<br>Labour St 1A03, 1C03<br>Pol Sci 1G06<br>Psych 1XX3<br>Relig St 1B06, 1D06, 1E03, 1J03<br>Soc Work 1A06

Program Note:
1.0 Completion of INQUIRY 1 SS3 in Level I is strongly recommended.
2.0 Students are responsible for ensuring that they meet the prerequisites for any course they wish to take from the course lists
3.0 Students considering a graduate program in Psychology should consult an academic advisor to plan a program of study that meets admission requirements for such programs. Additional courses may be required in Mathematics and Science subjects.

### 1.0 REVISIONS TO EXISTING COURSES:

1.1 SOC SCI 2ELO INTRODUCTION TO CAREER PLANNING THROUGH EXPERIENTIAL LEARNING

Provides an opportunity to engage in a variety of hands-on exploration activities to provide a strong foundation for career and education planning. Students will better understand the skills acquired in academic studies, extracurricular activities, work experience and how this relates to making occupation choices and job searching. Students will engage in exploration activities to provide a foundation for career/education planning. They will better connect the skills acquired through academics, extracurricular activities, work experiences to future occupation choices.
Six, two hour lectures/workshop; one term
Prerequisite: Registration in Level II or above of a Social Sciences Program, including an Honours Bachelor of Kinesiology Bachelor of Kinesiology General or Social Sciences program
Antirequisite: SOC SCI 3ELO
(See Note 1 above.)

### 1.2 SOC SCI 2J03 INTRODUCTION TO STATISTICS

An introduction to basic statistical concepts and their application to the analysis of data from the social sciences. The use of spreadsheets is emphasized.
Three hours; one term
Prerequisite: Registration in Level II or above of an Honours Bachelor of Kinesiology, Bachelor of
Kinesiology General, Social Sciences; or Music Cognition program or Linguistic Cognitive Science
Antirequisite: COMMERCE 2QA3 EARTH SC 2MB3, ECON 2B03, GEOG 2MB3,
Not open to students with credit or registration in ECON 2B03, 3O06, 3U03, GEO 2S03, HTH SCI 1F03, 2A03, KINESIOL 1B03, 1B06, 3C03, POL SCI 2F06, 3NO6, PSYCH 2G03, 2RA3, 2RB3, 2R03, 2RR3, SOCIOL 3H06, STATS 1A03, 1CC3 or any Level II, III or IV statistics course.

## Justification:

The Department of Sociology will now allow students to retain credit in both.
1.3 SOC SCI 3IF0 FULL-TIME INTERNSHIP

Full-time, non-credit, paid work opportunities of four, eight or 12 month duration allowing students to explore careers, develop employability skills and make important contacts for job searches.
Normally 30-35 hours per week
Prerequisite: Registration in a program in the Faculty of Social Sciences; credit or registration in SOC SCI 2ELO; and permission of the Gareer Development Coordinator Programming and Outreach Manager
SOC SCI 3IFO may be repeated.
1.4 SOC SCI 3IPO PART-TIME INTERNSHIP

Part-time, non-credit, paid work opportunities of four, eight or 12 month duration allowing students to explore careers, develop employability skills and make important contacts for job searches.
Normally 5-105 hours per week
Prerequisite: Registration in a program in the Faculty of Social Sciences; credit or registration in SOC SCI 2ELO; and permission of the Career Development Coordinator Programming and Outreach Manager SOC SCI 3IPO may be repeated.
1.5 SOC SCI 3ISO SUMMER INTERNSHIP

Full-time, non-credit, paid work opportunities normally lasting four months during the Spring/Summer Session allowing students to explore careers, develop employability skills and make important contacts for job searches. Student selected to complete a McMaster Summer or NSERC USRA may use this experience toward a have this experience recognized as a Summer Internship.
Normally $30-35$ hours per week

Prerequisite: Registration in a program in the Faculty of Social Sciences; credit or registration in SOC SCI 2ELO; and permission of the Gareer Development Coordinator Programming and Outreach Manager SOC SCI 3IS0 may be repeated.
3.0 COURSE DELETIONS:

SOC SCI 3MP3 COMMUNITY LEADERSHIP IN SPORT AND PHYSICAL ACTIVITY
Justification:
This course that was administered by Kinesiology will no longer be offered in social sciences.

## BA (Honours) Social Psychology

> In our teaching, research, and scholarship, we are committed to creativity, innovation, and excellence. We value integrity, quality, and teamwork in everything we do. We inspire critical thinking, personal growth, and a passion for learning. We serve the social, cultural, and economic needs of our community and our society. (Statement of Mission and Vision, Directions, 1995)

These principles underpinned the development of the proposed program and its curriculum.

## CURRICULUM PROPOSAL -BA (Honours) Social Psychology

## Purpose:

Students study various aspects of social psychology from a multidisciplinary perspective to gain an understanding of how individuals behave, how small groups and communities interact, and how societies develop practices and priorities. Students will learn how to locate themselves in the complex fabrics of their cultures, their geographies and their power relationships. Students who are interested in many social science perspectives on how people develop over the lifespan and how they behave both individually and socially in different environments and circumstances should consider this program.

## Admission:

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in each of PSYCH 1X03 and SOCIOL 1A06 and credit in at least 9 units of other Social Sciences courses from at least two disciplines from the following list:

Anthrop 1A03, 1B03, 1 ZO3
Econ 1B03, 1BB3
Geog 1HA3, 1HB3
Health Aging and Society (Gerontol 1A03, HealthSt 1A03)
Inquiry 1SS3
Labour St 1A03, 1C03
Pol Sci 1G06
Psych 1XX3
Relig St 1B06, 1D06, 1E03, 1J03
Soc Work 1A06

## Program Note:

1.0 Completion of INQUIRY 1SS3 in Level I is strongly recommended.
2.0 Students are responsible for ensuring that they meet the prerequisites for any course they wish to take from the course lists
3.0 Students considering a graduate program in Psychology should consult an academic advisor to plan a program of study that meets admission requirements for such programs. Additional courses may be required in Mathematics and Science subjects.

## REQUIREMENTS:

90 units beyond Level I including:
18 units - Social Sciences 2J03, 2K03, 3YY3, 3ZZ3, and 4ZZ6;
54 units from List A; which must include at least 18 units of Psychology, 18 units of Sociology, and 18 units from at least 2 other Social Sciences disciplines beyond Level I; students must have a minimum of 12 units of Level IV courses and may take a maximum of 12 units of Level IV courses from List A.
If not completed in Level I, a minimum of six units from the Faculty of Humanities and/or Religious Studies must be included.
Electives may be taken from courses in List A.

## REQUIRED COURSES

## SOC SCI2J03 STATISTICS FOR SOCIAL SCIENTISTS

An introduction to basic statistical concepts and their application to the analysis of data from the social sciences. The use of spreadsheets is emphasized.
Three hours; one term
Prerequisite: Registration in Level II or above of an Honours Bachelor of Kinesiology, Bachelor of Kinesiology General, Social Sciences or Music Cognition program
Antirequisite: COMMERCE 2QA3 Not open to students with credit or registration in: ECON 2B03, 3O06, 3U03, GEO 2S03, HTH SCI 1F03, 2A03, KINESIOL 1B03, 1B06, 3C03, POL SCl 2F06, 3N06, PSYCH 2GO3, 2RA3, 2RB3, 2R03, 2RR3, SOCIOL 3H06, STATS 1A03, 1CC3 or any Level II, III or IV statistics course.

## SOC SCI2K03 RESEARCH METHODS FOR THE SOCIAL SCIENCES

Prerequisite: Registration in Level II or above in BA (Honours) Social Psychology
Antirequisite: ANTHROP 3P03, CMST 2A03, GEOG 2MA3, HLTH AGE 3Z06, LABR ST 3H03, POL SCI 3N06, SOCIOL 2ZO3, 3H06
New course

## SOC SCI 3YY3 PERSPECTIVES AND THEORIES ON SOCIAL PSYCHOLOGY IN SOCIAL SCIENCES Understanding the history and development of perspectives and theories from multi social science disciplines on Social Psychology. <br> Prerequisite: Registration in Level II or above in BA (Honours) Social Psychology New course

## SOCSCI $3 Z Z 3$ COMPLEX PROBLEMS FROM A MULTIDISCIPLINARY SOCIAL PSYCHOLOGY PERSPECTIVE

Problem-based social issues course (changing foci) involving students in examining a social problem (e.g. poverty, drug abuse, juvenile crime) from a multidisciplinary social psychology perspective.
New course

Prerequisite: SOC SCI 3YY3; Registration in Level III or above in BA (Honours) Social Psychology New course

## SOCSCI 4ZZ6 INTEGRATIVE STUDIES IN THE SOCIAL PSYCHOLOGY

A seminar, an experiential education focused course, an internship, a group thesis, or some combination of opportunities which results in a capstone learning opportunity. For students in a Joint Honours program, this course may be replaced by a 6 unit senior thesis course, with the permission of both programs.
Prerequisite: Registration in Level IV in BA (Honours) Social Psychology
New course

## List A

Students are responsible for ensuring that they have successfully completed any prerequisite courses and are strongly encouraged to consult with an academic advisor in planning their course of studies.

## Psychology

| PSYCH 2AA3 | SURVEY OF DEVELOPMENTAL PSYCHOLOGY |
| :--- | :--- |
| PSYCH 2B03 | PERSONALITY |
| PSYCH 2CO3 | INTRODUCTION TO SOCIAL PSYCHOLOGY |
| PSYCH 2S03 | PSYCHOLOGY AND AGING |
| PSYCH 3AB3 | ADOLESCENT PSYCHOLOGY |
| PSYCH 3AC3 | HUMAN SEXUALITY |
| PSYCH 3B03 | SPECIAL POPULATIONS |
| PSYCH 3BA3 | POSITIVE PSYCHOLOGY |
| PSYCH 3CB3 | ATTITUDES AND BELIEFS |
| PSYCH 3CC3 | FORENSIC PSYCHOLOGY |
| PSYCH 3CD3 | INTERGROUP RELATIONS |
| PSYCH 3JJ3 | SOCIO-EMOTIONAL DEVELOPMENT |
| PSYCH 3NO3 | ABNORMAL PSYCHOLOGY: FUNDAMENTALS \& MAJOR DISORDERS |
| Sociology |  |

SOCIOL 2C06 DEVIANT BEHAVIOUR
SOCIOL 2D06 THE HUMAN GROUP
SOCIOL 2E06 RACIAL AND ETHNIC GROUP RELATIONS
SOCIOL 2 Q06 SOCIOLOGY OF GENDER
SOCIOL 2U06 SOCIOLOGY OF THE FAMILY
SOCIOL 3C03 MEDIA AND SOCIAL ISSUES
SOCIOL 2E06 RACIAL AND ETHNIC GROUP RELATIONS
SOCIOL 3CC3 SOCIOLOGY OF THE FAMILY AND THE LIFE CYCLE

SOCIOL 3G03 SOCIOLOGY OF HEALTH CARE
SOCIOL 3HH3 SOCIOLOGY OF HEALTH
SOCIOL 3KK3 GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES
SOCIOL 3U03 SOCIOLOGY OF SEXUALITIES
SOCIOL 3X03 SOCIOLOGY OF AGING
SOCIOL $3 Z 03$ ETHNIC RELATIONS
SOCIOL 4A03 ETHNIC/RACIAL TENSIONS
SOCIOL 4E03 SELF AND IDENTITY
SOCIOL 4EE3 SELECTED TOPICS IN THE SOCIOLOGY OF CULTURE
SOCIOL 4GG3 SPECIAL TOPICS IN THE SOCIOLOGY OF DEVIANCE
SOCIOL 4R03 INDIVIDUAL AND SOCIETY
SOCIOL 4U03 SPECIAL TOPICS IN THE SOCIOLOGY OF WOMEN
SOCIOL 4W03 SOCIAL PROBLEMS

## OTHER

ANTHROP 2H03
ANTHROP $2 R 03$
ANTHROP 2X03
ANTHROP3RR3
ANTHROP4AE3
GEOG 2E03
GEOG 2LI3
GEOG 2HI3
GEOG 2103
GEOG 3EP3
GEOG 3HH3
GEOG 3LT3
GEOG 3UP3
GOEG3UR3
GEOG4HC3
GOEG4HD3
GEOG 4HH3
GEOG 4HP3
GEOG 4UH3
GEOG 4UT3
ECON2A03
ECON2CC3
ECON2F03
ECON2T03
ECON 3xx3*
GERONTOL3D03

ENVIRONMENT AND CULTURE
RELIGION, MAGIC AND WITCHCRAFT
VIOLENCE IN ANTHROPOLICAL PERSPECTIVE
GENDER, SEX AND INEQUALILTY
ANTHROPOLOGY AND ENVIRONMENT
INTRODUCTION TO ENVIRONMENTAL ISSUES
INTRODUCTION TO TRANSPORTATION \& ECONOMIMC ACTIVITY
GEOGRAPHIES OF DEATH: INTRO TO POPULATION \& MEDICAL GEOGRAPHY
INTRODUCTION TO URBAN GEOGRAPHY
ENVIRONMENTAL POLICY \& PLANNING
GEOGRAPHY OF HEALTH \& HEALTH CARE
TRANSPORTATION GEOGRAPHY
GEOGRAPHY OF PLANNING
URBAN RESIDENTIAL GEOGRAPHY
PUBLIC AND COMMUNITY HEALTH
GEOGRAPHIES OF DISABILITIES
ENVIRONMENT \& HEALTH
POPULATION DISTRIBUTION AND MIGRATION
URBAN HOUSING
SPECIAL TOPICS IN URBAN GEOGRAPHY
ECONOMIC OF LABOUR-MARKET ISSUES
HEALTH ECONOMICS AND ITS APPLICATION TO HEALTH POLICY
THE POLITICAL ECONOMY OF DEVELOPMENT
ECONOMICS OF TRADE UNIONISM AND LABOUR
New course in Behavioural Economics
THE AGING MIND

GERONTOL3M03
GERONTOL3NO3
GERONTOL4IO3
HLTH AGE3H03
LABR ST 2E03
LABR ST2G03
LABR ST3E03
POL SCI3BB3
POL SCI3F03
POL SCI3G03
POL SCI3KK3
POL SCI3V03
POL SCI4XX3
RELIG ST2C03
RELIG ST2HO3
RELIG ST2M03
RELIG ST2NO3
RELIG ST2QQ3
RELIG ST2TT3
RELIG ST2WW3
RELIG ST3AA3
RELIG ST3C03
RELIG ST 3EE3
RELIG ST3F03
RELIG ST3FF3
RELIG ST3LL3
RELIG ST3UU3
RELIG ST3ZZ3
SOC SC2003
SOC SC2P03
SOC SC2Q03
SOC SC2RO3
SOC WORK3H03
SOC WORK3OO3
SOC WORK 4B03
SOC WORK4C03
SOC WORK4IO3

AGING IN A FAMILY CONTEXT
AGING AND MENTAL HEALTH
AGING AND HEALTH
HEALTH CONSUMERISM ACROSS THE LIFE COURSE
WORKING IN THE 21T CENTURY
LABOUR AND GLOBILIZATION
WOMEN, WORK AND UNIONISM
POLITICAL COMMUNICATION
CONTEMPORARY SOCIAL MOVEMENTS AND POPULAR COALITIONS
ETHNICITY AND MULTICULTURALISM: THEORY AND PRACTICE
GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES
WOMEN AND POLITICS
NEW COURSE IN POLITICAL PSYCHOLOGY
MORAL ISSUES
THEORY AND PRACTICE OF NON VIOLENCE
DEATH AND DYING: COMPARATIVE VIEWS
DEATH AND DYING: THE WESTERN EXPERIENCE CULTS IN NORTH AMERICA
RELIGION AND POPULAR CULTURE: JAPAN
HEALTH, HEALING, AND RELIGION
POPULAR RELIGION IN THE INDIAN TRADITION
ISLAM AND THE MODERN WORLD
SACRED JOURNEYS
APPROACHES TO THE STUDY OF RELIGION
GENDER AND RELIGION
RELIGION AND HUMAN NATURE
BUDDHISM IN EAST ASIA
JUDAISM AND THE JEWISH PEOPLE IN THE $20^{\text {TH }}$ CENTURY
CANADIAN CHILDREN
CANADIAN ADOLESCENTS
WOMEN AND FAMILY
WOMEN AND WORK IN CANADA
JUSTICE AND SOCIAL WELFARE
HUMAN SEXUALITY IN SOCIAL CONTEXT
ADULT FAMILY VIOLENCE
RACISM AND SOCIAL MARGINALIZATION IN CANADIAN SOCIETY
SOCIAL WORK AND INDIGENOUS PEOPLES

* NEW COURSES UNDER NEGOTIATION BETWEEN DEPARTMENTS AND THE DEAN


## ACADEMIC OBJECTIVES OF THE PROGRAM

Students study various aspects of social psychology from a multidisciplinary perspective to gain an understanding of how individuals behave, how small groups and communities interact, and how societies develop practices and priorities. Students will learn how to locate themselves in the complex fabrics of their cultures, their geographies and their power relationships. Students who are interested in many social science perspectives on how people develop over the lifespan and how they behave both individually and socially in different environments and circumstances should consider this program.

## CO-OPERATION WITH OTHER INSTITUTIONS - N/A

## COMPARISON WITH OTHER PROGRAMS IN THE PROVINCE

It will fill the niche of a Social Science (BA) multidisciplinary, social psychology degree not currently offered by any of our major competitors. It complements the existing Psychology programme at McMaster.

- U of T -- (none) - no BA in Psychology; BSc
- York - (applied psychology) -- offers both BA and BSc degrees with a focus on violence and conflict resolution in the Psychology BA (uni-disciplinary);
- Brock - (focus only within a general psychology degree);
- Guelph -- (Educational Psychology) -- BA;
- Carlton -- (focus only) - Bachelor of Arts in Interdisciplinary Studies within which the student could create a Social Psychology focus;
- Western - (general psychology); individually designed Social Psychology degree is possible in "boutique" model of degree design - "'Dream it, Build it, Achieve' focuses on the faculty's interdisciplinary approach to learning and promotes the idea that students can combine disciplines within the faculty, or even with other faculties, to create unique academic combinations - and a degree to call their own."
- Queens -- (Neuroscience, Linguistics and Cognitive Science) BA and BSc;
- Windsor -- Child and developmental specializations - 4 BA programs.


## LOCAL, REGIONAL SUPPORT FOR THE PROGRAM

We continue to draw many students to our outstanding Department of Psychology, Neuroscience and Behaviour from local, regional, national, and international pools. We do not anticipate that the attraction to this program will differ geographically from that of other Honours programs in the Social Sciences.

## APPROPRIATENESS OF THE OFFERING AT MCMASTER

The Department of Psychology, Neuroscience and Behaviour and the Faculty of Social Sciences support the addition of this fourth degree pillar to meet the longstanding demands of students and in recognition of the expertise within Psychology, Sociology, and other Social Science departments currently offering a social psychology perspective on their disciplinary areas of expertise. The approval of this program would enable McMaster to offer a BSc, BSc (Hon), BA, BA(Hon) in some aspect of Psychology with the BA (Hon) offering a unique yet academically sound, multidisciplinary, cross-faculty degree in Social Psychology.

The addition of this program is in keeping with the goal of developing creative and innovative programs which build on the core strengths of our departments and appeal to our best applicants. By combining the expertise of many departments each with legitimate academic claim to some aspect of the broad field of social psychology, we permit students to develop an understanding of the complex, rich, and entangled theories, applications, and research that underpin this field of study.

## FINANCIAL VIABILITY OF THE PROGRAM

There is strong demand for such a program for many incumbent students, and many who have expressed interest in coming to McMaster. This high level of demand makes this a program with limited financial risk, and high chances of financial success. In assessing the financial viability of this program, the discussion is broken down into discussions of revenue and costs.

Revenue: The proposed new B.A. Honours in Social Psychology degree is one of several steps that the Dean of Social Sciences is making to increase revenue in the Faculty. The Faculty of Social Sciences receives only 1 BIU for each three-year degree student, and 1.5 BIU for Honours students. The large number of 3-year B.A. students enrolled in Social Sciences is a financial drain on the Faculty. With the introduction of the new B.A. Honours in Social Psychology, we expect to increase the proportion of our existing student quota who qualify and register in Honours. In this way, this program contributes to an increase in Faculty revenue which in turn makes this program highly viable.

It is likely that this program will increase student demand for entry into Social Sciences which could have the effect of increasing the overall calibre of students seeking entry into Social Sciences. Based on analysis of previous cohorts of students, we know that students that enter into Social Sciences with a higher average are more likely to achieve higher grades in their first year and be more successful at entering an Honours program. This in turn is likely to have an overall positive effect on the financial viability of the Social Sciences faculty, and this degree program in particular.

Costs: With any new program, there are associated potential increases in costs associated with faculty to teach new courses, administering the program, advising students, etc. This degree proposal involves mounting a limited number of additional courses. We already have a considerable number of faculty in this and related fields of social psychology. The faculty in some cases will have their assignments changed to allow them to teach one of the new courses for this degree. There will also be some select hiring of faculty to mount these courses, faculty hires that were already on the books but will be shaped by some commitment to teaching in this new degree. In this way, there are limited additional faculty costs associated with this degree. With regard to the costs of administration, we will absorb these in the Dean's office until such time as one of the departments is interested and able to take on these responsibilities.

## SHOULD THIS BE FUNDED IN A PERIOD OF ECONOMIC CONSTRAINT?

The Faculty of Social Sciences is not asking that it increase its intake target of first year students. Rather we plan to maintain our current first-year intake target. This program will only have an impact on our second year student body. Two effects are likely. First we are likely to increase our retention of students due to the desirability of this program, and second, we expect more students to qualify for Honours which has an overall positive effect on revenues with little impact on costs. For this reason, the mounting of this new degree requires an internal reallocation of resources within the Social Sciences budget rather than an overall increase in University resources. In this way, the question of "funding during a period of financial restraint" is a moot point.

## ADDITIONAL RESOURCES NEEDED

Above comments answer this to a great extent. There are a couple of additional points to make. Any increase in administrative costs associated with this degree will be absorbed by the Dean's office and existing student advisors.

One or two departments will require additional teaching resources to mount this degree. The Dean will work with these departments to ensure that existing teaching resources are reallocated and new ones added where necessary.

Approved 2008-11-26 Council, Faculty of Social Sciences Approved 2008-12-04 Curriculum and Calendar Committee, Undergraduate Council

# Bachelor of Health Sciences (Honours) Program 

## Undergraduate Calendar Changes 2009/2010

Submission to: Health Sciences Education Committee and Undergraduate Council Curriculum and Admissions Committee

Submission Date: November 21, 2008
Revised copy: December 5, 2008

1. Transfer Applicants
a) Change in Transfer Applicant Admission Requirements:

A cumulative average of at least 9.0 (minimum overall average of $\mathrm{B}+$ ). Changed from 9.5 to reflect $\mathrm{B}+$ average.
2. Biomedical Sciences Specialization (2277)
a) Change in Level II Course Requirements:

Delete CHEM 2BA3 and 2BB3 (courses not offered)

## 3. Course Revisions

a) Change in Requisites:

## HTH SCI 2D06 Inquiry II

Add Antirequisite: HTH SCI 1E06 and 2E03
HTH SCI 2E03 Inquiry II
Add Antirequisite: HTH SCI 2D06
HTH SCI 2F03 and 2FF3 Human Physiology and Anatomy
Replace Antirequisite HTH SCI 1H03/1HH3 with HTH SCI 1H06

HTH SCI 3K03 Introductory Virology
Add Prerequisite: or Mol Biol 2B03

## HTH SCI 4J03 Biochemical Immunology

Add Antirequisite: Mol Biol 4J03 (cross-list deleted as requested by Biology Dept)
b) New Courses:

## HTH SCI 2Q06 Fundamentals of Global Health I

This course will provide various frameworks to contextualize and understand global health issues.
Three hours; two terms.
Prerequisite: Registration in Level II of the B.H.Sc. (Honours)
Program and permission of B.H.Sc. Assistant Dean Enrolment Capacity: 25 students

## HTH SCI 2S00 Preparatory Studies for Bachelor of Health Sciences II

Students will explore inquiry and small group learning in the context of language proficiency.
Three hours; two terms.
Prerequisite: Permission of the Assistant Dean, B.H.Sc, (Honours) Program
Enrolment Capacity: 5 students

## HTH SCI 3AA3 Introduction to Health Care Management

This course is an introduction to theory and practice of business management, applied to a health care setting. Focus will be on multidimensional perspectives of real-world management issues and personal development.
One lecture; one problem-based tutorial (two hours); one term Prerequisite: Registration in Level III of the B.H.Sc. (Honours)
Program; or permission of instructor
Enrolment Capacity: 80 students

## HTH SCI 3CC3 Theatre for Development

This course, rooted in Applied Drama will enable students to actively participate and explore their creativity, enhancing transferable skills like communication and active listening through drama games and exercises.
Three hours; one term.
Prerequisite: Registration in Level III or above of the B.H.Sc. (Honours) Program Enrolment Capacity: 20 students

## Page 3

## HTH SCI 3UU0 Preparatory Studies for Bachelor of Health

 Sciences IIIStudents will explore inquiry and small group learning in the context of language proficiency.
Three hours; two terms.
Prerequisite: Permission of the Assistant Dean, B.H.Sc, (Honours) Program
Enrolment Capacity: 5 students

## HTH SCI 4LL3 Integrated Health Systems

Consideration of the issues inherent to the integration of current conventional medical approaches with other healing systems.
Three hours; one term.
Prerequisite: Registration in Level III or above in the B.H.Sc. (Honours) Program
Enrolment Capacity: 20 students

## HTH SCI 4RR3 Drugs, Devices and Desires: A Historical Exploration

A problem-based approach will help students deconstruct the technological imperatives underlying modern medical practice which relies extensively on sophisticated instruments, procedures and drugs to diagnose and treat disease.
Three hours; one term.
Prerequisite: Registration in Level IV of the B.H.Sc. (Honours)
Program or permission of instructor
Enrolment Capacity: 30 students

## HTH SCI 4SS6 Group Process Practicum

An opportunity to explore theory and apply concepts of group dynamics and processes as it relates to best practice education. Sessions arranged individually or in small groups; two terms. Prerequisite: Permission of Assistant Dean, B.H.Sc. (Honours) Program
Enrolment Capacity: 100 students

## Page 4

## HTH SCI 4TT3 Research Ethics Practicum

An opportunity through peer tutoring and small group inquiry based learning to explore theory and apply concepts related to research ethics.
Three hours; two terms.
Prerequisite: Permission of instructor
Enrolment Capacity: 10 students

## HTH SCI 4UU0 Preparatory Studies for Bachelor of Health Sciences IV

Students will explore inquiry and small group learning in the context of language proficiency.
Three hours; two terms.
Prerequisite: Permission of the Assistant Dean, B.H.Sc, (Honours) Program
Enrolment Capacity: 10 students

## HTH SCI 4VV3 Space, Exploration and Remote Care Medicine

The focus will be on human life sciences data on short and long duration spaceflight and analog sites as they apply to exploration to the Moon and Mars and other remote environments. Insight will be gained regarding the constraints of analog environments, medical issues involved in remote care, and engineering designs for hardware development to meet the demands of these projects.
Three hours; one term.
Prerequisites: Registration in Level IV and one of Biol 2A03, HTH SCI 1D06, 1H06, 2F03 and 2FF3, 2L03 and 2LL3, Kinesiol 1Y03 and 1YY3
Enrolment Capacity: 100 students
c) Notes Added to Course Descriptions:

## HTH SCI 2J03 Health Psychology

This course is evaluated on a Pass or Fail.

## HTH SCI 4F03 Clinical Practice Environment

This course is evaluated on a Pass or Fail.

## Page 5

## HTH SCI 4T03 Current Research Initiatives

This course is evaluated on a Pass or Fail.

## HTH SCI 4U06 Current Research Initiatives

This course is evaluated on a Pass or Fail.
d) Change in Course Descriptions:

## HTH SCI 3D03 Genetics in Health Sciences

This course examines basic genetic principles including cytogentics, cancer genetics and metabolic diseases as they relate to health care issues.

## HTH SCI 2D06 Inquiry II

This course will use an inquiry-based approach. First semester will initiate the development of a skill set required for life-long learning by studying healthcare issues. Second semester will introduce key concepts in biochemistry and molecular biology to understand genetic, infectious and metabolic diseases.

November 18, 2008
Curriculum and Admissions Committee
c/o Michelle Bennett
University Secretariat
GH-210
Re: Approval of proposed curriculum changes
On behalf of the Faculty of Health Sciences Executive Committee, I would like to recommend approval of the following:

- Clinical Behavioural Sciences Program - Group Studies Level II B
- Undergraduate Nursing Education Program - Kaleidoscope Curriculum
- Undergraduate Nursing Education Program - Title and calendar changes for HTH SCI 4H03

The proposed changes received unanimous approval from the Executive Committee of the Faculty of Health Sciences.

The following item is submitted for information:

- Changes to the calendar information for the Bachelor of Health Sciences Physician Assistant Program

Enclosed please find the relevant documentation.
Yours sincerely,


John G. Kelton, M.D.
Dean and Vice-President

JGK/dm

# CLINICAL BEHAVIOURAL SCIENCES PROGRAM GROUP STUDIES LEVEL II B 

## 908 - Group Studies Level IIB (10 weeks, 3 hours per week)

## Criteria for Admission:

Successful completion of Group Studies Level I, and/or appropriate group experience as determined by the Study Area Chair.

## General Description:

The course will focus on the development and practice of group leadership skills through lectures and the provision of opportunities for in class, experiential learning. Students will participate in small groups to develop specific skills for effective group leadership.

## Objectives:

1. To acquire knowledge about and understand group leadership strategies and skills
2. To practice a range of group leadership skills
3. To engage in self-reflection that assists the student to bridge the gap between group theory and group practice

## Format:

Readings from selected text, didactic and small group, interactive learning will be utilized. In addition, there will be role-plays, video material and feedback. Selfmonitoring of skill acquisition will be encouraged.

- 90 Minutes Presentation (including didactic information, case material, modeling of skills)
- 90 Minutes; application of small group skills ( based on case material, apply the skills acquired in the session through the use of role play and group discussion/reflection)


## Evaluation:

Weekly self-reflection, written assignments and participation in the group discussions.

## Content:

Specific leadership skills such as; "Starting and Ending" sessions; "Maintaining Focus", "Dealing with Problem Situations", utilizing "Group Exercises" and "Termination" skills.

## Changes in Bachelor of Science in Nursing Program

Kaleidoscope Curriculum

December 2008
Executive Summary .....  2
Course of Studies Streams A, E, \& F (in chart form) ..... 3
Description of Kaleidoscope Curriculum. ..... 5
Course Descriptions ..... 8
Accommodation Plan for Students Experiencing Cohort Lag. ..... 13
Changes to Course of Studies for Students Admitted September 2008 ..... 13
Clarification to Admission Requirements for Basic Accelerated (F) Stream ..... 13
Themes, threads, and goals for the Kaleidoscope Curriculum.
$\qquad$Appendix A

This document contains a summary of the curriculum renewal process undertaken by the Curriculum Innovation Committee (CIC) and the final recommendations for a renewed Kaleidoscope BScN Curriculum to be implemented in Fall 2009. Some of the changes (course sequencing) commenced in Fall 2008 based on prior approvals and are consistent with the Course Designs described below. Other changes including new courses are to be implemented for Level 1 commencing in Fall 2009 and rolled-out over the other levels as students progress each year, and other changes such as the switch to Person-Based Learning within a problem-based learning approach will occur across all levels and streams simultaneously in Fall 2009.

## EXECUTIVE SUMMARY

Over the past six years the CIC has engaged in a process of curriculum renewal. The process to date is similar to the curriculum development model outlined by Iwasiw, Goldenberg and Andrusyszyn (2005) in which the need for curriculum revision is identified, a process for curriculum revision is organized, internal and external data are collected, philosophical underpinnings are identified, goals and outcomes are established and finally courses are designed, implemented and evaluated. This document represents the curriculum plan.

When the McMaster Collaborative BScN Program was formed in 2000, a process of curriculum renewal was initiated. This process began with a review of the McMaster Nursing Philosophy and the McMaster Model of Nursing and Nursing Education. The Collaborative Curriculum Innovation Committee was also established to continue the process of curriculum renewal, to ensure an innovative and collaborative undergraduate nursing curriculum, and to propose strategic directions to the Undergraduate Nursing Education Committee (UNEC).

Since 2000, the CIC has engaged in extensive internal and external data collection with stakeholders including focus groups, surveys, interviews, literature reviews, formation of expert advisory groups etc. Based on the philosophical and pedagogical foundations, the work of the CIC and the College of Nurses of Ontario 2007 Entry to Practice Competencies, program goals were established for the renewed curriculum. Key nursing concepts and themes were then identified and leveled throughout the program. The courses were designed and sequenced to facilitate learning and meet university requirements. Proposed course outlines were developed to identify course goals, learning activities and evaluation measures throughout the curriculum.

The detailed curriculum plan is the first step in curriculum implementation (Aoki, 1986/1991). A detailed implementation action plan is currently being finalized, including more detailed development of course outlines, faculty development, involvement of stakeholders and concept experts, development of program evaluation measures, and identification of specific resources. It is recognized that this next phase of curriculum renewal is the most labour intensive as we seek to bring about organizational change.

## Overarching Changes

The renewal process, of examining and questioning all aspects of the curriculum, has led to a recommitment to the philosophy of the BScN Program. It has also challenged faculty to move beyond those foundations to encompass a more holistic approach, which while implied in the philosophy, has never been truly embraced in all aspects of the curriculum. The overarching perspectives have emerged in this process. First, problembased learning is a sound pedagogical approach, which facilitates a cognitive learning approach (see Rideout and Carpio, 2001 for further discussion). The McMaster Model of Nursing and Nursing Education (which was developed in 1989) builds on that approach to include the holistic and relational components of nursing. Problem-based learning implies that there is a problem to be solved, consistent with the medical and nursing approaches of the 1970's when it was developed. At the inception of problem-based learning, the focus was on the patient's perspective of the problem or issue, and then moved to what was the learning issue for the student to be able to address that problem. In the Kaleidoscope Curriculum, problem-based learning is replaced with "person-based learning within problem based learning", which is firmly rooted in the original problem-based learning. This subtle change in language reflects the inclusion of the whole person as the impetus for learning, including the person's strengths and assets, as well as problems. The person becomes the centre of the iterative learning cycle. This is more consistent with the shifts that have occurred in nursing and other health professional approaches of the $21^{\text {st }}$ century (see Tompkins, 2001 for more discussion). Students will be initiated into the cycle of learning through "Care Scenarios", instead of "Health Care Problems". Narratives about the person (be it an individual, family, or community) will present students with the opportunity to explore the context of the situation as well as the impetus to always focus on the person first, and then on their own learning needs. Relevant health and illness data, as well as system's level
information will be included as has been the long tradition in problem-based learning. The iterative loop that engages the students in active learning that is characteristic of problem based learning will continue.

The second overarching change is the naming of the Kaleidoscope Curriculum. Advances in cognitive psychology suggest that students learn concepts best through multiple exposures, in differing contexts (Eva, 2003; Eva, Neville, \& Norman, 1998). The new PBL/PBL Scenarios will be shorter, allowing students to encounter more scenarios across their program. This is similar to revisions made in McMaster’s MD Concept Curriculum. The concepts that are core to all health professions; such as pathophysiology and evidence based approaches will be covered. In addition, core nursing concepts such as pain, suffering, caring, and communication (among many others) are explicitly enumerated.

McMaster has been a leader in promoting evidence based care and the BScN philosophy has previously described this as "scientific caring", which was combined with "humanistic caring" which focused on the relational aspects of care. Nursing scholars have expanded these ideas to focus on "ways of knowing" in nursing, which include empiric (scientific), ethical, personal, aesthetic, and emancipatory knowing (Chinn \& Kramer, 2008). This conceptual framework will be used to organize differing approaches to the concepts. The curricular changes are a shift or turn in approach to learning, building on the foundations of the McMaster approach to learning, and bringing this curriculum into the new millennium of nursing.

COURSE DESIGN: Basic (A) Stream*** -For Implementation Fall 2009

| Term I | Term II |
| :---: | :---: |
| Level I (30 units) |  |
| *Introduction to Nursing \& Health I (N1F03) <br> ( 3 units, 3 hours class time, small group) <br> *Introduction to Nursing Practice (N1IO2) <br> (2 units, 4 hours lab) | *Nursing Concepts \& Theories I (N1G03) <br> ( 3 units, 3 hours class time, small group) <br> *Professional Nursing Practice I (N1J02) <br> (2 units, 4 hours lab ) |
| *Health and Wellbeing of Diverse Populations I (N1K02) <br> (2 units, $4-1$ hour large group sessions, 32 hours service learning) <br> **Human Physiology \& Anatomy I (HTH SCI 1H06) (6 units) |  |
| **Intro to Psychology, Neuroscience \& Behaviour (PSYCH 1X03) (3 units) <br> Elective (3 units) <br> WHIMIS (N1A00) | **Foundation Psychology, Neuroscience \& Behaviour (PSYCH 1XX3) (3 units) <br> **Human Biochemistry I (HTH SCI 1AA3) (3 units) |
| Level II (31 units) |  |
| Nursing Concepts in Health \& Illness I (N2M04) (4 units, 3 hrs small group, 1 hr resource session) Professional Nursing Practice II (N2L03) ( 3 units, 8 hours professional practice and lab) | Nursing Concepts in Health \& Illness II (N2N04) (4 units, 3 hrs small group, 1 hr resource session) Professional Nursing Practice III (N2P03) ( 3 units, 8 hours professional practice and lab) |
| *Health and Wellbeing of Diverse Populations II (N2K02) (2 units, $4-1$ hour large group sessions, 32 hours service learning) Term I or II Elective (3 units) |  |
| Intro Pharmacology (HTH SCI 2H03) (3units) *Intro to Statistics for Nursing (3 units) (N2R03) | Introductory Microbiology (HTH SCI 2HH3) (3 units) Health, Science \& Society (HTH SCI 2RR3) (3 units) |
| Level III (31 units) |  |
| Nursing Concepts in Health \& Illness III (N3S04) <br> (4 units, 3 hrs small group, 1 hr resource session) <br> Professional Nursing Practice IV (N3X04) <br> (4 units, 12 hours, professional practice and lab) | Nursing Concepts in Health \& Illness IV (N3T04) (4 units, 3 hrs small group, 1 hr resource session) Professional Nursing Practice V (N3Y04) (4 units, 12 hours, professional practice and lab) |
| Te <br> Professional Commun <br> (3 units, 4 hours mixed | Term I OR II <br> Professional Community Nursing Practice (N3QQ3) <br> (3 units, 4 hours mixed tutorial \& professional practice) |
| **Human Biochemistry II (HTH SCI 3BB3) (3 units) Elective (3 units) | Nursing Research (HTH SCI 4L03) OR Elective (3 units) <br> Elective (3 units) |


| Level IV (30 units) |  |
| :---: | :---: |
| Advanced Nursing Concepts I (N4P04) <br> (4 units, 4 hours class time, small group) <br> Professional Nursing Practice VI (N4J07) <br> (7 units, 24 hours professional practice and lab) <br> Nursing Research (HTH SCI 4L03) <br> (3 units, 1 hr large group and 24-36 hr. research experience) <br> OR Elective (3 units) <br> [NB. See Term II Level III] <br> Elective (3 units) | Advanced Nursing Concepts II (N4Q03) <br> (3 units, 3 hours class time, small group \& on-line tutorial) <br> *Professional Practice \& the New Graduate (N4K10) <br> (10 units, $1^{\text {st }}$ half, 24 hrs. professional practice $\&$ lab; $2^{\text {nd }}$ half 30 hrs. professional practice and lab) <br> [NB. Professional practice to be in same setting for full 12.5 weeks] |
| *These courses are newly developed courses for the Kaleidoscope Curriculum. All other nursing-controlled courses have been reviewed and modified (some with a change in number of units allotted) to be consistent with the overarching curriculum changes. <br> **These courses are not under nursing control but the appropriate Departments have agreed that to their inclusion in the course of studies as indicated. |  |

## COURSE DESIGN: RPN to BScN (E) Stream-For Implementation Fall 2010

## Grey Courses unique to RPN to BScN Magenta Courses shared with Post RN



Blue Courses shared with Basic Accelerated Green Courses shared with Basic

## Term II

Transition to Baccalaureate Nursing II (N2AA4)
(4 units, 3 hrs small group, 4 hours lab)
Integrated Biological Basis of Nursing Practice II (HSC
2CO6) (6 units, 2 hrs lecture, 2 hr seminar, 1 hr on-line tutorial, 1 hr journal club)
Client Health Assessment (N3LL3)
(3 units, 1 hr lecture, 1 hr seminar \& 1 hr lab )
Electives (3 units)

Term II
Nursing Concepts in Health \& Illness IV (N3T04) (4 units, 3
hrs small group, 1 hr resource session)Professional
Community Nursing Practice (N3QQ3)
(3 units, 4 hours mixed tutorial \& professional practice)

## OR

Professional Nursing Practice IV
Nursing Research (HTH SCI 4L03) OR
Elective (3 units)
*Health and Wellbeing of Diverse Populations I (N1K02)
(2 units, 4-1 hour large group sessions, 32 hours service learning)

| Level IV (30 units) |
| :--- |
| Term I |
| Advanced Nursing Concepts I (N4P04) |
| (4 units, 4 hours class time, small group) |
| Professional Nursing Practice VI (N4J07) |
| (7 units, 24 hours professional practice and lab) |
| Nursing Research (HTH SCI 4L03) |
| (3 units, 1 hr large group and 24-36 hrs. research experience) |
| OR Elective (3 units) |
| [NB. See Term II Level III] |
|  |

Term II
Advanced Nursing Concepts II (N4Q03)
(3 units, 3 hours class time, small group\& on-line tutorial)
*Professional Practice \& the New Graduate (N4K10) (10 units, $1^{\text {st }}$ half, 24 hrs. professional practice \& lab; $2^{\text {nd }}$ half 30 hrs. professional practice and lab)
[NB. Professional practice to be in same setting for full 12.5 weeks]
*These courses are newly developed courses for the Kaleidoscope Curriculum. All other nursing-controlled courses have been reviewed and modified (some with a change in number of units allotted) to be consistent with the overarching curriculum changes.
*** All Post Diploma R.P.N. students are classified as E Stream regardless of site. The only difference in the Course of Studies between McMaster site students and Mohawk or Conestoga site students is in elective requirements. McMaster site students will take McMaster electives. Conestoga site nursing students will take 12 units of Collab electives and 9 units of McMaster electives and Mohawk site students 9 units of Collab electives and 12 units of McMaster electives.

## COURSE DESIGN: Basic - Accelerated (F) Stream (McMaster Site)

For Implementation Fall 2011
Green - courses in common with Basic Stream Blue - courses shared with RPN to BScN Stream Red - courses unique to Basic Accelerated Stream

*These courses are newly developed courses for the Kaleidoscope Curriculum. All other nursing-controlled courses have been reviewed and modified (some with a change in number of units allotted) to be consistent with the overarching curriculum changes.

## RENEWED BScN KALEIDOSCOPE CURRICULUM

(NB. This section will be printed within the BScN Handbook for all students and faculty)

## ~Philosophical Underpinnings $\sim$

The renewed Kaleidoscope Curriculum is based on the philosophical and pedagogical foundations outlined in the McMaster Nursing Philosophy, the McMaster Model of Nursing, and the McMaster Model of Nursing Education. The School of Nursing remains committed to the guiding principles of problem-based learning (PBL) but with a shift to person-based learning (the "new" PBL), self-directed learning (SDL) and small group learning (SGL). The McMaster Nursing Philosophy, McMaster Model of Nursing and McMaster

Model of Nursing Education were updated when the Collaborative BScN Program was formed in 2000 and were not initially revised as part of the curriculum renewal process. They are available on request and the language in the philosophy is currently being revised in the context of the two major overarching changes outlined above.

## ~Structure of the Curriculum~

Four types of courses are taken within the curriculum: (1) nursing courses (professional practice and classroom); (2) required health sciences courses (e.g. anatomy, physiology, biochemistry); (3) required nonhealth sciences courses (e.g. psychology), and (4) elective courses (non-professional, liberal arts or sciences). As students move through the program the focus of learning progresses in the following ways. In levels one and two students are provided with a strong basis in the health and social sciences and are able to choose a variety of electives. They learn about themselves and their clients as individuals. The focus is on health, health assessment, and the promotion of health. In levels two and three students begin to consider the family and the community as client. Students begin to deal with more acute and complex situations. In level three and four, there is a strong focus on nursing and the integration and critical appraisal of knowledge based on the different ways of knowing into client care in both the classroom and professional practice setting. Students also begin to consider health care from the national and global perspective. Students initially learn about nursing's role in health care and, through interprofessional education opportunities, they gain greater understanding of the interprofessional health care team.

## ~Nursing Courses~

Nursing courses in the Kaleidoscope Curriculum are organized and sequenced around priority nursing concepts. Concepts are the fundamental building blocks of any profession and are defined by Meleis (1991) as labels used to describe a phenomenon or a group of phenomenon. Concepts represent nursing by painting a rich mental image that addresses the question of nursing's domain, and build a clear picture of the depth and breadth of what nursing is (Cutcliffe \& McKenna, 2005).

## Key Concepts

Concepts guiding the renewed curriculum include:

1. Advocacy
2. Change
3. Communication
4. Critical Inquiry
5. Diversity
6. Interprofessional Teamwork
7. Leadership
8. Nursing as a Profession
9. Professional Nursing Care
10. Research
11. Technology

Each concept is defined and sub-concepts identified (Appendix B). Sub-concepts help to organize and sequence the concepts within the curriculum. These definitions outline the concept's scope and depth (what is to be learned) and sequence (progression throughout the levels). Concepts are learned sequentially and progressively across the curriculum. Concepts are presented across the lifespan and across clinical settings in person-based, didactic and professional practice courses. Concepts are targeted for repetition based on importance and difficulty.

Although a large body of content exists for all concepts, exemplar content that best represents the concept is used to help students understand the concept (Cutcliffe \& McKenna, 2005). It is this exemplar content that is used to develop person based scenarios for student learning. The exemplars selected represent individuals across the lifespan and in various settings to allow students to apply concepts in a variety of contexts. Narratives will be used to present the information so that students encounter "persons", with all of their strengths, assets, and challenges. Incidence and prevalence is one basis used for selecting exemplars.

## Themes

Themes are a logical grouping of prominent or frequently recurring concepts that provide direction to sequence and unify concepts throughout the curriculum. The themes that guide the renewed curriculum include:

1. Personhood \& Caring: This theme focuses on the humanistic aspect of nursing beginning with a focus on the nurse and client as person and the professional, therapeutic relationship between nurse and client.
2. Context, Health \& Healing: This theme focuses on the internal and external influences on health and the nurse's ability to provide safe and competent care as part of the health care team within a health care system and broader community.
3. Learning \& Knowing: This theme focuses on critical inquiry, discovery and appropriate use of technology within nursing to facilitate life long learning and reflective practice.

The concepts are grouped within the theme that they are most closely linked. It is acknowledged that a great deal of overlap exists across concepts and themes.

| Personhood \& Caring | Context, Health \& Healing | Learning \& Knowing |
| :--- | :--- | :--- |
| Communication | Change | Critical Inquiry |
| Nursing as a Profession | Interprofessional teamwork | Technology |
| Leadership | Professional Nursing Care | Research |
| Advocacy | Diversity |  |

A concept-based approach needs to be conceptual not only in structure but also in process. Conceptual learning is a process by which students learn how to organize information in logical mental structures, thus challenging students to become increasingly skilled at thinking. Conceptual teaching and learning complements the constructivist paradigm in fostering critical inquiry and deep understanding through the connections students make to past learning, their application of concepts in multiple contexts, and their development of an understanding of interrelated concepts. Although nurse educators can teach a class or course conceptually within a traditional curriculum, the absence of a conceptual foundation makes such an experience an isolated event for learners and limits students’ ability to consider interrelated concepts within and between courses (Giddens \& Brady, 2007).

A concept-based approach coupled with a PBL (person-based learning), self-directed and small group format can prepare nursing graduates who are skilled at conceptual thinking and learning; such skills are necessary to respond to a rapidly changing profession and health care environment (Cutcliffe \& McKenna, 2005). Learning within the nursing courses is also influenced by the work on Ways of Knowing by Chinn and Kramer (2008). A variety of ways of knowing are explored, encouraged and assessed within the Kaleidoscope Curriculum.

## Curriculum and Level Goals

Curriculum goals are a public statement of the characteristics and competencies of graduates (Iwasiw, Goldenberg, \& Andrusyszyn, 2005). Within the Kaleidoscope Curriculum, the goals are closely aligned with the 2007 College of Nurses of Ontario Entry to Practice Competencies. Program and level goals are identified for each of the core nursing concepts. These are outlined in the Themes / Concepts / Goals document in Appendix A. Supporting courses are also identified within this document.

## ~Course Design~

Curriculum design refers to the configuration of the program of studies. The course design organizes and sequences the courses within the curriculum, and ensures that students meet university requirements. The course design for the Kaleidoscope Curriculum is included in the Executive Summary, with a specific design
for each stream of the program. Names of nursing courses have not changed from those currently offered where possible to reflect the fact that this is a shift or renewal in thinking, rather than a fully different curriculum. Clinical courses have been renamed as "professional nursing practice", emphasizing the notion of "praxis", or thinking while doing, not simply learning nursing skills.

## ~Course Outlines~

Detailed course outlines are being developed for each nursing course and are available on request. The course outlines provide a general overview of the course, learning outcomes, core nursing concepts and a description of the learning activities and evaluation measures that will occur. These course outlines will continue to be developed and refined in the implementation phase of the curriculum renewal. Where there is an existing course which will have slight modifications, the course number is included for reference.

## ~Student Evaluation Measures~

A variety of student evaluation measures consistent with the renewed PBL, self-directed learning, and small group learning approach are integrated throughout the curriculum. As the course outlines and evaluation methods are further developed, the CIC will continue to work with the Evaluation Measures Task Force to ensure that evaluation measures within the Kaleidoscope Curriculum are appropriate to the learning outcomes, valid and reliable, and sequenced to provide timely and helpful information to assist students and faculty in assessing progress and performance.

## COURSE DESCRIPTIONS

(Only those courses which have changes impacting on calendar descriptions or are new are listed below. Only courses to be offered in 2009 will be included in the 2009-2010 calendar, and other courses will be phased in as appropriate to the cohort and stream.)

## NURSING 1F03 Introduction to Nursing \& Health I

This introductory course will familiarize students with ways of knowing in nursing. Students will learn selfdirected and person-based learning within a problem-based learning approach to facilitate their learning throughout the BScN program.
Three hours; small group tutorial; one term
Prerequisite: Registration in Level I of the BScN (A) Stream
Antirequisite: NURSING 1F04
Normally to be taken concurrently with NURSING 1102.
First offered in 09/10 Academic Year.

## NURSING 1G03 Introduction to Nursing and Health II

Students will be introduced to concepts of health and healing and will explore group process theory. They will learn to define clinical questions relevant to nursing and to use evidence based approach to address these questions.
Three hours per week, small group tutorial; one term
Prerequisite: Registration in Level I of the BScN (A) Stream
Antirequisite: NURSING 1G04
Normally to be taken concurrently with NURSING 1 J02.
First offered in 09/10 Academic Year.

## NURSING 1102

## Introduction to Nursing Practice

This course introduces students to the scope of professional practice and the meaning of caring in nursing. Students will learn beginning assessment, communication, and intervention skills in the clinical laboratory. This course is evaluated on a Pass/Fail basis.
Four hours per week laboratory; one term
Prerequisite: Registration in Level I of the BScN (A) Stream

Antirequisite: NURSING 1F04
Normally to be taken concurrently with NURSING 1 FO3.
First offered in 09/10 Academic Year.

## NURSING 1J02 Professional Nursing Practice I

Students will extend their knowledge of professional practice in the clinical laboratory focusing on healthy adults. Students will apply knowledge of growth and development, professional relationships, and narrative enquiry to healthy persons across the lifespan. This course is evaluated on a Pass/Fail basis.

Four hours per week clinical laboratory; one term
Prerequisite: Registration in Level I of the BScN (A) Stream
Antirequisite: NURSING 1G04
Normally to be taken concurrently with NURSING 1GO3.
First offered in 09/10 Academic Year.

## NURSING 1K02 Health and Well-Being of Diverse Populations I

This course assists students to gain a new understanding of influences on the health and well being of diverse populations and to explore professional responsibilities of civic engagement. Through service learning and reflection students will explore their own attitudes and values, strengths and resources in order to gain an understanding of concepts of health, ability, and social justice.
This course is evaluated on a Pass/Fail basis.
32 hours of service learning, 4 lectures and 4 large seminars; two terms.
Prerequisite: Registration in Level I of the BScN (A) Stream or Level II of (E) Stream.
First offered in 09/10 Academic Year.

## NURSING 2L03 Professional Nursing Practice II

This course is an applied professional practice course. Students will begin to apply their knowledge and skills to the care of ill clients and families, under supervision. Nursing concepts basic to health and illness are examined in individuals and families. Students will expand their understanding of internal and external influences on the health of individuals and families at the micro and macro level.
This course is evaluated on a Pass/Fail basis.
Eight hours, professional practice and lab; one term.
Prerequisite: NURSING 1J02.
Normally to be taken concurrently with NURSING 2M04.
Note: Essentially the same course as currently offered with new Course Name.
First offered in 10/11 Academic Year.

## NURSING 2M04 Nursing Concepts in Health \& Illness I

This course uses a person-based learning within problem-based learning approach in which students will expand their knowledge of core nursing concepts and will enhance their ability to critique that knowledge. Through independent learning and working in small groups, students will expand their understanding of internal and external influences on the health and illness of the individual and family in selected situations, and their ability to work in groups.
Three hours small group tutorial; 1 hr resource session (multi-media); one term
Prerequisite: NURSING 1F03, 1G03,
Antirequisite: NURSING 2M03
Normally to be taken concurrently with NURSING 2L03.
First offered in 10/11 Academic Year.

NURSING 2N04
Nursing Concepts in Health \& Illness II
In this PBL within PBL course students will further expand their knowledge of core nursing content and will enhance their ability to critique that knowledge and apply it to care scenarios. Through independent learning and working in small groups, students will expand their understanding of internal and external influences on the health and illness of the individual and family in selected situations.

Three hours small group tutorial, 1 hr resource session (multi-media); one term
Prerequisite: NURSING 2M04
Antirequisite: NURSING 2N03
Normally to be taken concurrently with NURSING $2 P 03$.
First offered in 10/11 Academic Year.

## NURSING 2P03 Professional Nursing Practice III

This course is an applied professional practice course. Students will extend their application of knowledge and skills to the care of ill clients and families, under supervision. Nursing concepts basic to health and illness are examined in individuals and families. Students will expand their understanding of internal and external influences on the health of individuals and families at the micro and macro level.
This course is evaluated on a Pass/Fail basis.
Eight hours, professional practice and lab; one term.
Prerequisite: NURSING 2L03
Normally to be taken concurrently with NURSING 2 N04.
Note: Essentially the same course as currently offered with new Course Name.
First offered in 10/11 Academic Year.

## NURSING 2K02 Health and Well-Being of Diverse Populations II

This course assists students to gain a further understanding of influences on the health and well being of diverse populations and to expand their knowledge of professional responsibilities of civic engagement.
This course is evaluated on a Pass/Fail basis.
32 hours of service learning, four lectures and 4 large group seminars; two terms.
Prerequisite: NURSING 1K02
First offered in 10/11 Academic Year.

## NURSING 2R03 Introduction to Statistics for Nursing

An introduction to basic parametric and non-parametric statistical methods, including their application to the analysis of data relevant to nursing and health-related research questions. Computer analysis of data using SPSS and interpretation of the statistical results will also be an integral component of the course.
Two hours lecture; one hour tutorial; one term
Prerequisite: Registration in Level II of the B.Sc.N. program or permission of instructor.
Antirequisite: HTH SCI 2A03; COMMERCE 2QA3, HTH SCI 1F03; STATS 1CC3; HTH SCI 2A03; SOC SCI 2J03; COLLAB 2L03
First offered in 09/10 Academic Year.

## NURSING 2V06 Nursing Concepts in Health \& Illness for Basic Accelerated I

In this PBL within PBL course students will apply knowledge of core nursing and interprofesssional health care content to individuals, families and communities in increasingly complex situations. Through independent learning and small groups, students will analyze professional practice situations from a variety of perspectives, and apply principles of evidence-based /best practice guidelines in their plan of care.
Four hours, small group tutorial, 2 hrs weekly resource session (multi-media).
Prerequisite: Registration in Level III of B.Sc.N. (F) Stream.
Antirequisite: NURSING 3CC3, 3E03, 3N03, 3P03, 3S03
Normally to be taken concurrently with NURSING 2 J04.
First offered in 11/12 Academic Year.

## NURSING 3QQ3 Professional Community Nursing Practice

A professional practice course in which students learn about community as client across all components of the nursing process. Students learn about promoting the health of a community by collaborating with community partners through the completion of a collaborative community initiative.
Four hours mixed tutorial and professional practice per week; one term.
Prerequisite: Registration in Level III of any Stream of the B.Sc.N. Program; HTH SCI 2RR3 or 3B03. Antirequisite: NURSING 2Q02, 2Q03

Note: Essentially the same course as currently offered with new Course Name.
First offered in 09/10 Academic Year.
NURSING 3 S04 Nursing Concepts in Health \& Illness III
In this PBL within PBL course students will apply deepening knowledge of core nursing and interprofesssional health care content to individuals, families and communities in increasingly complex situations. Through independent learning and small groups, students will analyze professional practice situations from a variety of perspectives, and apply principles of evidence-based /best practice guidelines in their plan of care.
Three hours, small group tutorial, 1 hr weekly resource session (multi-media).
Prerequisite: Registration in Level III B.Sc.N (A) or (E) Stream
Antirequisite: NURSING 3CC3, 3E03, 3N03, 3P03, 3S03
Normally to be taken concurrently with NURSING 3X04 or 3QQ3.
First offered in 11/12 Academic Year.

## NURSING $3 T 04 \quad$ Nursing Concepts in Health \& Illness IV

An extension of N3S04, students will apply deepening knowledge of core nursing and interprofessional health care content to individuals, families and communities in increasingly complex situations. Through independent learning and small groups, students will analyze professional practice situations from a variety of perspectives, and apply principles of evidence-based /best practice guidelines in their plan of care.
Three hours, small group tutorial, and 1 hr weekly resource session (multi media)
Prerequisite: NURSING 3 S04
Antirequisite: NURSING 3DD3, 3F03, 3Q03, 3T03
Normally to be taken concurrently with NURSING 3Y04 or 3QQ3.
First offered in 11/12 Academic Year.

## NURSING 3V03 Nursing Concepts in Health \& Illness for Basic Accelerated II

An extension of 2V06, students will apply deepening knowledge of core nursing and interprofesssional health care content to individuals, families and communities in increasingly complex situations. Through independent learning and small groups, students will analyze professional practice situations from a variety of perspectives, and apply principles of evidence-based /best practice guidelines in their plan of care.
Three hours mixed small group tutorial \& weekly resource session (multi-media).
Prerequisite: NURSING 2V06
Antirequisite: NURSING 3S03, 3T03
Normally to be taken concurrently with NURSING 2 J04.
First offered in Spring/Summer 2012.

## NURSING 3X04 Professional Nursing Practice IV

This is an applied professional practice course in which students gain confidence in their emerging professional practice through a guided clinical practice in increasingly complex and diverse settings. This course is evaluated on a Pass/Fail basis.
Twelve hours professional practice and lab; one term.
Prerequisite: NURSING 2P03; or NURSING 2AA4, 3LL3 ((E) Stream); or NURSING 2J04, 3LL3 ((F)
Stream)
Normally to be taken concurrently with NURSING 3 S04.
Note: Essentially the same course as currently offered with new Course Name.
First offered in 11/12 Academic Year.

## NURSING 3Y04

## Professional Nursing Practice V

This is an applied professional practice course in which students gain confidence in their emerging professional practice through a guided clinical practice in increasingly complex and diverse settings. This course is evaluated on a Pass/Fail basis.
Twelve hours professional practice and lab; one term.
Prerequisite: NURSING 3X04

Normally to be taken concurrently with NURSING $3 T 04$.
Note: Essentially the same course as currently offered with new Course Name.
First offered in 11/12 Academic Year.

## NURSING 4J07 Professional Nursing Practice VI

This course is an applied professional practice course in which students focus on the integration and application of research, theory and concepts to professional practice, including an introduction to the leadership role in client care. Students are individually placed in a variety of contexts, where they are actively involved in the enactment of the nursing role.
This course is evaluated on a Pass/Fail basis.
Twenty-four hours, professional practice and lab; one term.
Prerequisite: NURSING 3X04 or 3Y04
Normally to be taken concurrently with NURSING 4P04.
Note: Essentially the same course as currently offered with new Course Name.
First offered in 12/13 Academic Year.

## NURSING 4K10

Professional Practice \& the New Graduate
This course is an applied professional practice course in which students focus on the integration and application of research, theory and concepts to professional practice, including an introduction to the leadership role in client care. Students are individually placed in a variety of contexts, where they are actively involved in the enactment of the nursing role.
This course is evaluated on a Pass/Fail basis.
24 hours, professional practice \& lab for 6 weeks; 30 hours, professional practice and lab for 6 weeks; one
term
Prerequisite: NURSING 4J07
Antirequisite: NURSING 4K07
Normally to be taken concurrently with NURSING 4Q04.
First offered in 12/13 Academic Year.

## NURSING 4P04 Advanced Nursing Concepts I

In this PBL within PBL course students expand and integrate their knowledge base and apply critical reasoning skills in the examination and development of their professional practice. Students examine their professional practice with a focus on the organizational systems in which they are working in, management and evaluation of professional practice, and their own professional role development.
Three hours small group tutorial; 1 hr large group; one term.
Prerequisite: Registration in Level IV of any stream of the B.Sc.N. Program.
Antirequisite: NURSING 4E03
Normally to be taken concurrently with NURSING 4J07, 4SO6 OR $4 T 06$.

## NURSING 4Q03 Advanced Nursing Concepts II

This is an online course in which students expand and integrate their knowledge base and apply critical reasoning skills in the examination and development of their professional practice. Students examine their professional practice with a focus on the organizational systems in which they are working in, management and evaluation of professional practice, and their own professional role development.
Three hours small group tutorial on line and in person; one term.
Prerequisite: NURSING 4P03
Antirequisite: NURSING 4F03, 4Q04
Normally to be taken concurrently with NURSING 4K07, 4S06 OR 4 T06.
First offered in 12/13 Academic Year.

## HTH SCI 1CC6

## Integrated Biological Bases of Nursing Practice I

Students will apply principles of cellular biology, biochemistry and human anatomy and physiology essential to the assessment and understanding of health care challenges.
Lecture (two hours), seminar (two hours), one on-line tutorial; one term.

Prerequisite: Registration in Level II of the B.Sc.N. (E) Stream or Level III of the B.Sc.N. (B) Stream Antirequisite: HTH SCI 1A06, 1CC7, 1AA3, 1BB3, 1ZZ4, 3BB3
First offered in 10/11 Academic Year.

## HTH SCI 2C06 Integrated Biological Bases of Nursing Practice II

Students will integrate concepts of pathophysiology and will include principles of microbiology and pharmacology essential to the assessment and understanding of health care challenges.
Lecture (two hours), seminar (two hours), one journal club (one hour), one on-line tutorial; one term Prerequisite: HTH SCI 1CC7 or 1CC6
Antirequisite: HTH SCI 2AA2, 2B08, 2BB2, 2CC2, 2C07, 2DD2, 2H03, 2HH3
First offered in 10/11 Academic Year.

## HTH SCI 4L03 Nursing Research

A professional practice course designed to enhance the student's understanding of the research process.
Emphasis is placed on the student potential role as a research collaborator in projects related to professional practice.
One hour lecture; 24 - 36 hours research practicum; one term.
Prerequisite: NURSING 3T04 or HTH SCI 3C04 or permission of instructor.
Antirequisie: HTH SCI 4L02
First offered in 12/13 Academic Year.
The following 2 courses were offered on a Dean's Letter of Permission in Winter 2008:

## COLLAB 2M03 Medical Anthropology: Illness and Healthcare in Cross Cultural Perceptive and Social Issues

Medical anthropology gains theoretical and practical knowledge by studying other societies' medical systems. It helps broaden the understanding of "health" and address issues of inequality.
Three hours; one term.
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: ANTHROP 3Z03, 3ZZ3

## COLLAB 2N03 Organizational Behaviour

This course allows participants to develop and practice the interpersonal skills necessary to work with and/or manage people effectively.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: COM 2S03

## New Collab Elective:

COLLAB 3D03 Illness Narratives in Fiction and Non-Fiction
This seminar-based course will use fictional literature (poetry, short stories, and excerpts from novels) as well as first-person accounts (writings of actual patients and health-care workers) to explore the psychological, emotional, and relational aspects of patient experiences of such conditions as cancer, heart disease, disability, AIDS, mental illness, and chronic pain conditions.
Three hours; one term
Prerequisite: Registration in the B.Sc.N. (D) Stream (Conestoga College Site).

## ACCOMMODATION PLAN FOR STUDENTS EXPERIENCING COHORT LAG

An individualized plan will be made with each student experiencing cohort lag as the Kaleidoscope Curriculum is phased in over the period of 2009 to 2013. In each instance, a plan for course completion will be developed considering which particular aspects of the curriculum have been completed with the guiding
principle to advantage the student where-ever possible. The Course of Studies for students who entered in September 2008 will be of greatest concern. The Program reserves the right to offer courses which have been replaced by new courses in the Kaleidoscope Curriculum if this is to the students’ advantage, and if there are sufficient numbers of students requiring a course, based on resources. In other instances students will require individualized or group tutoring to learn specific concepts so that they can join a cohort who enters the Program after them. Given the complexity of the Course of Studies of the different Streams, this approach is more realistic than an overall template for each possible scenario.

## CHANGE TO COURSE OF STUDIES FOR STUDENTS ADMITTED SEPTEMBER 2008

Students who were admitted in September 2008 to Stream (A) or (D) were required to take SOC SCI 2J03 (Introduction to Statistics). Negotiations between Faculties to accommodate this requirement have not been successful related to logistics and resources. Therefore, Nursing has developed its own Introduction to Statistics Course for Nursing (NURSING 2R03) and that course description is included above.

## CLARIFICATION TO ADMISSION REQUIREMENTS

## 1. Basic-Accelerated (F) Stream

The Basic-Accelerated (F) Stream is available to those applying from a university science program of studies. Students may complete the program of studies in five academic terms. This stream is not open to applicants from other university nursing programs. Normally to be considered in this category, applicants to the program must:

1. achieve a Cumulative Average of at least B- in all university degree credit courses taken.
2. complete a minimum of 54 units of university credit and have achieved at least a C-grade in each of the following required courses:

- six units of Psychology of which at least 3 units are Introductory Psychology
- six units of Human Physiology or six units of Human Anatomy and Physiology
- six units of Biochemistry (preferred) or six units of Chemistry and
- three units of Statistics (recommended but not required).

Rationale: The phrase in bold and italics above has previously been implied as this is the minimum grade required for a course to be considered for transfer credit and this is consistent with McMaster policy. This addition makes the requirement transparent to prospective applicants.

## 2. Applicants from Other Degree Nursing Programs

Applicants who are enrolled in a Nursing degree program at another university or in another college/university consortium may apply to transfer to McMaster or to the Mohawk or Conestoga site to earn a McMaster B.Sc.N. degree. Applicants will not be considered for studies above Level II. The Post Diploma B.Sc.N. and the Basic Accelerated Streams are not available at the College sites. Availability of space and placement in the program is extremely limited and all potential applicants should contact the appropriate site to determine if there is space for transfer applicants before proceeding any further. For McMaster, contact the Admissions Coordinator (Nursing); for Mohawk, contact the Chair Associate Dean, B.Sc.N. Program; for Conestoga, contact the Chair, Nursing Program. [Delete all information about transfer from the calendar].

Rationale: The phrase in bold and italics above has been inserted as there have been no transfers accepted in several years due to lack of space. This will assist in reducing any false hope of applicants.

|  |  | Abilities / Disabilities <br> Supporting Courses <br> Health Science \& Society <br> Professional Practice: Community | Key Learning: <br> - Introduction to diversity within nursing <br> - Impact of diversity in nursing practice <br> - Introduction to relevant theories related to diversity <br> - Introduction to standards of practice that impact on caring for diverse clients/populations <br> - Understands the impact of diversity on health, health promotion, the role of the nurse and the culture of nursing <br> - Introduction to growth and development <br> Supporting Courses <br> Health \& Well-being of Diverse Populations | Key Learning: <br> - Identification and assessment of diversity within a health care setting <br> - Development of strategies to optimize transition into the culture of nursing as a student nurse <br> - Application of family theory as it relates to client care <br> - Spirituality <br> Supporting Courses <br> Health Science \& Society <br> Health \& Well-being of Diverse Populations | Key Learning: <br> - Develop strategies to transition into culture of nursing <br> - Incorporates diversity into a plan of care <br> - Care for clients throughout the lifespan <br> - Gender / sexual orientation <br> Supporting Courses <br> Professional Practice: Community Health \& Well-being of Diverse Populations | Key Learning: <br> - Understanding of agency's organizational culture on nursing practice <br> - Demonstrates sensitivity to diversity in nursing practice <br> Supporting Courses <br> Health \& Well-being of Diverse Populations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Change <br> Change means to make different in nursing practice and the health care system. Nurses work in an area of never-ending change. | Change Theory (personal, sociopolitical etc) <br> Current Trends \& Issues (society, health etc) <br>  <br> Pandemic Planning <br> Role Transition | Understand change theory and apply it to self, peers, and healthy clients. <br> Key Learning: <br> - Introduction to change theory <br> - Introduction to the concept/process of change/change agent <br> - Understanding of personal change | Apply change theory in both the class and clinical setting with a diverse group of clients. <br> Key Learning: <br> - Role Transition <br> - Introduction to change strategies and application in practice <br> Supporting Courses Health Science \& Society | Apply change theory in the class, clinical and community setting. <br> Key Learning: <br> - Current Trends \& Issues <br> - Integration of change theory into own practice <br> - Exploration of sociopolitical change <br> - Emergency Preparedness and Pandemic Planning | Identify the need for appropriate change in health care. Create a climate for adopting change. Contribute to effecting and evaluating change. <br> Key Learning: <br> - Application of Change Theory at a Systems Level <br> - Role Transition/ Personal Change <br> - Examination of personal change and growth <br> - Global Health Emergencies |
|  | Interprofessional Teamwork <br> A fully integrated practice by a team of professionals from a diverse background of disciplines who share a common goal and vision. Each member of the team has an integrated knowledge of the other team members' roles, and works from an equally valued team mandate. | Role of Different Health Care <br> Professionals <br> Role of the Nurse within the Health <br> Care Team <br> Interdependent / <br> interprofessional decision-making <br> Intersectoral collaboration | Develop an understanding of the role of the nurse (see Nursing as a Profession) | Effectively communicate and interact with the interprofessional health care team. <br> Key Learning: <br> - Intro to the role of the nurse within the health care team <br> - Understand the roles and responsibilities of other health care professionals | Collaborate with other health care professionals to make decisions / solve problems together. Adapt a plan of care in response to changes in client status in partnership with the interprofessional team. <br> Key Learning: <br> - Participate in interdependent and interprofessional decisionmaking. | Build relationships in a team environment and be actively engaged in team decision making around client care. <br> Key Learning: <br> - Initiate interdependent and interprofessional decisionmaking. <br> - Participate in intersectoral collaboration |

Themes, Concepts and Goals by Level

| Concept | Sub Concepts | Goals by Level |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 |
| Research <br> Research facilitates the discovery of new knowledge. Research also involves learning how to access/appraise and use new knowledge to inform clinical practice. | Information Literacy (Info seeking/ retrieval / management) <br> Critical appraisal <br> Evidence-based / Best practice <br> Epidemiology <br> Knowledge Transfer <br> Research Role of Nurse <br> Supporting Courses <br> Statistics <br> Nursing Research | Identify appropriate questions and sources of information within the principles of evidence-based practice. <br> Key Learning: <br> - Learning to define researchable questions <br> - Identify and use relevant sources of information <br> - Introduction to different ways of learning and knowing ( qualitative and quantitative research methods, primary sources) <br> - Intro to evidence-based nursing / decision-making | Develop critical appraisal skills in order to critique the research literature. <br> Key Learning: <br> - Information literacy skills <br> - Review steps of evidencebased nursing (focus on $1 \&$ 2) <br> - Introduce concept of critical appraisal <br> - Introduce different study designs <br> - Introduction to quantitative data collection and analysis <br> Supporting Courses <br> Statistics | Build on critical appraisal skills and support practice with relevant evidence, knowledge and theory. <br> Key Learning: <br> - Critical appraisal of treatment studies, systematic reviews, causation studies, qualitative studies, guidelines <br> - Beginning focus on application of critically appraised evidence into practice <br> - Knowledge translation <br> - Research role of nurse <br> Supporting Courses <br> Nursing Research | Contribute to the body of nursing knowledge through demonstrating an inquiring approach to practice. <br> Key Learning: <br> - Research role of nurse <br> - Critical appraisal of all evidence \& evaluation of decisions, evidence etc. <br> Supporting Courses <br> Nursing Research |
| Technology <br> Technology refers to the safe and ethical use of the variety of tools, instruments and machines used in nursing practice, education and research. | Clinical Simulation <br> Communication Technology (PowerPoint, LearnLink, medical internet, PDA's, phone) <br> Ethics / confidentiality in all media (netiquette) <br> Use of technology for client care \& documentation (including safety) | Use technology effectively in classroom settings or with healthy clients. <br> Key Learning: <br> - Introduction to Learnlink <br> - Appropriate use of technology for SDL <br> - Technology for assessment | Use technology effectively in a variety of settings according to professional standards. <br> Key Learning: <br> - Ethics / confidentiality in all media (netiquette) <br> - Communication technology <br> - Technology for client care \& documentation | Use increasingly complex technology effectively. <br> Key Learning: <br> - Ethics / confidentiality in all media (netiquette) <br> - Technology for client care \& documentation | Provide technologically appropriate care in a variety of contexts. <br> Key Learning: <br> Appropriate use of technology in class and clinical setting. |
| Critical Inquiry <br> Critical inquiry expands on the meaning of critical thinking to encompass critical reflection on actions. Critical inquiry means a process of purposive thinking and reflective reasoning where practitioners examine ideas, assumptions, principles, conclusions, beliefs and actions in the context of nursing practice. This critical inquiry process is associated with a spirit of inquiry, discernment, logical reasoning, and application of standards. | Critical Reflection Ways of Knowing Self-directed, PBL, Group theory Clinical Decision Making Lifelong Learning (learning plans / learning styles) Problem-solving | Develop self-directed, personbased, critical thinking, and reflection skills to facilitate learning throughout the BScN program. <br> Key Learning: <br> - Introduction to critical inquiry <br> - Introduction to PBL, SDL, SGL, lifelong learning <br> - Introduction to problemsolving <br> - Introduction to ways of knowing in nursing <br> - Introduction to reflective practice | Develop critical thinking inquiry skills incorporating evidence based resources, theoretical perspectives and reflection. <br> Key Learning: <br> - Apply the critical inquiry process in clinical with support <br> - Build knowledge and skills in group process <br> - Use appropriate resources to inform decision-making <br> - In-depth focus on group process <br> - Build critical reflection skills | Apply ways of knowing (empirical, ethical, aesthetic, and personal) to guide and inform nursing practice. Use critical inquiry, evidence-based practice and theory in client care <br> Key Learning: <br> - Solving problems in increasingly complex situations with support <br> - Apply ways of knowing to guide practice | Contribute to the future of the nursing profession through a commitment to lifelong learning and professional growth. Integrate critical inquiry into professional practice. <br> Key Learning: <br> - Independent and interdependent problem-solving within the clinical context <br> - Incorporate lifelong learning into practice |




## Themes, Concepts \& Goals by Level

| Concept | Sub Concepts | Goals by Level |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 |
| Leadership <br> A relational process in which an individual seeks to influence others towards a mutually desirable goal (RNAO). It is an expectation for all nurses requiring self-knowledge (understanding one's beliefs and values and being aware of how one's behavior affects others), respect, trust, integrity, shared vision, learning, participation, good communication techniques and the ability to be a change facilitator. The nurse shows leadership by providing facilitating and promoting best possible care and modeling professional values, beliefs and attributes. (CNO, 2006) | Self awareness <br> Leadership / Management <br> Principles <br> Nursing Leaders (past / present) <br> Negotiation \& Conflict <br> Resolution <br> Organizational Change Theory <br> Marketing theory <br> Principles of delegation <br> Resource Management <br> Political Lobbying <br> Group Theory | Actively participate in the functions of a group and demonstrate a variety of group roles. <br> Key Learning: <br> - Introduction to group process and theory <br> - Exploration of Self Awareness | Identify and interact as a member of a nursing care team. <br> Key Learning: <br> - Introduction to leadership in classroom setting <br> - Nursing leaders (past \& present) <br> - Introduction to negotiation and conflict resolution <br> - Self awareness \& confidence in a variety of roles | Identify the skills and competencies required by a nurse to provide the leadership and coordination necessary to manage the delivery of client care by the interprofessional team. <br> Key Learning: <br> - Awareness of leadership within interprofessional setting <br> - Explore power within interdisciplinary teams <br> - Introduction to organization theory and culture | Assume leadership roles in partnership with clients and the health care team. <br> Key Learning: <br> - Introduction to principles of delegation <br> - Introduction to leader vs manager principles <br> - Introduction to political lobbying |
| Advocacy <br> An advocate is a person who supports or speaks in favour for a cause or acts as a change agent for clients, families, communities or the profession. An essential role that addresses the nurse's responsibility to be informed and educate colleagues and the public, as well as collaborate with others, and effect change in nursing practice to provide better outcomes. It is the nurse's ethical obligation to advocate for someone who is ill, vulnerable, unfamiliar with the health care system or does not know his/her rights. | Advocacy Strategies (personal, client, community) <br> Social and Political Advocacy <br> Nurse and Client Safety <br> Power / Abuse <br> Social justice | Advocates appropriately for self and peers. <br> Key Learning: <br> - Identify and outline strategies for personal advocacy ( eg., student groups, RNAO, MUNSS, etc) in the role of the student <br> - Introduction to power / empowerment <br> Supporting Courses <br> Health \& Well-being of Diverse Populations | Recognize the need for advocacy in client care. <br> Key Learning: <br> - Identifies opportunities for advocacy for client <br> - Implements simple client advocacy strategies <br> Supporting Courses <br> Health \& Well-being of Diverse Populations | Participate in developing and implementing strategies for advocacy (political and social) with, and on behalf of, clients and the nursing profession. <br> Key Learning: <br> - Implementation of increasingly complex strategies for advocacy <br> - Social \& political advocacy <br> - Power / abuse <br> Supporting Courses <br> Health \& Well-being of Diverse Populations | Assume advocacy roles in partnership with clients and the health care team. Challenge inequities that impact on the health of clients. <br> Key Learning: <br> - Demonstrates participation as an emerging professional in social justice issues re health (ie poverty) <br> Supporting Courses <br> Health \& Well-being of Diverse <br> Populations |
| Nursing as a Profession <br> Professional status requires a unique knowledge and skill set, extensive educational preparation and selfregulation in regards to ensuring ethical, accountable and competent practice. | Ethics <br> Reflection <br> Legislation (Standards of practice, RHPA, Institutional <br> Policy) <br> Nursing Bodies (CNO, RNAO, <br> ONA) <br> History of Nursing <br> Lifelong Learning / CNO profile | Gain a deeper understanding of self as person and nurse. Understand the scope of nursing practice. | Demonstrate personal and professional characteristics associated with nursing in the classroom and clinical setting. Apply professional standards, guidelines, legislation and values of nursing to the care of clients and families. | Embrace the personal and professional characteristics associated with the nursing profession. | Practice within the professional standards, guidelines, legislation and values of the nursing profession. |



|  | Client as Person <br> Caring <br> Role Transition / Role Theory <br> Professionalism <br> Current Trends and Issues in <br> Nursing (Regional / provincial / <br> national / international) <br> Nursing Theory / Concepts | Key Learning: <br> - History of nursing/caringnursing leaders past and present <br> - Current trends and issues in nursing <br> - Roles of nurses <br> - Introduction to the CNO Standards of Practice <br> - Introduction to professional self: identification of own values and beliefs, ethics, understanding personal change | Key Learning: <br> - Health / Nursing in Ontario (regional / provincial trends \& issues) <br> - Practice within the CNO standards / RHPA <br> - Nursing code of ethics <br> - Introduction to accountability for practice <br> - Application of McMaster Model of Nursing <br> Supporting Courses Health Science \& Society | Key Learning: <br> - Health / Nursing in Canada (national trends \& issues) <br> - Application of a variety of theories / concepts / models <br> - Ongoing clarification of own values and beliefs <br> - Professionalism | Key Learning: <br> - Health / Nursing in International Context <br> - Personal philosophy of nursing <br> - Role transition |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Communication <br> Communication is the exchange or transmission of thoughts, messages, or information, by speech, signals, writing or behavior. Communication includes the collection and transfer of information through a variety of media. | Documentation <br> Scholarly Writing / Scholarly <br> Presentations <br> Group Communication <br> Therapeutic Use of Self Communication Theory / Skills Confidentiality Communication Technology | Demonstrate professional communication skills with peers, tutors, clients, and others. <br> Key Learning: <br> - Introduction to communication theory <br> - Introduction to therapeutic nurse/client relationships <br> - Identify and apply basic communication skills with clients and peer group <br> - Beginning level scholarly writing <br> - Introduction to Documentation | Demonstrate professional communication skills (written and verbal) and therapeutic use of self in interactions with clients and families and members of the health care team. <br> Key Learning: <br> - $\quad$ Select and use professional and therapeutic communication skills in a variety of settings <br> - Engage in the therapeutic use of self <br> - Develop written communication skills (scholarly writing, documentation) <br> - Confidentiality in all interactions <br> - Group Communication | Effectively communicates and collaborates with clients in increasingly diverse and complex situations. Develops scholarly writing / presentation skills. <br> Key Learning: <br> - Advanced communication skills <br> - Scholarly writing / presentation skills | Establish therapeutic partnerships with clients to enhance health and healing. Communicates effectively in a variety of media. <br> Key Learning: <br> - Use and evaluate communication skills and strategies with an emphasis on communication at a macro level (e.g. health care system and political system) <br> - Actively engages and evaluates the therapeutic nurse / client relationship |

Curriculum Innovation Committee- June 4 ’07; Passed by Undergraduate Nursing Education Committee September 24, 2007, minor editorial revisions September 2008.

## The following 2 courses were offered on a Dean's Letter of Permission in Winter 2008:

COLLAB 2M03 Medical Anthropology: Illness and Healthcare in Cross Cultural Perceptive and Social Issues
Medical anthropology gains theoretical and practical knowledge by studying other societies' medical systems. It helps broaden the understanding of "health" and address issues of inequality.
Three hours; one term.
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: ANTHROP 3Z03, 3ZZ3

COLLAB 2N03 Organizational Behaviour
This course allows participants to develop and practice the interpersonal skills necessary to work with and/or manage people effectively.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site) Antirequisite: COM 2S03

## New Collab Elective:

COLLAB 3D03 Illness Narratives in Fiction and Non-Fiction
This seminar-based course will use fictional literature (poetry, short stories, and excerpts from novels) as well as first-person accounts (writings of actual patients and health-care workers) to explore the psychological, emotional, and relational aspects of patient experiences of such conditions as cancer, heart disease, disability, AIDS, mental illness, and chronic pain conditions.
Three hours; one term
Prerequisite: Registration in the B.Sc.N. (D) Stream (Conestoga College Site).

## ACCOMMODATION PLAN FOR STUDENTS EXPERIENCING COHORT LAG

An individualized plan will be made with each student experiencing cohort lag as the Kaleidoscope Curriculum is phased in over the period of 2009 to 2013. In each instance, a plan for course completion will be developed considering which particular aspects of the curriculum have been completed with the guiding principle to advantage the student where-ever possible. The Course of Studies for students who entered in September 2008 will be of greatest concern. The Program reserves the right to offer courses which have been replaced by new courses in the Kaleidoscope Curriculum if this is to the students’ advantage, and if there are sufficient numbers of students requiring a course, based on resources. In other instances students will require individualized or group tutoring to learn specific concepts so that they can join a cohort who enters the Program after them.

Given the complexity of the Course of Studies of the different Streams, this approach is more realistic than an overall template for each possible scenario.

## CHANGE TO COURSE OF STUDIES FOR STUDENTS ADMITTED SEPTEMBER 2008

Students who were admitted in September 2008 to Stream (A) or (D) were required to take SOC SCI 2J03 (Introduction to Statistics). Negotiations between Faculties to accommodate this requirement have not been successful related to logistics and resources. Therefore, Nursing has developed its own Introduction to Statistics Course for Nursing (NURSING 2R03) and that course description is included above.

## CLARIFICATION TO ADMISSION REQUIREMENTS

## 1. Basic-Accelerated (F) Stream

The Basic-Accelerated (F) Stream is available to those applying from a university science program of studies. Students may complete the program of studies in five academic terms. This stream is not open to applicants from other university nursing programs.
Normally to be considered in this category, applicants to the program must:

1. achieve a Cumulative Average of at least B- in all university degree credit courses taken.
2. complete a minimum of 54 units of university credit and have achieved at least a Cgrade in each of the following required courses:

- six units of Psychology of which at least 3 units are Introductory Psychology
- six units of Human Physiology or six units of Human Anatomy and Physiology
- six units of Biochemistry (preferred) or six units of Chemistry and
- three units of Statistics (recommended but not required).

Rationale: The phrase in bold and italics above has previously been implied as this is the minimum grade required for a course to be considered for transfer credit and this is consistent with McMaster policy. This addition makes the requirement transparent to prospective applicants.

## 2. Applicants from Other Degree Nursing Programs

Applicants who are enrolled in a Nursing degree program at another university or in another college/university consortium may apply to transfer to McMaster or to the Mohawk or Conestoga site to earn a McMaster B.Sc.N. degree. Applicants will not be considered for studies above Level II. The Post Diploma B.Sc.N. and the Basic Accelerated Streams are not available at the College sites. Availability of space and placement in the program is extremely limited and all potential applicants should contact the appropriate site to determine if there is space for transfer applicants before proceeding any further. For McMaster, contact the Admissions Coordinator (Nursing);
for Mohawk, contact the Chair Associate Dean, B.Sc.N. Program; for Conestoga, contact the Chair, Nursing Program. [Delete all information about transfer from the calendar].

Rationale: The phrase in bold and italics above has been inserted as there have been no transfers accepted in several years due to lack of space. This will assist in reducing any false hope of applicants.

|  |  | Abilities / Disabilities <br> Supporting Courses <br> Health Science \& Society <br> Professional Practice: Community | Key Learning: <br> - Introduction to diversity within nursing <br> - Impact of diversity in nursing practice <br> - Introduction to relevant theories related to diversity <br> - Introduction to standards of practice that impact on caring for diverse clients/populations <br> - Understands the impact of diversity on health, health promotion, the role of the nurse and the culture of nursing <br> - Introduction to growth and development <br> Supporting Courses <br> Health \& Well-being of Diverse Populations | Key Learning: <br> - Identification and assessment of diversity within a health care setting <br> - Development of strategies to optimize transition into the culture of nursing as a student nurse <br> - Application of family theory as it relates to client care <br> - Spirituality <br> Supporting Courses <br> Health Science \& Society <br> Health \& Well-being of Diverse Populations | Key Learning: <br> - Develop strategies to transition into culture of nursing <br> - Incorporates diversity into a plan of care <br> - Care for clients throughout the lifespan <br> - Gender / sexual orientation <br> Supporting Courses <br> Professional Practice: Community Health \& Well-being of Diverse Populations | Key Learning: <br> - Understanding of agency's organizational culture on nursing practice <br> - Demonstrates sensitivity to diversity in nursing practice <br> Supporting Courses <br> Health \& Well-being of Diverse Populations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Change <br> Change means to make different in nursing practice and the health care system. Nurses work in an area of never-ending change. | Change Theory (personal, sociopolitical etc) <br> Current Trends \& Issues (society, health etc) <br>  <br> Pandemic Planning <br> Role Transition | Understand change theory and apply it to self, peers, and healthy clients. <br> Key Learning: <br> - Introduction to change theory <br> - Introduction to the concept/process of change/change agent <br> - Understanding of personal change | Apply change theory in both the class and clinical setting with a diverse group of clients. <br> Key Learning: <br> - Role Transition <br> - Introduction to change strategies and application in practice <br> Supporting Courses Health Science \& Society | Apply change theory in the class, clinical and community setting. <br> Key Learning: <br> - Current Trends \& Issues <br> - Integration of change theory into own practice <br> - Exploration of sociopolitical change <br> - Emergency Preparedness and Pandemic Planning | Identify the need for appropriate change in health care. Create a climate for adopting change. Contribute to effecting and evaluating change. <br> Key Learning: <br> - Application of Change Theory at a Systems Level <br> - Role Transition/ Personal Change <br> - Examination of personal change and growth <br> - Global Health Emergencies |
|  | Interprofessional Teamwork <br> A fully integrated practice by a team of professionals from a diverse background of disciplines who share a common goal and vision. Each member of the team has an integrated knowledge of the other team members' roles, and works from an equally valued team mandate. | Role of Different Health Care <br> Professionals <br> Role of the Nurse within the Health <br> Care Team <br> Interdependent / <br> interprofessional decision-making <br> Intersectoral collaboration | Develop an understanding of the role of the nurse (see Nursing as a Profession) | Effectively communicate and interact with the interprofessional health care team. <br> Key Learning: <br> - Intro to the role of the nurse within the health care team <br> - Understand the roles and responsibilities of other health care professionals | Collaborate with other health care professionals to make decisions / solve problems together. Adapt a plan of care in response to changes in client status in partnership with the interprofessional team. <br> Key Learning: <br> - Participate in interdependent and interprofessional decisionmaking. | Build relationships in a team environment and be actively engaged in team decision making around client care. <br> Key Learning: <br> - Initiate interdependent and interprofessional decisionmaking. <br> - Participate in intersectoral collaboration |

Themes, Concepts and Goals by Level

| Concept | Sub Concepts | Goals by Level |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 |
| Research <br> Research facilitates the discovery of new knowledge. Research also involves learning how to access/appraise and use new knowledge to inform clinical practice. | Information Literacy (Info seeking/ retrieval / management) <br> Critical appraisal <br> Evidence-based / Best practice <br> Epidemiology <br> Knowledge Transfer <br> Research Role of Nurse <br> Supporting Courses <br> Statistics <br> Nursing Research | Identify appropriate questions and sources of information within the principles of evidence-based practice. <br> Key Learning: <br> - Learning to define researchable questions <br> - Identify and use relevant sources of information <br> - Introduction to different ways of learning and knowing ( qualitative and quantitative research methods, primary sources) <br> - Intro to evidence-based nursing / decision-making | Develop critical appraisal skills in order to critique the research literature. <br> Key Learning: <br> - Information literacy skills <br> - Review steps of evidencebased nursing (focus on $1 \&$ 2) <br> - Introduce concept of critical appraisal <br> - Introduce different study designs <br> - Introduction to quantitative data collection and analysis <br> Supporting Courses <br> Statistics | Build on critical appraisal skills and support practice with relevant evidence, knowledge and theory. <br> Key Learning: <br> - Critical appraisal of treatment studies, systematic reviews, causation studies, qualitative studies, guidelines <br> - Beginning focus on application of critically appraised evidence into practice <br> - Knowledge translation <br> - Research role of nurse <br> Supporting Courses <br> Nursing Research | Contribute to the body of nursing knowledge through demonstrating an inquiring approach to practice. <br> Key Learning: <br> - Research role of nurse <br> - Critical appraisal of all evidence \& evaluation of decisions, evidence etc. <br> Supporting Courses <br> Nursing Research |
| Technology <br> Technology refers to the safe and ethical use of the variety of tools, instruments and machines used in nursing practice, education and research. | Clinical Simulation <br> Communication Technology (PowerPoint, LearnLink, medical internet, PDA's, phone) <br> Ethics / confidentiality in all media (netiquette) <br> Use of technology for client care \& documentation (including safety) | Use technology effectively in classroom settings or with healthy clients. <br> Key Learning: <br> - Introduction to Learnlink <br> - Appropriate use of technology for SDL <br> - Technology for assessment | Use technology effectively in a variety of settings according to professional standards. <br> Key Learning: <br> - Ethics / confidentiality in all media (netiquette) <br> - Communication technology <br> - Technology for client care \& documentation | Use increasingly complex technology effectively. <br> Key Learning: <br> - Ethics / confidentiality in all media (netiquette) <br> - Technology for client care \& documentation | Provide technologically appropriate care in a variety of contexts. <br> Key Learning: <br> Appropriate use of technology in class and clinical setting. |
| Critical Inquiry <br> Critical inquiry expands on the meaning of critical thinking to encompass critical reflection on actions. Critical inquiry means a process of purposive thinking and reflective reasoning where practitioners examine ideas, assumptions, principles, conclusions, beliefs and actions in the context of nursing practice. This critical inquiry process is associated with a spirit of inquiry, discernment, logical reasoning, and application of standards. | Critical Reflection Ways of Knowing Self-directed, PBL, Group theory Clinical Decision Making Lifelong Learning (learning plans / learning styles) Problem-solving | Develop self-directed, personbased, critical thinking, and reflection skills to facilitate learning throughout the BScN program. <br> Key Learning: <br> - Introduction to critical inquiry <br> - Introduction to PBL, SDL, SGL, lifelong learning <br> - Introduction to problemsolving <br> - Introduction to ways of knowing in nursing <br> - Introduction to reflective practice | Develop critical thinking inquiry skills incorporating evidence based resources, theoretical perspectives and reflection. <br> Key Learning: <br> - Apply the critical inquiry process in clinical with support <br> - Build knowledge and skills in group process <br> - Use appropriate resources to inform decision-making <br> - In-depth focus on group process <br> - Build critical reflection skills | Apply ways of knowing (empirical, ethical, aesthetic, and personal) to guide and inform nursing practice. Use critical inquiry, evidence-based practice and theory in client care <br> Key Learning: <br> - Solving problems in increasingly complex situations with support <br> - Apply ways of knowing to guide practice | Contribute to the future of the nursing profession through a commitment to lifelong learning and professional growth. Integrate critical inquiry into professional practice. <br> Key Learning: <br> - Independent and interdependent problem-solving within the clinical context <br> - Incorporate lifelong learning into practice |




## Themes, Concepts \& Goals by Level

| Concept | Sub Concepts | Goals by Level |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 |
| Leadership <br> A relational process in which an individual seeks to influence others towards a mutually desirable goal (RNAO). It is an expectation for all nurses requiring self-knowledge (understanding one's beliefs and values and being aware of how one's behavior affects others), respect, trust, integrity, shared vision, learning, participation, good communication techniques and the ability to be a change facilitator. The nurse shows leadership by providing facilitating and promoting best possible care and modeling professional values, beliefs and attributes. (CNO, 2006) | Self awareness <br> Leadership / Management <br> Principles <br> Nursing Leaders (past / present) <br> Negotiation \& Conflict <br> Resolution <br> Organizational Change Theory <br> Marketing theory <br> Principles of delegation <br> Resource Management <br> Political Lobbying <br> Group Theory | Actively participate in the functions of a group and demonstrate a variety of group roles. <br> Key Learning: <br> - Introduction to group process and theory <br> - Exploration of Self Awareness | Identify and interact as a member of a nursing care team. <br> Key Learning: <br> - Introduction to leadership in classroom setting <br> - Nursing leaders (past \& present) <br> - Introduction to negotiation and conflict resolution <br> - Self awareness \& confidence in a variety of roles | Identify the skills and competencies required by a nurse to provide the leadership and coordination necessary to manage the delivery of client care by the interprofessional team. <br> Key Learning: <br> - Awareness of leadership within interprofessional setting <br> - Explore power within interdisciplinary teams <br> - Introduction to organization theory and culture | Assume leadership roles in partnership with clients and the health care team. <br> Key Learning: <br> - Introduction to principles of delegation <br> - Introduction to leader vs manager principles <br> - Introduction to political lobbying |
| Advocacy <br> An advocate is a person who supports or speaks in favour for a cause or acts as a change agent for clients, families, communities or the profession. An essential role that addresses the nurse's responsibility to be informed and educate colleagues and the public, as well as collaborate with others, and effect change in nursing practice to provide better outcomes. It is the nurse's ethical obligation to advocate for someone who is ill, vulnerable, unfamiliar with the health care system or does not know his/her rights. | Advocacy Strategies (personal, client, community) <br> Social and Political Advocacy <br> Nurse and Client Safety <br> Power / Abuse <br> Social justice | Advocates appropriately for self and peers. <br> Key Learning: <br> - Identify and outline strategies for personal advocacy ( eg., student groups, RNAO, MUNSS, etc) in the role of the student <br> - Introduction to power / empowerment <br> Supporting Courses <br> Health \& Well-being of Diverse Populations | Recognize the need for advocacy in client care. <br> Key Learning: <br> - Identifies opportunities for advocacy for client <br> - Implements simple client advocacy strategies <br> Supporting Courses <br> Health \& Well-being of Diverse Populations | Participate in developing and implementing strategies for advocacy (political and social) with, and on behalf of, clients and the nursing profession. <br> Key Learning: <br> - Implementation of increasingly complex strategies for advocacy <br> - Social \& political advocacy <br> - Power / abuse <br> Supporting Courses <br> Health \& Well-being of Diverse Populations | Assume advocacy roles in partnership with clients and the health care team. Challenge inequities that impact on the health of clients. <br> Key Learning: <br> - Demonstrates participation as an emerging professional in social justice issues re health (ie poverty) <br> Supporting Courses <br> Health \& Well-being of Diverse <br> Populations |
| Nursing as a Profession <br> Professional status requires a unique knowledge and skill set, extensive educational preparation and selfregulation in regards to ensuring ethical, accountable and competent practice. | Ethics <br> Reflection <br> Legislation (Standards of practice, RHPA, Institutional <br> Policy) <br> Nursing Bodies (CNO, RNAO, <br> ONA) <br> History of Nursing <br> Lifelong Learning / CNO profile | Gain a deeper understanding of self as person and nurse. Understand the scope of nursing practice. | Demonstrate personal and professional characteristics associated with nursing in the classroom and clinical setting. Apply professional standards, guidelines, legislation and values of nursing to the care of clients and families. | Embrace the personal and professional characteristics associated with the nursing profession. | Practice within the professional standards, guidelines, legislation and values of the nursing profession. |



|  | Client as Person <br> Caring <br> Role Transition / Role Theory <br> Professionalism <br> Current Trends and Issues in <br> Nursing (Regional / provincial / <br> national / international) <br> Nursing Theory / Concepts | Key Learning: <br> - History of nursing/caringnursing leaders past and present <br> - Current trends and issues in nursing <br> - Roles of nurses <br> - Introduction to the CNO Standards of Practice <br> - Introduction to professional self: identification of own values and beliefs, ethics, understanding personal change | Key Learning: <br> - Health / Nursing in Ontario (regional / provincial trends \& issues) <br> - Practice within the CNO standards / RHPA <br> - Nursing code of ethics <br> - Introduction to accountability for practice <br> - Application of McMaster Model of Nursing <br> Supporting Courses Health Science \& Society | Key Learning: <br> - Health / Nursing in Canada (national trends \& issues) <br> - Application of a variety of theories / concepts / models <br> - Ongoing clarification of own values and beliefs <br> - Professionalism | Key Learning: <br> - Health / Nursing in International Context <br> - Personal philosophy of nursing <br> - Role transition |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Communication <br> Communication is the exchange or transmission of thoughts, messages, or information, by speech, signals, writing or behavior. Communication includes the collection and transfer of information through a variety of media. | Documentation <br> Scholarly Writing / Scholarly <br> Presentations <br> Group Communication <br> Therapeutic Use of Self Communication Theory / Skills Confidentiality Communication Technology | Demonstrate professional communication skills with peers, tutors, clients, and others. <br> Key Learning: <br> - Introduction to communication theory <br> - Introduction to therapeutic nurse/client relationships <br> - Identify and apply basic communication skills with clients and peer group <br> - Beginning level scholarly writing <br> - Introduction to Documentation | Demonstrate professional communication skills (written and verbal) and therapeutic use of self in interactions with clients and families and members of the health care team. <br> Key Learning: <br> - $\quad$ Select and use professional and therapeutic communication skills in a variety of settings <br> - Engage in the therapeutic use of self <br> - Develop written communication skills (scholarly writing, documentation) <br> - Confidentiality in all interactions <br> - Group Communication | Effectively communicates and collaborates with clients in increasingly diverse and complex situations. Develops scholarly writing / presentation skills. <br> Key Learning: <br> - Advanced communication skills <br> - Scholarly writing / presentation skills | Establish therapeutic partnerships with clients to enhance health and healing. Communicates effectively in a variety of media. <br> Key Learning: <br> - Use and evaluate communication skills and strategies with an emphasis on communication at a macro level (e.g. health care system and political system) <br> - Actively engages and evaluates the therapeutic nurse / client relationship |

Curriculum Innovation Committee- June 4 ’07; Passed by Undergraduate Nursing Education Committee September 24, 2007, minor editorial revisions September 2008.

## HTH SCI 4H03 ISSUES IN INTERNATI ONAL AND INTERCULTURAL HEALTH

An introduction to health issues in a rural Canadian and international context including theories of: development; political economy; medical and social anthropology; and intercultural health care practice

Lecture/problem-based tutorials (three hours); one term

Prerequisite: $\underline{\text { HTH SCI 3B03; and registration in Level III or IV of any stream of the B.Sc.N. }}$ program; and permission of the instructor

Antirequisite: COLLAB 4H03, NURSING 4H03

## Proposed Title and Calendar Description

## HTH SCI 4H03 INTRODUCTI ON TO ISSUES IN GLOBAL HEALTH

An introduction to the determinants of inequalities in the health of select populations in Canadian and international contexts as viewed through the lenses of historical development, political economy and medical anthropology.

Lecture/seminar (three hours); one term
Prerequisite: HTH SCI 3B03; and registration in Level III or IV of any stream of the B.Sc.N. program; and permission of the instructor

Antirequisite: COLLAB 4H03, NURSING 4H03

## Rationale

For many decades the term 'international health' has been used to describe health-related issues in an international setting where the nation-state is the focus of analysis. While 'international health' is still very much in use, those who work internationally and write about international health issues are increasingly using the term 'global health' to characterize this field of activity. The change from IH to GH is one of emphasis rather than of substance, it reflects an important evolution in thinking about health issues in the world. We propose the following distinctions:
'I nternational Health' relates more to health practices, policies and systems in countries other than one's own. IH stresses more the differences between countries than their commonalities. IH is a concept more focused on bilateral foreign aid activities than on collective action, to disease control in poor countries, and to medical missionary work.
'Global Health' relates to health issues and concerns that transcend national borders and culture per se, such as class, identity, geography and justice. We wish to include the health of Canada's aboriginal peoples (both rural and urban). GH stresses the commonality of health issues that requires a global vision and collective (partnership-based) action.

Approved Health Sciences Education Council and Executive Committee of the Faculty of Health Sciences 10-22-08

## THE B.H.SC. PHYSICIAN ASSISTANTPROGRAM

Subject to approval by the Ministry of Training, Colleges and Universities, beginning in the 20082009 academic year, a B.H.Sc. (Physician Assistant) program will be offered.

## WEB ADDRESS: http://fhs.mcmaster.ca/physicianassistant

PROGRAM OVERVIEW
McMaster will be was among one of the first institutions in Canada to launch a Physician Assistant Education Program in 2008. Twenty students will be admitted to the first class to pioneer a new role in health care provision in the province. The PA Education program will lead to the Bachelor of Health Sciences (Physician Assistant) degree. The program will be is taught using inquiry and problem-based learning, which enhance each student's ability to think critically, solve problems, demonstrate initiative and independence in practice, and promote lifelong learning.

## MISSION STATEMENT

The mission of the McMaster University Physician Assistant Education Program is to educate energetic, innovative, committed and caring individuals to become role models in a new health care delivery model practicing medicine under the supervision of a physician to expand health care access for the people of Ontario.

## CURRICULUM PLAN

The twenty-four month program begins in September. The first year will focusses on the study of the clinical sciences underpinning health care delivery. In the second year, students will enter into clinical placements.

## YEAR 1: CLINICAL SCIENCES

The clinical sciences curriculum is modeled on the McMaster Medical School COMPASS Curriculum and is designed to meet the competencies outlined in the Canadian Association of Physician Assistants Occupation Competency Profile Ontario Physician Assistant Competency Profile and the Canadian Medical Association accreditation requirements. The curriculum be is delivered in small group problem-based learning modules with a focus on the physician assistant's role in health care and the promotion of interprofessional education and training.
The clinical sciences curriculum consists of five three Medical Foundations each composed of four components:

1. Clinical Sciences
2. Professional Skills
3. Professional Competencies
4. Longitudinal Clinical Experience Program

## MEDICAL FOUNDATION 1

1. Clinical Sciences: Oxygen Transport: Cardiovascular, respiratory and blood, physiology and disease
2. Professional Skills: Basic history taking and physical examination
3. Professional Competencies: Role of the PA in patient care, responsibilities of the professional, scope of practice, the problem of uncertainty, self-awareness and lifelong learning

## 4. Longitudinal Clinical Experience Program

## MEDICAL FOUNDATION 2

1. Clinical Sciences: Homeostasis 1: Energy Balance: GI, endocrine and nutrition, physiology, and disease, fluid and electrolyte balance (including renal, acid base, BP) and reproduction, pregnancy and genetics 1
2. Professional Skills: Additional focus on the GI, endocrine history, and on communication skills, obstetric and gynecologic history
3. Professional Competencies: Role of the $P A$ in the health care system, organizational structure of the health care system, principles of health care in society, social and community context of health care, introduction to epidemiology, standards of care, laws and codes relevant to medical practice, organizational structure in institutions, institutional policies, health policy, ethics in genetics and reproduction
4. Longitudinal Clinical Experience Program

MEDICAL FOUNDATION 3

1. Clinical Sciences: Homeostasis 2: Fluid and electrolyte balance (including renal, acid base, BP) and reproduction, pregnancy and genetics 1
2. Professional Skills: Additional focus on obstetric and gynecologic history
3. Professional Competencies: Standards of care, laws and codes relevant to medical practice, organizational structure in institutions, institutional policies, health policy, ethics in genetics and reproduction
4. Longitudinal Clinical Experience Program

MEDICAL FOUNDATION 34

1. Clinical Sciences: Host defenses, neoplasia, and genetics 2, neurologic, psychiatric and musculoskeletal physiology and disease
2. Professional Skills: Additional focus on health care counselling, neurologic, psychiatric and musculoskeletal history
3. Professional Competencies: Mental health and society, negotiation and conflict resolution, charting, public reporting and accountability, consent and confidentiality, dealing with error, error prevention, breaking bad news, end of life decision-making, resource allocation
4. Longitudinal Clinical Experience Program

MEDICAL FOUNDATION 5

1. Clinical Sciences: Nourologic, psychiatric and musculoskeletal physiology and disease
2. Professional Skills: Additional focus on the neurologic, psychiatric and musculoskeletal history
3. Professional Competencies: Dealing with orror, orror prevention, breaking bad news, and of life decision-making, resource-allocation
4. Longitudinal Clinical Experience Program

YEAR II: CLERKSHIP
In the second year of the program students will undertake 5046 weeks of supervised clinical placements. Core experiences will take place in family medicine, internal medicine, surgery, emergency medicine, and psychiatry. Placements will take place in Hamilton, in the expanded McMaster campuses of St. Catharines and Kitchener/Waterloo, and in the broader Ontario community. Elective placements will round out the balance of the clinical year and will allow students to pursue additional career interests.

## CERTIFICATION

Graduates will qualify to take the Canadian Association of Physician Assistants certification examination national physician assistant certification examination in order to practice in the province of Ontario.

## Admission Procedures and Requirements

## ADMISSION REQUIREMENTS

By June 20089, applicants must have completed a minimum of two years of undergraduate work. Only degree courses at an accredited university will be considered. A minimum of 10 full-courses or 20 half courses (two years) is required. Courses that employ small group, self-directed or inquiry learning are excellent preparation for the PA Education program. There is no requirement for applicants to have carried a full course load. By September 2007 February 2009, applicants are expected to have achieved an overall simple average of at least 3.0 on the OMSAS 4.0 scale for consideration. Higher grades may be required.
Upon acceptance, successful applicants will be required to provide detailed medical information, including a record of completion of required immunizations, evidence of Basic Cardiac Life Support certification (Adult and Child CPR) and a satisfactory Police Records Check (at the applicant's expense) upon entering the program and annually thereafter.

## ADMISSION PROCEDURES (2008-2009 ONLY)

Application (including the appropriate fee) is to be made through the:
Ontario Universities' Application Centre (OUAC)
170 Research Lane
Guelph, ON, N1G 5E2
http://www.ouac.on.ca
This form, as well as a supplementary application form are both required and the deadline for receipt of both applications is February 25, 2009 May 1, 2008. (This deadline however might be extended for the 2008-2009 cycle.) -Please refer to the program's web site for full application details and to download the required supplementary form. Upon receipt of the application and certified transcripts, selected applicants will be invited to an interview.
The admissions committee will consider:

- University transcripts and GPA
- Supplementary application (to assess the applicant's previous
-clinical exposure, teamwork, aptitude for problem-based learning and understanding of the role of the PA)
- Interview


## APPLICATION FOR DEFERRED REGISTRATION

Deferred registrations will not normally be granted in the PA Education Program. Deferred registration may be granted only under exceptional circumstances.

## ADVANCED STANDING/TRANSFER

The structure of the PA Education program requires that all students complete the entire program starting with Medical Foundation 1. There is no provision for advanced standing or transfer into the program.

## FULL-TIME STATUS

The structure of the program requires that all students be registered in the program on a full-time basis and attendance in all components of the program is mandatory.

## Financial Information

In 2008-2009 2009-2010 the tuition fee for a student in Year I of the PA Education Program is expected to be approximately $\$ 9,000.00$ for a 12 month academic term, plus supplementary fees estimated at $\$ 1,000.00$ per year. Additional costs include books, diagnostic equipment and other learning resources estimated at $\$ 2,500.00$. Students are also responsible for their transportation costs related to clinical study.
There is a bursary program which has been developed by the University. Bursaries may be awarded to students who are Canadian citizens based on demonstrated financial need. Bursaries are intended to offset provincial financial assistance and cannot supplement the full cost of education. For further information, please contact the Education program web site or the Student Financial Aid and Scholarships Office at McMaster University.

Dean and Vice-President

1200 Main Street W. Phone 905.525.9140
Faculty of Healih Sciences

## Hamilton, Ontario <br> Canada

L8N 375

Ext. 22100
Fax 905.546.0800
Email keltonj@mcmaster.ca
http://www.fhs.memaster.ca

October 16, 2008
Undergraduate Council C/o University Secretariat GH-210

Dear Councilors,

## Re: Change to the admissions process for the Undergraduate Medical Education Program

At its meeting of September 24, 2008, the Executive Committee of the Faculty of Health Sciences approved, with one abstention, a motion that "the Undergraduate MD Program will require that all applicants write the $M C A T$, and that scores from the verbal reasoning component only will be used, effective the 2009 admissions cycle".

The Medical School currently receives in excess of 4400 applications per year. The School proposes to utilize the score from the verbal reasoning component of the MCAT in conjunction with the GPA and the autobiographical submission to decide which of the applicants will continue to the multi mini-interview. Over $70 \%$ of McMaster's applicants already take the MCAT, a tool that has been proven effective in determining success. The verbal reasoning component of the MCAT would serve as another tool to evaluate non-cognitive ability among the applicants and provide the program with an increased ability to predict for professional behavior. Applicants, who by taking the verbal reasoning portion of the MCAT may be disadvantaged in their application, would be allowed to challenge the requirement.

On behalf of the Faculty of Health Sciences I am requesting approval for the Undergraduate Medical Education Program to require all applicants to write the MCAT and for the scores from the verbal reasoning component only be used as an evaluative tool for admissions effective 2009.

Yours sincerely,


John G. Kelton, M.D.
Dean and Vice-President
cc: B. Frank
JGK/dm

FALL/WINTER SESSION 2009-2010

|  | TERM 1 <br> (61 days) | TERM 2 <br> (63 days) | TERM 3 |
| :---: | :---: | :---: | :---: |
| Registration begins | TBA |  |  |
| Classes begin | Thursday, September 10 | Monday J anuary 4 | Thursday, September 10 |
| Last day for registration and adding or dropping courses | Monday, September 21 | Wednesday J anuary 13 | Monday, September 21 |
| Thanksgiving: No classes | Monday, October 12 | - | Monday, October 12 |
| Mid-term recess | - | Monday, February 15 to Saturday, February 20 | Monday, February 15 to Saturday, February 20 |
| Last day for cancelling courses without failure by default | Friday, November 6 | Friday, March 5 | Friday, March 5 |
| Good Friday: No classes or examinations | - | Friday, April 2 | Friday, April 2 |
| Test and Examination Ban (no tests or exams may be held during class time) | Monday , <br> November 30 <br> to <br> Monday, December 7 | Friday, <br> April 2 <br> to <br> Friday, <br> April 9 | Friday, <br> April 2 <br> to <br> Friday, <br> April 9 |
| Classes end | Friday, December 4 | Thursday, April 8 | Thursday, April 8 |
| Mid-Session Tests Level (I) | - | - | Tuesday, December 8 to Tuesday, December 22 |
| Final Examinations | Tuesday, December 8 to Tuesday, December 22 | Saturday, <br> April 10 to Wednesday, April 28 | ```Saturday, April 10 to Wednesday, April 28``` |
| Deferred examinations | Tuesday, February 16 to Friday, February 19 | Monday, J une 21 to Thursday, J une 24 | Monday, J une 21 to Thursday, June 24 |

## SPRING/SUMMER SESSION 2010

|  | TERM 1 | TERM 2 | TERM 3 |
| :---: | :---: | :---: | :---: |
| Classes begin | Monday, May 3 | Monday, <br> J une 21 | Monday, May 3 |
| Last day for registration and changes in registration | Friday, May 7 | Friday, J une 25 | Friday, May 7 |
| Victoria Day: No classes | Monday, May 24 | - | Monday, May 24 |
| Last day for cancelling courses without failure by default | Wednesday, J une 2 | Wednesday, <br> July 21 | Monday, July 5 |
| Canada Day: No classes | - | Thursday, <br> July 1 | Thursday, July 1 |
| Civic Holiday: No classes | - | Monday, August 2 | Monday, August 2 |
| Classes end | Friday, J une 18 | Friday, August 6 | Friday, August 6 |
| Examinations | As arranged by instructor in class time |  |  |
| Deferred Examinations | December 2010 Exam period | December 2010 <br> Exam period | December 2010 <br> Exam period |

## CONVOCATION DATES 2009

|  | Convocation Date | Last day to file <br> graduation information <br> card |
| :---: | :---: | :---: |
| 2009 Divinity | Tuesday, May 19 |  |
| 2009 Health Sciences | Friday, May 22 | Friday, February 27 |
| 2009 Spring | Monday, J une 8* <br> Tuesday, June 9 <br> Wednesday, June 10 <br> Thursday, June 11 <br> Friday, June 12 | Friday, February 27 |

\(\left.$$
\begin{array}{lll}\text { *J une } 8 & \text { 9:30 a.m. } & \begin{array}{l}\text { Faculty of Humanities and } \\
\text { Arts \& Science Program }\end{array}
$$ <br>

\& 2:30 p.m. \& Faculty of Humanities\end{array}\right\}\)|  |  |  |
| :--- | :--- | :--- |
| J une 9 | 9:30 a.m. | Faculty of Science |
| 2:30 p.m. | Faculty of Science |  |

NOTE: The breakdown of the specific majors for each ceremony will be posted in the New Year.

## CONVOCATION DATES 2010

|  | Convocation Date | Last day to file <br> graduation information <br> card |
| :---: | :---: | :---: |
| 2010 Divinity | Tuesday, May 18 |  |
| 2010 Health Sciences | Friday, May 21 | Friday, February 26 |
| 2010 Spring | Monday, J une 7* <br> Tuesday, June 8 <br> Wednesday, J une 9 <br> Thursday, June 10 <br> Friday, June 11 | Friday, February 26 |
| 2010 Fall | Friday, November 19 | Friday, July 30 |


| * J une 7 | 9:30 a.m. 2:30 p.m. | Faculty of Humanities and Arts \& Science Program Faculty of Humanities |
| :---: | :---: | :---: |
| $J$ une 8 | $\begin{aligned} & \text { 9:30 a.m. } \\ & \text { 2:30 p.m. } \end{aligned}$ | Faculty of Science Faculty of Science |
| J une 9 | 9:30 a.m. | Faculty of Business |
| J une 10 | $\begin{aligned} & \text { 9:30 a.m. } \\ & \text { 2:30 p.m. } \end{aligned}$ | Faculty of Social Sciences Faculty of Social Sciences |
| J une 11 | 9:30 a.m. 2:30 p.m. | School of Nursing and Medical Radiation Sciences Program Faculty of Engineering |

NOTE: The breakdown of the specific majors for each ceremony will be posted in the New Year.


[^0]:    LEVELS IIIV: 90 UNITS (REQUREMENTS FOR STUDENTS WHO ENTERED IN SEPTEMBER 2008)
    42 units from Honours Life Sciences Course List, of which at least 24 units must be Levels III, IV (Seo Program Note 4 abovo.)

