To be appended to Program Change Proposals for:

**BSc; Environment; Ecological Determinants of Health - Population**  
(bsc_environment_health_pop_revision_2008.doc)

**BSc(AgEnvSc); Environment; Ecological Determinants of Health - Population**  
(bsc_agenvsc_environment_health_pop_revision_2008.doc)

Course list  
Deleted courses shown as strikeout, added courses shown as **underlined italics**. Courses at Macdonald Campus are shown with (M). Superscript numbers (*) refer to notes in the Rationale.

<table>
<thead>
<tr>
<th>Current Program (63 credits)</th>
<th>Proposed Program (63 credits)</th>
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<tbody>
<tr>
<td><strong>Core: Required Courses</strong> (18 credits)</td>
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<tr>
<td>ENVR 200 (3) The Global Environment</td>
<td>ENVR 200 (3) The Global Environment</td>
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<tr>
<td>ENVR 201 (3) Society and Environment</td>
<td>ENVR 201 (3) Society and Environment</td>
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<tr>
<td>ENVR 202 (3) The Evolving Earth</td>
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<tr>
<td>ENVR 203 (3) Knowledge, Ethics and Environment</td>
<td>ENVR 203 (3) Knowledge, Ethics and Environment</td>
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<tr>
<td>ENVR 301 (3) Environmental Research Design</td>
<td>ENVR 301 (3) Environmental Research Design</td>
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<tr>
<td>ENVR 400 (3) Environmental Thought</td>
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</tbody>
</table>

Core: Complementary Course – Senior Research Project (3 credits*)  
AGRI 519 (6) Sustainable Development Plans (in Barbados)  
ENVR 401 (3) Environmental Research  
ENVR 451 (6) Research in Panama (in Panama)  
* Only 3 credits will be applied to the program; extra credits will count as electives.

**Domain: Required Courses** (6 credits)  
PARA 410 (3) Environment and Infection (M)  
SOCI 234 (3) Population and Society

**Domain - Population Concentration:**  
**Complementary Courses** (36 credits)  
18 credits of fundamentals, maximum of 3 credits from each category:

<table>
<thead>
<tr>
<th>Toxicology</th>
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</thead>
<tbody>
<tr>
<td>NUTR 420 (3) Toxicology and Health Risks (M)</td>
<td>PHAR 303 (3) Principles of Toxicology</td>
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</table>

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<tr>
<th>Core: Complementary Course – Senior Research Project (3 credits*)</th>
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<tr>
<td>AGRI 519 (6) Sustainable Development Plans (in Barbados)</td>
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<tr>
<td>ENVR 401 (3) Environmental Research</td>
<td>ENVR 401 (3) Environmental Research</td>
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<tr>
<td>ENVR 451 (6) Research in Panama (in Panama)</td>
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</tbody>
</table>

**Domain: Required Courses** (3 credits)  
1 SOCI 234 (3) Population and Society

**Domain - Population Concentration:**  
**Complementary Courses** (39 credits)  
21 credits of fundamentals, maximum of 3 credits from each category:

<table>
<thead>
<tr>
<th>Health and Environment</th>
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</table>
| GEOG 221 (3) Environment and Health | GEOG 221 (3) Environment and Health  
or NRSC 221 (3) Environment and Health (M) |

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<thead>
<tr>
<th>Health and Society</th>
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</table>
| GEOG 303 (3) Health Geography | GEOG 303 (3) Health Geography  
SOCI 234 (3) Population and Society  
SOCI 309 (3) Health and Illness |

<table>
<thead>
<tr>
<th>Toxicology</th>
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</thead>
</table>
| ANSC 312 (3) Animal Health and Disease (M) | NUTR 420 (3) Toxicology and Health Risks (M)  
PHAR 303 (3) Principles of Toxicology |
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<tbody>
<tr>
<td>BIOL 202 (3) Basic Genetics</td>
<td>BIOL 200 (3) Molecular Biology</td>
<td>AEMA 310 (3) Statistical Methods 1 (M)</td>
<td>ANSC 330 (3) Fundamentals of Nutrition (M)</td>
<td>AEMA 306 (3) Mathematical Methods in Ecology (M)</td>
<td>AGRI 340 (3) Principles of Ecological Agriculture (M)</td>
<td>AGEC 200 (3) Principles of Microeconomics or ECON 208 (3) Microeconomic Analysis and Applications</td>
<td>AGEC 200 (3) Principles of Microeconomics or ECON 208 (3) Microeconomic Analysis and Applications</td>
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<tr>
<td>CELL 204 (4) Genetics (M)</td>
<td>BIOL 201 (3) Cell Biology and Metabolism</td>
<td>MATH 203 (3) Principles of Statistics 1 or equivalent</td>
<td>NUTR 207 (3) Nutrition and Health (M)</td>
<td>BIOL 465 (3) Conservation Biology</td>
<td>AGRI 452 (3) Water Resources in Barbados (in Barbados)</td>
<td>AGEC 242 (3) Management Theories and Practices (M)</td>
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<td></td>
<td>FDSC 211 (3) Biochemistry 1(M)</td>
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<td>NUTR 307 (3) Human Nutrition (Video conference Downtown and Macdonald)</td>
<td>BIOL 553 (3) Neotropical Environments (in Panama)</td>
<td>AGRI 550 (3) Sustained Tropical Agriculture (in Panama)</td>
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<td>ENVR 540 (3) Ecology of Species Invasions</td>
<td>BREE 217 (3) Hydrology and Water Resources (M)</td>
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<td>or BIOL 540 (3) Ecology of Species Invasions</td>
<td>GEOG 321 (3) Climatic Environments</td>
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<td>GEOG 497 (3) Ecology of Coastal Waters (at Bay of Fundy)</td>
<td>GEOG 322 (3) Environmental Hydrology</td>
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<td>MICR 331 (3) Microbial Ecology (M)</td>
<td>NRSC 510 (3) Agricultural Micrometeorology (M)</td>
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<td>PLNT 460 (3) Plant Ecology (M)</td>
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<td>WILD 410 (3) Wildlife Ecology (M)</td>
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<td>WOOD 410 (3) The Forest Ecosystem (M)</td>
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6 credits from the following List A, maximum of 3 credits from each category:
Development and History
AGRI 210 (3) Agro-Ecological History (M)
ANTH 212 (3) Anthropology of Development
HIST 292 (3) History and the Environment
SOCI 254 (3) Development and Underdevelopment

12 credits from the following list B, maximum of 3 credits from each category:

Techniques and Management
BREE 430 (3) GIS for Bioresource Management (M)
CHEE 230 (3) Environmental Aspects of Technology
GEOG 201 (3) Introductory Geo-Information Science
NRSC 437 (3) Assessing Environmental Impact (M)
URBP 507 (3) Planning and Infrastructure (in Barbados)

Immunology and Infectious Disease
ANSC 400 (3) Eukaryotic Cells and Viruses (M)
MIMM 314 (3) Immunology
MIMM 324 (3) Fundamental Virology
MIMM 413 (3) Parasitology
PARA 438 (3) Immunology (M)
WILD 424 (3) Parasitology (M)

Nutrition and Agriculture
AGRI 411 (3) International Agriculture (M)
NUTR 403 (3) Nutrition in Society (M)
NUTR 501 (3) Nutrition in Developing Countries (M)
NUTR 512 (3) Herbs, Foods and Phytochemicals
(Video conference Downtown and Macdonald)

Populations and Place
CANS 407 (3) Regions of Canada (at Bay of Fundy)
GEOG 300 (3) Human Ecology in Geography
GEOG 303 (3) Health Geography
GEOG 498 (3) Humans in Tropical Environments (in Panama)
PSYC 533 (3) International Health Psychology

Pollution and Pest Management
BIOL 350 (3) Insect Biology and Control
BREE 322 (3) Organic Waste Management (M)
ENTO 352 (3) Control of Insect Pests (M)
NRSC 333 (3) Physical and Biological Aspects of Pollution (M)
PLNT 361 (3) Pest Management and the Environment (M)

PHIL 343 (3) Biomedical Ethics
URBP 520 (3) Globalization: Planning and Change (in Barbados)

Development and History
AGRI 210 (3) Agro-Ecological History (M)
ANTH 212 (3) Anthropology of Development
HIST 292 (3) History and the Environment
SOCI 254 (3) Development and Underdevelopment

12 credits from the following list B, maximum of 3 credits from each category:

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Pollution and Pest Management
BIOL 350 (3) Insect Biology and Control
BREE 322 (3) Organic Waste Management (M)
ENTO 352 (3) Control of Insect Pests (M)
NRSC 333 (3) Pollution and Bioremediation (M)
PLNT 361 (3) Pest Management and the Environment (M)

Genetics
BIOL 202 (3) Basic Genetics
LSCI 204 (3) Genetics (M)
Rationale

1. SOCI 234 is not always offered, necessitating that students take it in upper years, where it competes in their schedule for more advanced courses. Rather than require this course, it will be listed as a choice with GEOG 303 and SOCI 309. Both of these courses are highly relevant to the Domain. GEOG 303 was already listed as a complementary, and is moved to this list.

2. GEOG / NRSC 221 is a relatively new cross-listed course which is highly relevant to this program, and serves to integrate many of the subjects in this Domain.

3. NUTR 420 which has not been offered in several years due to the departure of the instructor. ANSC 312 is one of several substitutions for NUTR 420 recommended by Kristine Koski, Director of the School of Dietetics and Human Nutrition.

4. Genetics is de-emphasized and moved to List B to preserve the credit count for the program.

5. GEOG 497, AGRI 413, ENVR 465 and PLNT 361 have been retired.

6. BTEC 502 is an appropriate addition to the decision making section.

7. URBP 520 replaces AGRI 413 as part of the Barbados Field Semester

8. BREE 430 became NRSC 430 last year. The course has not changed, only the name and subject code.

9. Course names and numbers changed associated with Faculty of Agricultural and Environmental Sciences program changes:
   • FDSC 211 (3) Biochemistry 1 – now:  LSCI 211 (3) Biochemistry 1
   • WOOD 410 (3) The Forest Ecosystem – now:  ENVB 410 (3) Ecosystem Ecology
   • NRSC 333 (3) Physical and Biological Aspects of Pollution – now:  NRSC 333 (3) Bioremediation
   • CELL 204 (4) Genetics – now:  LSCI 204 (3) Genetics
Consultations with related units below.

From: Marilyn Scott, Prof.
Sent: Tuesday, March 11, 2008 2:01 PM
To: Peter Barry, Mr.
Subject: RE: Health Domain changes

Pete, hope you can make sense of my questions ...

BSc - Population Stream
   I think the Society and Health set should be included in the Fundamentals ... as we had Population and Society as a required course. What about merging the Health and Environment set with the Health and Society set, under the fundamentals? BTEC 502 would make sense in the Decision-Making set.

Marilyn E. Scott
Associate Professor, Institute of Parasitology
and
Associate Director of Graduate Affairs, McGill School of Environment
Macdonald Campus of McGill University