To be appended to Program Change Proposals for:

**BSc; Environment; Ecological Determinants of Health - Cellular**  
(bsc_environment_health_cell_revision_2008.doc)

**BSc(AgEnvSc); Environment; Ecological Determinants of Health - Cellular**  
(bsc_agenvsc_environment_health_cell_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>
<tr>
<td>ENVR 200 (3) The Global Environment</td>
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<tr>
<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>
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</tr>
<tr>
<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*) | **Core: Complementary Course – Senior Research Project** (3 credits*) |
| AGRI 519 (6) Sustainable Development Plans (in Barbados) | AGRI 519 (6) Sustainable Development Plans (in Barbados) |
| ENVR 401 (3) Environmental Research | ENVR 401 (3) Environmental Research |
| ENVR 451 (6) Research in Panama (in Panama) | 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) | **Domain - Population Concentration: Complementary Courses** (39 credits) |
| PARA 410 (3) Environment and Infection (M) | **21 credits** of fundamentals, maximum of 3 credits from any one category: |
| SOCI 234 (3) Population and Society | 2. **Health, Society and Environment**  
GEOG 221 (3) Environment and Health  
or NRSC 221 (3) Environment and Health (M)  
3. **Toxicology**  
ANSC 312 (3) Animal Health and Disease (M)  
NUTR 420 (3) Toxicology and Health Risks (M)  
PHAR 303 (3) Principles of Toxicology  
4. **Cellular Biology**  
AEBI 202 (3) Cellular Biology (M)  
ANSC 234 (3) Biochemistry 2 (M)  
BIOL 201 (3) Cell Biology and Metabolism  
5. **LSCI 202 (3) Molecular Cell Biology (M)**  
ANSC 234 (3) Biochemistry 2 (M)  
BIOL 201 (3) Cell Biology and Metabolism  
6. **SOCI 309 (3) Health and Illness**  
SOCI 234 (3) Population and Society  
SOCI 309 (3) Health and Illness  |
### Genetics
- BIOL 202 (3) Basic Genetics
- CELL 204 (4) Genetics (M)

### Molecular Biology
- BIOL 200 (3) Molecular Biology
- FDSC 211 (3) Biochemistry 1(M)

### Statistics
- AEMA 310 (3) Statistical Methods 1(M)
- MATH 203 (3) Principles of Statistics 1 or equivalent

### Nutrition
- ANSC 330 (3) Fundamentals of Nutrition (M)
- NUTR 307 (3) Human Nutrition (Video conference Downtown and Macdonald)

12 credits chosen from Human Health, maximum of 3 credits from any one category:

### Immunology and Pathogenicity
- MICR 341 (3) Mechanisms of Pathogenicity (M)
- MIMM 314 (3) Immunology
- PARA 438 (3) Immunology (M)
- PATH 300 (3) Human Disease

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

### Nutrition
- NUTR 403 (3) Nutrition in Society (M)
- NUTR 512 (3) Herbs, Foods and Phytochemicals (Video conference Downtown and Macdonald)

### Drugs and Hormones
- ANSC 424 (3) Metabolic Endocrinology (M)
- PHAR 300 (3) Drug Action

### Physiology
- ANSC 323 (4) Mammalian Physiology (M)
- PHGY 209 (3) Mammalian Physiology 1

6 credits chosen from the Natural Environment, maximum of 3 credits from any one category:

### Hydrology and Climate
- AGRI 452 (3) Water Resources in Barbados (in Barbados)
- BREE 217 (3) Hydrology and Water Resources (M)
- GEOG 321 (3) Climatic Environments
- GEOG 322 (3) Environmental Hydrology
- NRSC 510 (3) Agricultural Micrometeorology (M)

### Techniques and Management
- BREE 322 (3) Organic Waste Management (M)
- CHEE 230 (3) Environmental Aspects of Technology
- GEOG 302 (3) Environmental Management 1
- NRSC 437 (3) Assessing Environmental Impact (M)

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### Genetics
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- LSCI 204 (3) Genetics (M)

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- LSCI 211 (3) Biochemistry 1(M)

### Statistics
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## 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 complementary with GEOG 303 and SOCI 309. Both of these courses are highly relevant to the Domain.

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. Course retirements by their departments.

5. ENTO 350 and BIOL 350 are cross-listed courses.

6. Course names and numbers changed associated with Faculty of Agricultural and Environmental Sciences program changes:
   - AEBI 202 (3) Cellular Biology – now: LSCI 202 (3) Molecular Cell Biology

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<thead>
<tr>
<th>URBP 507 (3) Planning and Infrastructure (in Barbados)</th>
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<tr>
<td>Pest Management</td>
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<tr>
<td>BIOL 350 (3) Insect Biology and Control</td>
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<tr>
<td>ENTO 352 (3) Control of Insect Pests (M)</td>
<td>or ENTO 350 (3) Insect Biology and Control (M)</td>
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<tr>
<td>PLNT 361 (3) Pest Management and the Environment (M)</td>
<td>ENTO 352 (3) Control of Insect Pests (M)</td>
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<td>BREE 518 (3) Bio-Treatment of Wastes (M)</td>
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<td>CHEM 307 (3) Analytical Chemistry of Pollutants</td>
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<tr>
<td>NRSC 333 (3) Physical and Biological Aspects of Pollution (M)</td>
<td>NRSC 333 (3) Pollution and Bioremediation (M)</td>
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<td>BIOL 465 (3) Conservation Biology</td>
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<td>BIOL 553 (3) Neotropical Environments (in Panama)</td>
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<tr>
<td>ENVR 540 (3) Ecology of Species Invasions</td>
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<td>or BIOL 540 (3) Ecology of Species Invasions</td>
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<tr>
<td>GEOG 497 (3) Ecology of Coastal Waters (at Bay of Fundy)</td>
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<td>MICR 331 (3) Microbial Ecology (M)</td>
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<tr>
<td>PLNT 304 (3) Biology of Fungi (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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<tr>
<td>WOOD 410 (3) The Forest Ecosystem (M)</td>
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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

BSc - Cellular 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?

ANSC 400 (3) Eukaryotic Cells and Viruses (M)
And
PARA 400 (3) Eucaryotic Cells and Viruses (M) are the same course
BTEC 502 especially relevant for this domain