To be appended to Program Change Proposal for:

**BSc; Environment; Earth Sciences and Economics**
(bsc_environment_earth_revision_2008.doc)

**Course list**
Deleted courses shown as **strikeout**, added courses shown as **underlined italics**. Courses at Macdonald Campus are shown with (M).

### Current Program (66 credits)

**Core: Required Courses** (18 credits)
- ENVR 200 (3) The Global Environment
- ENVR 201 (3) Society and Environment
- ENVR 202 (3) The Evolving Earth
- ENVR 203 (3) Knowledge, Ethics and Environment
- ENVR 301 (3) Environmental Research Design
- ENVR 400 (3) Environmental Thought

**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** (22 credits)
- ECON 230D1 (3) Microeconomic Theory
- ECON 230D2 (3) Microeconomic Theory
- ECON 405 (3) Natural Resource Economics
- EPSC 210 (3) Introductory Mineralogy
- EPSC 212 (4) Introductory Petrology
- EPSC 220 (3) Principles of Geochemistry
- EPSC 425 (3) Sediments to Sequences

**Domain: Complementary Courses** (23 credits)
- 3 credits of statistics from:
  - AEMA 310 (3) Statistical Methods 1 (M)
  - GEOG 202 (3) Statistics and Spatial Analysis
  - MATH 203 (3) Principles of Statistics 1 or equivalent

  12 credits from List A:
  - AGEC 333 (3) Resource Economics (M)
  - BIOL 308 (3) Ecological Dynamics
  - or WILD 205 (3) Principles of Ecology (M)
  - CHEE 430 (3) Technology Impact Assessment or NRSC 437 (3) Assessing Environmental Impact (M)
  - ECON 326 (3) Ecological Economics
  - ECON 347 (3) Economics of Climate Change
  - ECON 416 (3) Topics in Economic Development 2
  - ECON 525 (3) Project Analysis

  8 credits minimum, from List B:
  - AGRI 435 (3) Soil and Water Quality Management (M)
  - ANTH 339 (3) Ecological Anthropology

### Proposed Program (66 credits)

**Core: Required Courses** (18 credits)
- ENVR 200 (3) The Global Environment
- ENVR 201 (3) Society and Environment
- ENVR 202 (3) The Evolving Earth
- ENVR 203 (3) Knowledge, Ethics and Environment
- ENVR 301 (3) Environmental Research Design
- ENVR 400 (3) Environmental Thought

**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** (21 credits)
- ECON 230D1 (3) Microeconomic Theory
- ECON 230D2 (3) Microeconomic Theory
- ECON 405 (3) Natural Resource Economics
  1  EPSC 212 (3) Introductory Petrology
  2  EPSC 425 (3) Sediments to Sequences
  3  EPSC 455 (3) Sedimentary Geology

**Domain: Complementary Courses** (24 credits)
- 3 credits of statistics from:
  - AEMA 310 (3) Statistical Methods 1 (M)
  - or GEOG 202 (3) Statistics and Spatial Analysis
  - or MATH 203 (3) Principles of Statistics 1 or equivalent

  9 credits from List A:
  - AGEC 333 (3) Resource Economics (M)
  3  BIOL 308 (3) Ecological Dynamics
  3  or WILD 205 (3) Principles of Ecology (M)
  - CHEE 430 (3) Technology Impact Assessment or NRSC 437 (3) Assessing Environmental Impact (M)
  - ECON 326 (3) Ecological Economics
  - ECON 347 (3) Economics of Climate Change
  - ECON 416 (3) Topics in Economic Development 2
  - ECON 525 (3) Project Analysis

  12 credits minimum, from List B:
  - AGRI 435 (3) Soil and Water Quality Management (M)
  - ANTH 339 (3) Ecological Anthropology
Rationale:
1. EPSC 212 has changed from 4 credits to 3 credits.

2. These changes reflect retirements and credit count changes in Earth and Planetary Sciences courses. They are also designed to emphasize resources (fossil fuels, groundwater, minerals), the key focus of the domain, and to provide more field experience to students.

3. BIOL 308 Ecology has evolved away from the course that was originally included in this program, and is no longer as relevant. It contains extensive ecological modeling, and is overkill for an Arts program in economics and geology. Students receive basic ecology content in ENVR 202, a required course. To compensate for credit changes, 3 additional credits of List B courses are required.

4. Course retirement.

5. Course names and numbers changed associated with Faculty of Agricultural and Environmental Sciences program changes:
   - SOIL 410 (3) Soil Chemistry – now: SOIL 510 (3) Environmental Soil Chemistry
Consultations with related units:

From: Christopher Green, Prof.
Sent: Saturday, February 23, 2008 11:20 AM
To: Peter Barry, Mr.; 'Bruce Hart'
Subject: RE: Proposed changes to economics and the earth's environment domains in MSE

Peter,

The proposed (minor) change seems OK with me.

Best regards,

Chris Green

From: Bruce Hart [mailto:hart@eps.mcgill.ca]
Sent: Monday, January 21, 2008 10:07 AM
To: Peter Barry, Mr.
Subject: eps courses - economics and the earth's environment domain

hello pete

at the departmental meeting on friday we came up with our wish list for changes to the b.a. and b.sc. domains. here is what we suggest:

1) b.a. domain
complimentary courses: replace epsc 312 (spectroscopy) and epsc 334 (invertebrate paleontology) with epsc 455 (sedimentary geology) and epsc 549 (hydrogeology)

2) b.sc. domain
required courses: replace epsc 425 (sediments to sequences) with epsc 455 (sedimentary geology)
complimentary courses: add epsc 435 (geophysical applications; we will work on changing pre-requisites for that course), 452 (mineral deposits), 425 (sediments to sequences), 331 (field school 2) and 341 (field school 3). delete epsc 334. we could also delete the independent studies courses (483d1 and 483d2) if needed.
all of these changes are designed to emphasize resources (fossil fuels, groundwater, minerals), the key focus of the domains.
let me know if/when you need more from me.

thanks
bruce

Bruce Hart
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