



# Program Approval Form

For approval of new programs and deletions or modifications to an existing program.

### Action Requested:

Create New (SCHEV approval required except for minors)

Inactivate Existing

Modify Existing (check **ALL** that apply)

Title (SCHEV approval required except for minors)

**Concentration** (Choose one):  Add  Delete  Modify

Degree Requirements

Admission Standards/ Application Requirements

Other Changes: \_\_\_\_\_

### Type (Check one):

B.A.  B.S.  Minor (req. C3 approval)

M.A.  M.S.  M.Ed.

Ph.D.

Undergraduate Certificate\* (req. C3 approval)

Graduate Certificate\*

Bachelor's/Accelerated  Other:

Master's

**College/School:**

CHSS

**Department:**

New Century College

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**Effective Term:**

Fall

2016

**Please note:** For students to be admitted to a new degree, minor, certificate or concentration, the program must be fully approved, entered into Banner, and published in the University Catalog.

### Justification: (attach separate document if necessary)

1. Create new concentration in Sustainable Food and Agriculture in response to student demand. Course list for concentration attached.
2. Create new concentration in Conservation and Sustainability to enable ESS majors who enroll in the Smithsonian-Mason semester to use their coursework for the Semester to count as the concentration for their major. This makes it feasible for students who want to do the Semester and major in ESS to do both. Course list for concentration attached.
3. Merge two existing ESS concentrations (Environmental Policy & Politics and Environmental Economics) into one concentration called Environmental Policy and Economics. The Environmental Economics concentration has very low enrollment and the ESS advisory group agrees that it should close. The ESS advisory group further agrees that the Environmental Policy and Politics concentration is less rigorous than other ESS concentrations and should have an additional economics course in it, since economics is a critical component of environmental policy. The newly created Environmental Policy and Economics concentration has greater rigor than the Policy & Politics concentration and includes additional economics course work. The concentration electives provide good options for students who would like to delve more deeply into policy or economics. Course list for merged concentration attached.
4. Create alternative environmental science and society sequence to satisfy 11 credits of the core requirements. This sequence is for students seeking a higher degree of rigor in fulfilling this aspect of their core requirements and takes advantage of new courses that are being offered by the Environmental Science and Policy Department. Sheet showing existing sequence and new alternative sequence attached.
5. Delete concentration elective courses that have not been offered in previous 5 years. List of courses to be deleted attached.
6. Expand concentration course options. Suggested language to add to catalog attached.  
Note: changes 1-5 are also reflected in two versions of the ESS advising sheet that are attached. One is the advising sheet for the 2015-16 catalog year; the other is the advising sheet for 2016-17 with additions highlighted in yellow and deletions highlighted in blue.

**Program Title:** (Required)

Title must identify subject matter. Do not include name of college/school/dept.

**Concentration(s):**

**Admissions Standards / Application Requirements:** (Required only if different from those listed in the University Catalog)

**Degree Requirements:**

Consult University Catalog for models, attach separate document if necessary using track changes for modifications

**Courses offered via distance:**

(if applicable)

**TOTAL CREDITS REQUIRED:**

Existing	New/Modified
Environmental and Sustainability Studies	Environmental and Sustainability Studies
1. Environmental Policy & Politics; Environmental Economics 2. Sustainable Business 3. Equity and Environmental Justice 4. Climate Change and Society 5. * 6. *	1. Environmental Policy and Economics 2. Sustainable Business 3. Equity and Environmental Justice 4. Climate Change and Society 5. Sustainable Food and Agriculture 6. Conservation and Sustainability
n/a	n/a
See attached	See attached
n/a	n/a
60-61	60-62

\*For Certificates Only: Indicate whether students are able to pursue on a

Full-time basis

Part-time basis

**Approval Signatures**

Department \_\_\_\_\_ Date \_\_\_\_\_ College/School \_\_\_\_\_ Date \_\_\_\_\_ Provost's Office \_\_\_\_\_ Date \_\_\_\_\_  
*Required for Minors and Interdisciplinary Programs*

If this program may impact another unit or is in collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

**For Minors and UG Certificates only (Cross-College Curriculum Committee Approval)**

C3 Committee Member \_\_\_\_\_ Provost Office \_\_\_\_\_ C3 Committee Approval Date \_\_\_\_\_

**For Graduate Programs Only**

Graduate Council Member \_\_\_\_\_ Provost Office \_\_\_\_\_ Graduate Council Approval Date \_\_\_\_\_

**For Registrar Office's Use Only:** Received \_\_\_\_\_ Banner \_\_\_\_\_ Catalog \_\_\_\_\_ *revised 7/1/15*

## Environmental & Sustainability Studies, B.A.

### Twelve required core courses (42 credits)

*Three courses (11 – 12 credits) in environmental science and society*

- EVPP 110 - The Ecosphere: An Introduction to Environmental Science I Credits: 4
- EVPP 111 - The Ecosphere: An Introduction to Environmental Science II Credits: 4
- EVPP 377 - Applied Ecology Credits: 3

**or**

- **EVPP 210 – Environmental Biology: Molecules and Cells (Prerequisite: CHEM 211)**
- **EVPP 301 – Environmental Science: Biological Diversity and Ecosystems (Prerequisite: Grade of C or better in EVPP 210)**
- **EVPP 302 – Environmental Science: Biomes and Human Dimensions (Prerequisite: Grade of C or better in EVPP 301)**

*Two courses (7 credits) in individual and group behavior*

- EVPP 336 - Human Dimensions of the Environment Credits: 3
- NCLC 334 - Environmental Justice Credits: 4

*Three courses (9 credits) in business and public policy*

- ECON 105 - Environmental Economics for the Citizen Credits: 3
- EVPP 322 - Business and Sustainability Credits: 3
- EVPP 361 - Introduction to Environmental Policy Credits: 3 **or**  
GOVT 361 - Introduction to Environmental Policy  
Credits: 3 (satisfies the college BA requirement for social and behavioral science)

*One course (4 credits) in statistics*

- SOCI 313 - Statistics for the Behavioral Sciences Credits: 4
- or**
- **BIOL 214 – Biostatistics (4 credits)**

*Three courses (11 credits) in integration, analysis, innovation*

- NCLC 210 - Sustainable World Credits: 4
- EVPP 480 - Sustainability in Action Credits: 4
- NCLC 390 - Internship Credits: 1-6 and/or NCLC 490 Internship Credits 1-6 (minimum of 3 credits required)

### **Changes**

- **adding NCLC 210, 301 & 302 as an options to the environmental science and society core requirement**
- **adding BIOL 214 as an option to the statistics core requirement**

*One Concentration (18-19 credits)*

Students must complete one concentration.

Concentration in Business and Sustainability (BUSU) = 18-19 credits

Three required courses (9 credits)

- MBUS 300 - Managing Financial Resources Credits: 3
- MBUS 301 - Managing People and Organizations Credits: 3
- MBUS 306 - Managing Projects and Operations Credits: 3

One or two additional courses (3-4 credits) chosen from:

- GOVT 353 - Social Entrepreneurship Credits: 3
- IT 495 - Turning Ideas into Successful Companies Credits: 3
- MBUS 304 - Entrepreneurship: Starting and Managing a New Enterprise Credits: 3
- MGMT 451 - New Venture Creation Credits: 3 **or**
- CHSS 310 - Introduction to Entrepreneurship Credits: 1 **and** one of the above courses

Two courses (6 credits) chosen from:

- ECON 335 - Environmental Economics Credits: 3
- EVPP 338 - Economics of Environmental Policy Credits: 3
- EVPP 362 - Intermediate Environmental Policy Credits: 3
- GGG 307 - Sustainable Development Credits: 3
- NCLC 204 - Leadership Theory and Practice Credits: 3
- PHIL 243 - Global Environmental Ethics Credits: 3
- PHIL 305 - Business Ethics Credits: 3
- **Other coursework with advisor approval**

*Changes*

- **added "Other coursework with advisor approval"**

Concentration in Climate Change and Society (CCSO) = 18-19 credits

Three required courses (9-10 credits)

- CLIM 101 - Global Warming: Weather, Climate, and Society Credits: 3 **or**  
GGS 121 - Dynamic Atmosphere and Hydrosphere Credits: 4
- EVPP 432 - Energy Policy Credits: 3
- EVPP 436 - The Human Dimensions of Global Climate Change Credits: 3

9 credits chosen from:

- EVPP 362 - Intermediate Environmental Policy Credits: 3
- GGS 302 - Global Environmental Hazards Credits: 3
- GGS 304 - Populations Dimensions of Global Change Credits: 3
- GGS 309 - Meteorology and Climate Credits: 3
- GGS 312 - Physical Climatology Credits: 3
- GGS 314 - Severe and Extreme Weather Credits: 3
- ~~GGS 322 - Issues in Global Change Credits: 3~~
- ~~GGS 353 - Observations of the Earth and its Climate Credits: 3~~
- ~~NCLC 220 - Energy and Environment Credits: 3-6~~
- PHIL 243 - Global Environmental Ethics Credits: 3 (satisfies the college BA requirement in philosophy and religious studies)
- PHIL 343 - Topics in Environmental Philosophy Credits: 3 (satisfies the college BA requirement in philosophy and religious studies)
- **Other coursework with advisor approval**

*Changes*

- *deleted GGS 322 & 353 and NCLC 220 as options (course not offered in recent years)*
- *added "Other coursework with advisor approval"*

## **Concentration in Environmental Policy and Economics = 18 credits**

~~Concentration in Environmental Economics (EVEC) / Concentration in Environmental Policy and Politics (EVPO)~~

Four required courses (12 credits)

- ECON 104 - Contemporary Macroeconomic Principles Credits: 3
- ~~ECON 306 - Intermediate Microeconomics Credits: 3~~
- EVPP 338 - Economics of Environmental Policy Credits: 3
- EVPP 362 - Intermediate Environmental Policy Credits: 3 or **GOVT 362: Intermediate Environmental Policy Credits: 3**
- **GOVT 351 – Administration in Political Systems**
- ~~GOVT 103 - Introduction to American Government Credits: 3~~
- ~~GOVT 132 - Introduction to International Politics Credits: 3~~

6 credits chosen from:

- **CONF 340 – Global Conflict Analysis & Resolution Credits: 3**
- **ECON 306 – Intermediate Microeconomics Credits: 3**
- **ECON 311 – Intermediate Macroeconomic Credits: 3**
- **ECON 330 – Public Finance Credits: 3**
- **ECON 345 – Introduction to Econometrics Credits: 3**
- ECON 360 - Economics of Developing Areas Credits: 3
- **ECON 412 – Game Theory & Economics of Institutions**
- ~~ECON 361 - Economic Development of Latin America Credits: 3 (satisfies the college BA requirement in non-Western culture)~~
- ~~ECON 362 - African Economic Development Credits: 3 (satisfies the college BA requirement in non-Western culture)~~
- EVPP 337 - Environmental Policy Making in Developing Countries Credits: 3
- **EVPP 396 – Directed Topics in Environmental Science & Policy Credits: 1 – 4**
- EVPP 432 - Energy Policy Credits: 3
- GEOL 420 - Earth Science and Policy Credits: 3
- GGG 305 - Economic Geography Credits: 3
- GGG 307 - Sustainable Development Credits: 3
- **GOVT 336 – Political Development & Change Credits: 3**
- **GOVT 339 – Issues in the Politics of Advanced Industrial Societies Credits: 3**
- **GOVT 343 – International Political Economy Credits: 3**
- **GOVT 357 – Urban Governance & Planning Credits: 3**
- **GOVT 364 – Public Policy Making Credits: 3**
- ~~NCLC 220 - Energy and Environment Credits: 3-6~~
- NCLC 331 - The Nonprofit Sector Credits: 4
- **NCLC 4xx – Food Systems & Policy Credits: 3**
- **Other coursework with advisor approval**
- ~~NCLC 402 - Plants and People - Sustenance, Ceremony, and Sustainability Credits: 6~~
- ~~PHIL 243 - Global Environmental Ethics Credits: 3 (satisfies the college requirement for philosophy and religious studies)~~
- ~~PHIL 343 - Topics in Environmental Philosophy Credits: 3 (satisfies the college requirement for philosophy and religious studies)~~

### **Changes**

- *combined Environmental Economics (EVEC) and Environmental Policy & Politics (EVPO) concentrations into a single concentration in Environmental Policy & Economics (due to low student enrollment in each)*
- *added additional course options*
  - *added Other coursework with advisor approval*

## Concentration in Equity and Environmental Justice (EQEJ) = 18 credits

Four required courses (12 credits)

- EVPP 362 - Intermediate Environmental Policy Credits: 3
- EVPP 436 - The Human Dimensions of Global Climate Change Credits: 3
- NCLC 336 - Poverty, Wealth and Inequality in the US Credits: 3
- NCLC 337 - Social Justice Consciousness and Personal Transformation Credits: 3

6 credits chosen from:

- CONF 394 - Human Rights and Inequality Credits: 3
- ~~EVPP 335 - People, Plants, and Culture Credits: 3~~
- GGC 304 - Populations Dimensions of Global Change Credits: 3
- GGC 307 - Sustainable Development Credits: 3
- GOVT 445 - Human Rights Credits: 3
- NCLC 304 - Social Movements and Community Activism Credits: 4
- NCLC 331 - The Nonprofit Sector Credits: 4
- NCLC 338 - Animal Rights and Humane Education Credits: 3
- **NCLC 362 – Social Justice & Human Rights Credits: 3**
- NCLC 402 - Plants and People - Sustenance, Ceremony, and Sustainability Credits: 6
- SOCI 320 - Social Structure and Globalization Credits: 3
- SOCI 355 - Social Inequality Credits: 3
- **Other coursework with advisor approval**

### *Changes*

- *Deleted EVPP 335 (no offered in recent years)*
- *Added NCLC 362 (new course as of 2015)*
- *Added “Other coursework with advisor approval”*

## **Concentration in Sustainable Food and Agriculture (18 credits)**

### **Core Requirements: 10 credits:**

- **NCLC 3xx - Sustainable Agriculture and Food Systems Credits: 6**
- **NCLC 4xx – Food Systems and Policy Credits: 3**
- **NCLC 4xx – Professional Pathways in Sustainable Food Systems Credits: 1**

### **And at least 8 credits from the following classes:**

- **ANTH 366 – Food and Human Evolution Credits: 3**
- **ANTH 376 – Food and Culture Credits: 3**
- **BIOL 344 – Plant Diversity and Evolution (pre-req BIOL 310 – Biodiversity) Credits: 4**
- **BIOL 345 – Plant Ecology (pre-req BIOL 310 – Biodiversity) Credits: 4**
- **EVPP 335 – People, Plants, and Culture Credits: 3**
- **EVPP 436 – The Human Dimensions of Global Climate Change Credits: 3**
- **GGIS 303 - Conservation of Resources and Environment Credits: 3**
- **NCLC 331 – The Nonprofit Sector Credits: 4**
- **NCLC 338 – Animal Rights and Humane Education Credits: 3**
- **NCLC 402 – Plants and People: Sustenance, Ceremony, & Sustainability Credits: 6**
- **NUTR 295 – Introduction to Nutrition Credits: 3**
- **NUTR 408 – Introduction to Food Security (pre-req NUTR 295) Credits: 3**
- **Other coursework with advisor approval**

*Changes = new concentration option*



## **Concentration in Conservation and Sustainability (COSU) (19 - 22 credits)**

**Smithsonian-Mason Program (16 credits)** Students complete 16 credits offered through the Smithsonian-Mason School of Conservation in cooperation with the Smithsonian Conservation Biology Institute.

### ***Conservation, Biodiversity and Society option***

- **CONS 320 - Conservation in Practice Credits: 3**
- **CONS 401 - Conservation Theory Credits: 3**
- **CONS 402 - Applied Conservation Credits: 4**
- **CONS 410 - Human Dimensions in Conservation Credits: 3**
- **CONS 490 - Integrated Conservation Strategies Credits: 3**

### ***Wildlife Ecology and Conservation option***

- **CONS 320 - Conservation in Practice Credits: 3**
- **CONS 403 - Ecology and Conservation Theory Credits: 3**
- **CONS 404 - Monitoring and Assessment of Biodiversity Credits: 4**
- **CONS 411 - Science Communication for Conservation Credits: 3**
- **CONS 491 - Comprehensive Conservation Planning Credits: 3**

**And at least three credits from the following classes:**

- **BIOL 472 – Introductory Animal Behavior (pre-req: BIOL 303 or permission) Credits: 3**
- **EVPP 419 – Marine Mammal Biology And Conservation (pre-req: GEOL 309) Credits: 3**
- **EVPP 421 – Marine Conservation (pre-req: GEOL 309) Credits: 3**
- **EVPP 430 – Fundamentals of Environmental Geographic Information Systems (EVPP 110, 110 and IT 104 or CDS 103) Credits: 3**
- **GGIS 303 - Conservation of Resources and Environment Credits: 3**
- **NCLC 211 - Introduction to Conservation Studies Credits: 4**
- **NCLC 311 - The Mysteries of Migration: Consequences for Conservation Credits: 6**
- **NCLC 3XX - Sustainable Food Systems (submitted for 16-17 catalog) Credits: 6**
- **NCLC 4XX – Food Systems and Policy (submitted for 16-17 catalog) Credits: 3**
- **NCLC 3XX - Beekeeping and Sustainability (submitted for 16-17 catalog) Credits: 3**
- **NCLC 403 - Conservation Behavior Credits: 6**
- **Other coursework with advisor approval**

***Changes = new concentration option***

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