

Rochester INSTITUTE OF TECHNOLOGY

Minor Program proposal form

College of Science

**Name of Certifying Academic Unit:** School of Life Sciences

**Name of Minor:** Environmental Science

**Brief description of the minor to be used in university publications**

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| The Environmental Science Minor is designed to introduce students to the interdisciplinary nature of environmental issues and concepts and provide them with opportunities to further investigate many of these issues through advanced course work. Central to this minor are the development of field, analytical, and problem solving skills and an understanding of the multiple stakeholder perspectives often involved with environmental issues. Students interested in becoming “citizen scientists” or pursuing employment or an advanced degree with an environmental focus will find this minor beneficial. |

**1.0 Minor Program Approvals**

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| --- | --- | --- |
|  | Approval request date: | Approval granted date: |
| Academic Unit Curriculum Committee | 1-27-2012 | 1-27-2012 |
| College Curriculum Committee | 1-31-2012 | 1-31-2012 |
| Inter-College Curriculum Committee |  |  |

**2.0 Rationale:**

A minor at RIT is a related set of academic courses consisting of no fewer than 15 semester credit hours leading to a formal designation on a student's baccalaureate transcript

How is this set of academic courses related?

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| The courses offered help students understand the various aspects of environmental problem solving and provide them with both skills and opportunities to work through environmental problem solving. The three required foundational courses provide background in and an introduction to environmental problem solving. The advanced electives are designed to give the students depth. |

**3.0 Multidisciplinary involvement:**

If this is a multidisciplinary minor spanning two or more academic units, list the units and their role in offering and managing this minor.

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| Primarily based in the COS, courses are offered by several programs within the School of Life Sciences (SOLS). One required course, Environment and Society (COLA-STSO-220), is offered by the Science, Technology, and Society Program as part of the three course foundation of the minor. The other two courses are Concepts of Environmental Science (COS-ENVS-101) and Environmental Workshop (COS-ENVS-201). Environmental Workshop has been developed with the STS Program and serves as the lab component for both Concepts of Environmental Science and Environment and Society. SOLS will be administratively responsible for overseeing this minor. |

**4.0 Students ineligible to pursue this minor:**

The purpose of the minor is both to broaden a student's college education and deepen it in an area outside the student’s major program. A minor may be related to and complement a student’s major, or it may be in a completely different academic/professional area. It is the responsibility of the academic unit proposing a minor and the unit’s curriculum committee to indicate any home programs for which the minor is not a broadening experience.

Please list below any home programs whose students will not be allowed to pursue this minor, provide the reasoning, and indicate if this exclusion has been discussed with the affected programs:

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| Environmental Science majors will not be allowed to minor in Environmental Science since most of the courses are required for the major. |

**5.0 Minor Program Structure, Sequence and Course Offering Schedule:**

Describe the structure of the proposed minor and list all courses, their anticipated offering schedule, and any prerequisites.

* All minors must contain at least fifteen semester credit hours;
* Minors may be discipline-based or interdisciplinary;
* In most cases, minors shall consist of a minimum of two upper division courses (300 or above) to provide reasonable breadth and depth within the minor;
* As per New York State requirements, courses within the minor must be offered with sufficient frequency to allow students to complete the minor within the same time frame allowed for the completion of the baccalaureate degree;
* Provide a program mask showing how students will complete the minor.

Narrative of Minor Program Structure:

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| A three course foundation sequence will be followed by two advanced electives. In most cases students will need to take BIOL-121, BIOL-122, and BIOL-240 as prerequisites to this minor. A grade of a C or better must be attained in all courses applied to the minor. |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Course Number & Title | SCH | Required | Optional | Fall | Spring | Annual/ Biennial | Prerequisites |
| ENVS-101-Concepts of Environmental Science | 3 | X |  | X |  | Annual | None |
| ENVS-201-Environmental Workshop | 3 | X |  |  | X | Annual | ENVS-101 |
| STSO-220-Environment and Society | 3 | X |  | X |  | Annual | None |
| 300-400 level elective | 3-4 |  | X | X | X | Annual | Course specific |
| 300-400 level elective | 3-4 |  | X | X | X | Annual | Course specific |

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| --- | --- |
| Total credit hours: 15-17 |  |

Sampling of Available 300-400 Electives (SOLS)

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| --- | --- | --- | --- | --- | --- |
| Course Number & Title | SCH | Fall | Spring | Annual/ Biennial | Prerequisites |
| ENVS-301-Environmental Science Field Skills | 4 |  | X | Annual | ENVS-201, BIOL-240,  CHMG-141 and 145 |
| BIOL-475-Conservation Biology | 3 |  | X | Annual | BIOL-240 |
| BIOL-343-Tropical Ecology | 3 |  | X | Annual | BIOL-240 |
| BIOL-371- Freshwater Ecology | 3 | X |  | Biennial | BIOL-240 |
| BIOL-373- Marine Biology | 3 | X |  | Biennial | BIOL-240 |
| Other upper division courses offered by SOLS and approved by the Faculty of the Environmental Science Program |  |  |  |  |  |

**Minor Course Conversion Table: Quarter Calendar and Semester Calendar Comparison**

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| **Directions: The tables on this page will be used by the registrar’s office to aid student’s transitioning from the quarter calendar to the semester calendar.**  **If this minor existed in the quarter calendar and is being converted to the semester calendar please complete the following tables.**  **If this is a new minor that did not exist under the quarter calendar do not complete the following tables.**  Use the following tables to show minor course comparison in quarter and semester calendar formats. Use courses in the (2011-12) minor mask for this table. Display all required and elective minor courses. If necessary clarify how course sequences in the quarter calendar convert to semesters by either bracketing or using some other notation. |

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| Name of Minor in Semester Calendar: | Environmental Science |
| Name of Minor in Quarter Calendar: | Environmental Science |
| Name of Certifying Academic Unit: | School of Life Sciences |

| **QUARTER: Current Minor Courses** | | | **SEMESTER: Converted Minor Courses** | | |  |
| --- | --- | --- | --- | --- | --- | --- |
| Course # | Course Title | QCH | Course # | Course Title | SCH | **Comments** |
| 1006-202 | Concepts of Environmental Science | 4 | ENVS-101 | Concepts of Environmental Science | 3 |  |
|  |  |  | ENVS-201 | Environmental Workshop | 3 | Course takes lab components of 1006-202 and 0508-460 and combines them into an intro problem solving course |
| 0508-460 | Environment and Society | 4 | STSO-220 | Environment and Society | 3 |  |
|  | Elective | 4 |  | Elective | 3-4 | See Below |
|  | Elective | 4 |  | Elective | 3-4 | See Below |
|  | Elective | 4 |  | Elective | 3-4 | See Below |

**Sample Electives and Pre-requisite Courses**

| **QUARTER: Current Minor Courses** | | | **SEMESTER: Converted Minor Courses** | | |  |
| --- | --- | --- | --- | --- | --- | --- |
| Course# | Course Title | QCH | Course # | Course Title | SCH | **Comments** |
| 1001-251 | Introduction to Biology I | 4 | BIOL-121 | Introduction to Biology I | 4 | Pre-Requisite for Ecology |
| 1001-252 | Introduction to Biology II | 4 |  |  |  | Pre-Requisite for Ecology, Quarter content split between semester courses |
| 1001-253 | Introduction to Biology III | 4 | BIOL-122 | Introduction to Biology II | 4 | Pre-Requisite for Ecology |
| 1011-215 | General and Analytical Chemistry I | 4 | CHMG-141 | G&A Chem. I | 3 | Pre-Requisite for Environmental Science Field Skills |
| 1011-205 | Chemistry Principles I Lab | 1 | CHMG-145 | G&A Chem. I Lab | 1 | Pre-Requisite for Environmental Science Field Skills |
| 1011-216 | General and Analytical Chemistry II | 3 | CHMG-142 | G&A Chem. II | 3 | Pre-Requisite for Environmental Science Field Skills |
| 1011-206 | Chemistry Principles II Lab | 1 | CHMG-146 | G&A Chem. II Lab | 1 | Pre-Requisite for Environmental Science Field Skills |
| 1011-202 | Fundamentals of Organic Chemistry | 3 | CHMO-231 | Organic Chemistry I | 3 | Pre-Requisite for Environmental Science Field Skills |
| 1011-207 | Introduction to Organic Chemistry Lab | 1 | CHMO-235 | Organic Chemistry I Lab | 1 | Pre-Requisite for Environmental Science Field Skills |
| 1001-340 | General Ecology | 4 | BIOL-240 | General Ecology | 4 | Advanced Elective in Quarters and a Pre-Requisite for Environmental Science Field Skills (quarters and semesters) |
| 1006-203 | Environmental Science Field Skills | 4 | ENVS-301 | Environmental Science Field Skills | 4 | Advanced Elective (quarters and semesters) |
| 1001-443 | Tropical Ecology | 4 | BIOL-343 | Tropical Ecology | 3 | Advanced Elective (quarters and semesters) |
| 1001-471 | Freshwater Ecology | 4 | BIOL-371 | Freshwater Ecology | 3 | Advanced Elective (quarters and semesters) |
| 1001-473 | Marine Biology | 4 | BIOL-373 | Marine Biology | 3 | Advanced Elective (quarters and semesters) |
| 1001-475 | Conservation Biology | 4 | BIOL-475 | Conservation Biology | 3 | Advanced Elective (quarters and semesters) |