

Rochester INSTITUTE OF TECHNOLOGY

Minor Program proposal form

golisano college of computing and information sciences

**School of Interactive Games & Media**

**Name of Minor:** Free and Open Source Software and Free Culture

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

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| Free and Open Source Software (FOSS) is released with licenses that allow it to be redistributed freely for others to use, copy and/or modify within certain restrictions and conditions. Free Culture (FC) refers to Writing, Art, Music and other creative materials also released with rights for reuse and/or redistribution that are more flexible than those of the traditional market place. Both are often created and/or distributed by collaborative teams with members around the world. This minor is intended for students who want to develop a deep understanding of the processes, practices, technologies, and financial, legal and societal impacts of the FOSS and FC movements. The minor includes a set of computing and liberal arts courses that explore these aspects and impacts through research, analysis and participation in these communities via the creation of digital cultural artifacts and team-driven software projects. It is designed so that students from technical, arts or liberal arts backgrounds can all build a path through it. |

**1.0 Minor Program Approvals**

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|  | Approval request date: | Approval granted date: |
| Academic Unit Curriculum Committee | 4/29/2013 | 10/29/2013 |
| College Curriculum Committee | 10/29/2013 | 12/12/2013 |
| Inter-College Curriculum Committee | 2-12-14 | 2-25-14 |

**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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| Since offering its first seminar in FOSS development four years ago, the School of Interactive Games and Media has seen steady interest from students across GCCIS and some participation from other colleges as well. This has been demonstrated by students taking additional courses, pursuing independent studies, completing Summer Undergraduate Research Fellowship projects, and presenting their work at conferences across the country. Outside of academics and research they have also completed local, regional and even international co-ops within the FOSS industry and/or using FOSS technology. Likewise, students in New Media, Liberal Arts and other majors have shown an interest in FC in terms of taking courses and creating projects within the scope of their disciplines. These students have expressed an interest in the possibility of a minor to gain a deeper understanding of FOSS and FC. Interest in a minor has also been voiced by several of our academic and industry partners. In discussing this issue, the program faculty have agreed that FOSS and FC represent processes and approaches to content creation and software development and as such don’t warrant full degrees in and of themselves.  We therefore propose a minor in *Free and Open Source Software and Free Culture* to complement the existing degree programs within the School of Interactive Games and Media, the Golisano College and across the institute to provide opportunities for focused study in these areas. This minor is intended to give students greater direct experience in the creation of FOSS technology and FC projects while providing a deeper understanding of the theoretical and practical underpinnings of the process and its social, commercial and legal roots and impacts. This minor will provide students the ability to engage in the ongoing critical discourse within those communities and across the larger canvas of creatives in society. It also will provide a reasonable measure of academic knowledge and practical experience at a level of depth appropriate to the concept of an academic minor.  Students are required to complete two (2) basic pre-requisites in order to pursue the *Minor in Free and Open Source Software and Free Culture*: (1) the successful completion of a recognized sequence in introductory computing (provided through the first-year Computer Science or New Media programming courses) or content creation (provided by the Graphic Design, Animation or Communication programs) or permission of the Minor Advisor, and (2) the successful completion of the RIT writing requirement (First Year Writing). |

**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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| The proposed minor consists of   1. Three required courses 2. The choice of one of two constrained electives as the “fourth course” 3. A final elective course from a list maintained by IGM as courses appropriate for the Minor.   The School of Interactive Games and Media in the Golisano College will administer the Minor. It will offer a minimum of one section each of two of the three required courses, *Humanitarian Free and Open Source Software Development*, and *Business and Legal Aspects of FOSS,* annually. It also will offer a minimum of one section annually of the constrained elective fourth course*, Software Development on Linux Systems* and the elective *Project in FOSS Development.*  The Department of English in the College of Liberal Arts will offer a minimum of one section of one required course, *Theories of Open Source and Free Culture* annually. It also offers multiple sections each semester of the other constrained elective for the fourth course, *Technical Writing*.  The fifth course will be selected by the student from an approved list maintained and administered by IGM. These courses must make use of FOSS technologies, require FOSS development and/or strengthen a student’s contributions within a FOSS community. A list of such courses appears in the table at the end of this proposal. Over time, additional courses might be identified as appropriate and added to this list. |

**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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| Excluded: This minor is open to every 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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| Students are required to complete two (2) basic pre-requisites in order to pursue the Minor in Free and Open Source Software and Free Culture: (1) the successful completion of a recognized sequence in introductory computing (provided by the first year Computer Science or New Media programming courses) or content creation (provided by Graphic Design, Animation or Communication courses) or the permission of the Minor Advisor and (2) the successful completion of the RIT writing requirement (First Year Writing).  Following this, all students take three required courses. Two of these, *Humanitarian Free and Open Source Software Development* and *Business and Legal Aspects of FOSS* *and Free Culture* are offered by the School of Interactive Games and Media in the Golisano College. The third, *Theories of Open Source and Free Culture* is offered by the Department of English in the College of Liberal Arts. All three can be taken by any eligible student in the minor regardless of their background in technology.  For the fourth course, students must take either *Software Development on Linux Systems* (offered by IGM) or *Technical Writing* (offered by COLA). Students with programming expertise would likely choose the former and those without, the latter.  The fifth and final course requirement may be met in any of several ways. First, a student might elect to take both of the constrained elective courses listed above and complete the minor that way. Second, an “elective” from the minor’s approved list below might be chosen. Some of these courses require in-depth technical knowledge (such as *Computer System Forensics*) and might only be selected by students pursuing a major in that department. Others, such as *Text and Code* or *Project in FOSS Development* require no specific technical background; the former because it’s the nature of the course’s content and the latter because it’s a team development course in which a wide variety of skills is applicable.  Sample path for a GCCIS student: The three required courses, a constrained elective choice of *Linux Software Development,* and an approved elective, *Foundations of Mobile Design.* After successful completion of one year of pre-requisite course work, this can be completed in a minimum of three semesters.  Sample path for a non-GCCIS student: The three required courses, a constrained elective choice of *Technical Writing,* and an approved elective choice of *Text and Code.* After successful completion of one year of pre-requisite course work, this can be completed in a minimum of three semesters. |

**Courses**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course Number & Title | SCH | Required | 1 of 2 required | Optional | Fall | Spring | Annual or  Biennial | Prerequisites |
| **Required Courses (must take all three)** | | | | | | | | |
| IGME-582 Humanitarian Free and Open Source Software Development | 3 | X |  |  | X | X | Annual | Third-year standing |
| IGME-583  Legal and Business Aspects of FOSS | 3 | X |  |  |  | X | Annual | IGME-582 |
| ENGL-450  Free and Open Source Culture | 3 | X |  |  | X |  | Annual | Completion of FYW requirement |
| **Constrained Elective “Fourth Course” (must take at least one)** | | | | | | | | |
| ENGL-361 Technical Writing | 3 |  | X |  | X | X | Multiple Sections Annually | None |
| IGME-584  Software Development on Linux Systems | 3 |  | X |  |  | X | Annual | IGME-582 & a one-year programming sequence |
| **Electives (may take any one below, or the second Constrained Elective above)** | | | | | | | | |
| IGME-585  Project in FOSS Development | 3 |  |  | X | X |  | Annual | IGME-582 |
| CSEC-474 Computer System Forensics | 3 |  |  | X |  |  | Annual | NSSA-221 |
| ISTE-452 Foundations of Mobile Design | 3 |  |  | X | X |  | Annual | ISTE-240 |
| ENGL-215  Text & Code | 3 |  |  | X | X | X | Annual | None |
| ENGL-351 Language Technology | 3 |  |  | X | X | X | Annual | None |
| ENGL-481 Introduction to Natural Language Processing | 3 |  |  | X | X |  | Annual | ENGL-351 |
| **Total** | 15 |