**REMINDER: The information presented in this syllabus is subject to expansion, change, or modification during the semester.**

# Instructor and Class Details

Professor --

Office: --

Email: --

Phone: --

Office hours: --

**Course Text and Materials**

Possible Texts:

* The Success of Open Source – Steven Weber – ISBN: 978-0674018587
* Open Source 2.0: Continuing the Evolution – Chris DiBona, Danese Cooper, Mark Stone –   
  ISBN:978-1171648161
* The Cathedral and the Bazaar – Eric. S. Raymond – ISBN: 978-0596001087
* Producing Open Source Software – Karl Fogel – ISBN: 978-0596007591
* Rapid GUI Programming with Python and QT – Mark Summerfield – ISBN: 978-0132354189
* The Linux Programming Interface – Michael Kerrisk – ISBN: 978-1593272203

Suggested support:

* Mailing lists
* IRC Channels
* Blogs
* Planets
* [fedoraforum.org](http://www.fedoraforum.org/)
* [ubuntuforums.org](http://www.ubuntuforums.org/)
* [linuxquestions.org](http://www.linuxquestions.org/)
* ubuntuguide.org
* github.com
* bugzilla.redhat.com

**Course Description**

Students will be introduced to open source software development concepts and Linux platforms. Students will learn to use the Linux command line, edit configuration files and setup systems for development. Students will learn how to design, package, release and maintain open source software. Topics such as open source communities, Linux packages, package managers, version control systems, software development tools, licensing, releasing, bug tracking, maintenance, patching and future development, will be covered in lectures, exercises and a project. Students will demonstrate competency with the Linux command line, Linux development and software development.  **Important RIT Deadlines**

Last day of add/drop week is January 0, 20xx.

Last day to withdraw with a grade of "W" is January 0, 20xx

**NOTE**: IGM department policy states that a student has one semester to **challenge** any

**grade**. After that, grades cannot be challenged.

**Prerequisites**

These prerequisites are necessary and will be strictly enforced.

Interact Des & Alg Prob Solving Sequence

* IGME-101 & IGME-102

or

Game Dev & Algo Prob Solving

* IGME-105 & IGME-106

or

Equivalent programming sequence.

**Role of course in curriculum for**

Game Design & Development: This is an elective.

New Media Interactive Development: This is an elective

**Course Goals and Objectives**

General Course Goals

The student will:

* Be introduced to the basic concepts of Linux and Unix
* Be familiar with the history of open source
* Understand the fundamentals of licensing, trademarks, software ownership and rights
* Understand the basics of open source economics and the relationship between open source and businesses.
* Understand open source communities, societies and politics
* Examine how to use Linux for development and services
* Explore how to get involved in the open source community (IRC, Blogs, etc)
* Explore high level process of open source software development
* Examine Linux package types and package managers
* Explore how to use open source version control software and compare various packages
* Explore open source software development tools and potential benefits of each (such as portability)
* Examine the publishing process and release cycle using hosting facilities
* Examine the bug tracking process, maintenance and patching
* Explore future development and project forking

**Course Organization**

Midterm exam

A midterm exam will be scheduled during class time.

Project(s)

A significant project will be assigned that will require students to design and develop an open source software package leveraging other open source software, open source libraries or, with needed more stringent requirements, from scratch. Every project will need approval from the instructor.

Exercises

Some class periods may be reserved for the project. Plan on attending the class periods in order to complete the exercises. Some exercises may take longer than one class session to complete. You may be required to plan time outside of class to complete them. All exercises will be collected and graded. You will need to be familiar with the exercises in order to do well on the exam.

The bonus questions ARE NOT OPTIONAL for graduate students. To get full credit, graduate

students must complete the bonus questions.

**Grading**

The grading scale used along with the grading criteria is as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Component** | **Weight** |  | **Range** | **Grade** |
| Exercises | 20% |  | >=90.0% | A |
| Exam | 25% |  | >=80.0% & <90% | B |
| Homeworks | 20% |  | >=70.0% & <80% | C |
| Project(s) | 35% |  | >=60.0% & <70% | D |
| Peer Evaluation (if applicable) | 10% |  | <60.0% | F |

**Academic Honesty Policy**

My policy on academic dishonesty is simple: If you cheat/plagiarize, you get an “F” as a grade for the course, a letter detailing the incident goes into your folder, and you are immediately removed from the class. (If this is a second occurrence during your career at RIT, the penalties are harsher.)

Note that if you get accused of cheating, I have already documented the offense and had the evidence reviewed by other faculty members to verify it will withstand an appeal.

Please review RIT policy on academic dishonesty: <http://www.rit.edu/studentaffairs/studentconduct/rr_academicdishonesty.php>

Except for assignments that are specifically designated as being “group efforts,” all work

submitted (assignments, projects, participation activities, bonus opportunities, examinations, etc.)

under your name is assumed to be your own individual effort and will be graded as such under

the IGM’s Academic Dishonesty Policy.

Submission of coursework under your name to your professor indicates that you understand

and agree to abide by all relevant dishonesty policies.

**Course Schedule (Subject to change)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Day 1** | **Day 2** | **Activity** |
| 1 | Intro to course, intro to the project, language overview, Brainstorming process, getting involved in open source community | Exercise 1: Brainstorming project ideas | Project Idea, team formation and Open Source Software research assignment. |
| 2 | History of open source, how open source works, open source licensing, trademarks, software ownerships, rights,  Intro to open source software development and software development cycles | Exercise 2: Open Source Community involvement and data gathering | Community involvement Exercise and project planning |
| 3 | Open source relationship with business and proprietary software.  Open source communities, societies and politics | Exercise 3: Setting up Linux environment, intro to command line, package installations | Plan for development environment; language, database, etc |
| 4 | Software development tools, frameworks, portability and IDEs | Exercise 4: Using development tools and frameworks; exploring IDEs | Work on Project |
| 5 | Command line discussion, scripting, intro to configuration files | Exercise 5: Scripting for development | Work on Project |
| 6 | Version control software and project planning | Exercise 6: Configuration files and installing/using version control software | Work on Project |
| 7 | Code Documentation, release documentation and generating man pages | Exercise 7: Documentation and Code Review | Study for Exam |
| 8 | Exam Review | Exam | Work on Project |
| 9 | Linux distribution differences, specialty distributions, building RPMs and DEBs | Exercise 8: Building and installing RPMs and DEBs | Work on Project |
| 10 | Integrating with services; databases, mongodb, d-bus | Exam 9: mongodb, mysql, SQLite and d-bus | Work on Project |
| 11 | Integrating with services; Apache and Django | Exam 10: Apache, Django and mongoDB; simple project web page | Work on Project |
| 12 | Publishing process, code hosting, bug tracking process, project forking, project merging | Packaging and pre-publishing | Work on Project, submit package to mycourses |
| 13 | Future development, maintenance, patching | Exam 11: Setup bug tracking, patching, forking and merging projects | Work on project |
| 14 | Code review, documentation review | Code review, documentation review | Work on project |
| 15 | Open Source development issues and current themes | Publish Alpha code (if applicable & meets coding standards) | End of Course |