Project Management (Open-source and Working Open)

Dr. Bradly Alicea

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IS 340, Fall 2023
Location: 46 Graduate School of Library and Information Science
Tuesdays and Thursdays, 2pm – 3:20pm
Office Hours: Fridays 9am-11pm, https://meet.jit.si/project-mgmt
Discord: https://discord.gg/ZvxwgXg, #project-management

Course Objectives

In this course, students will learn how to manage projects using open-source principles and tools, as well as how to manage distributed collaborations. These skills include learning how to work with version-control systems, managing projects according to the principles of "working open", and managing distributed and asynchronous communities. Open-source techniques provide small projects with bureaucratic flexibility and access to collaborators from around the world. Managing the open-source way, particularly using open-source communities, is growing in popularity among large corporations and startups alike.

Learning will be assessed through two quizzes to foster understanding. The lessons learned here are transferable to a wide range of project types. Students will also apply the skills learned in the course to a paper describing a hypothetical but personally relevant open-source project. This paper will realize many of the techniques and ideas covered in this curriculum. For students specializing in library science, you may also take the paper assignment as an opportunity to apply your newly acquired version-control skills to a problem in the field.

Prerequisites

Students should have taken **IS 205 - Programming for Information Problems** or have basic knowledge of a coding language such as Python, C++, Java, or object-oriented modeling prior to taking this course.

Media and Reading Materials (NOT REQUIRED, but useful). A more detailed set of topical references will accompany the lecture materials.

Working Open textbook. Mozilla Foundation.
http://mozillascience.github.io/open-science-leadership-workshop/01.2-working_open.html

Ben Cotton, Program Management for Open Source Projects: How to Guide Your Community-Driven, Open Source Project.
https://www.amazon.com/Program-Management-Open-Source-Projects/dp/1680509241

Jhangiani, R.S. and Biswas-Diener, R. (2017). Open: the philosophy and practices that are revolutionizing education and science. Ubiquity Press, London.
https://library.oapen.org/handle/20.500.12657/31551

Fogel, K. Producing Open Source Software: how to run a successful free software project. https://producingoss.com/

Adrienne Watt, Project Management. Available as eBook:
https://opentextbc.ca/projectmanagement/

Project Management Institute. (2017). Agile Practice Guide. PMI.
https://www.agilealliance.org/wp-content/uploads/2021/02/AgilePracticeGuide.pdf

Project Management Body of Knowledge (PMBOK)
https://www.projectmanagement.com/contentPages/wiki.cfm?ID=234759&thisPageURL=/wikis/234759/Project-Management-Body-of-Knowledge--PMBOK--#_=_

Galen M. Charlton, Distributed Version Control and Library Metadata. code4lib Journal, 3, 6-23. https://journal.code4lib.org/articles/86

Stellman, A. and Greene, J. Learning Agile: Understanding Scrum, XP, Lean, and Kanban 1st Edition. O'Reilly Media.
https://www.amazon.com/Learning-Agile-Understanding-Scrum-Kanban/dp/1449331920

The Community Engagement Playbook. Commsor.
https://www.commsor.com/engagement-playbook

How to MozFest: how to arrive at a Hackathon with an idea. Mozilla Foundation.
https://book.mozillafestival.org/

Git Guides (FAQ on Github-flavored Git)
https://github.com/git-guides/

GitHub Docs (especially the collaborative coding section)
https://docs.github.com/en

Jesse Parent, Collaboration Tools and Open Source.
Orthogonal Research and Education Laboratory YouTube:
https://www.youtube.com/watch?v=h4WrLtZWqHA&list=PL4RJ4xCetB61jueazy5pCZQTh81Hdz8J1&index=10

Oh My Git! An Interactive way to learn version-control

https://ohmygit.org/

Open Data and Open Science features (Synthetic Daisies posts)
https://orthogonal-research.weebly.com/open-science-and-data.html

Schedule

Week 1 (August 22-24): Introduction to open-source and open access.

* why open and how is this beneficial?

* ethos of working open.

* the different types of open: open-source, open data, open research, open *x,y,x*.

Week 2-3 (August 29-31; September 5-7): Introduction to Github and Version-control

* managing documentation, code, and other versioned materials.

* working collaboratively and asynchronously.

* managing open data and metadata.

Quiz #1: Introduction to Github and Version Control. Available on September 7 after the class period, due in one week (September 14): https://github.com/OREL-group/Project-Management/tree/main/Quiz%201

Week 4-5 (September 12-14, 19-21): Community Resource Management.

* why work as a community? The power of community collaboration.

* collaboration tools and community relations.

* community standards and coherent organizations.

* project management with documentation.

Week 6-7 (September 26-28; October 3-5): Public Events, Discussions.

* Sprints and the -athon style of project management: Hack-, Doc-, Idea-, Etc-.

* contributor and stakeholder management.

* community interactions as a base of operations.

Weeks 8-9 (October 10-12, 17-19): Project Scope and Types of Contribution

* scoping and rescoping, using Kanban boards and issue management, prioritizing goals and degrees of contribution.

* project complexity.

Week 10 (October 24-26): Hypothetical Open Project Design
Midterm Check-in: report on paper progress.

* how to describe your project of interest.

* discuss: what are the most interesting things to focus on?

Quiz #2: Issue Management. Available on October 26 after the class period, due in two weeks (November 9): https://github.com/OREL-group/Project-Management/tree/main/Quiz%202

Weeks 11-13 (October 31; November 2, 7-9, 14): Project Sustainability and Lifecycle

* open-source sustainability (keeping projects alive).

* how to create leaders and maintainers, encouraging self-perpetuating activity.

* project automation and related topics.

Week 13 (November 16): Financial and Budgeting

* types of legal organization.

* grants and fundraising.

Week 14 (November 21-23): Fall Break

Week 15 (November 28): Financial and Budgeting

Weeks 16-17 (November 30; December 5): Final Paper Presentations

* discuss your projects and management details.

****FINAL PAPERS DUE BY THURSDAY OF FINALS WEEK (DECEMBER 14)****

Assignments and Grading

Assignment	Percent of Grade
Quiz #1	25
Quiz 2	25
Presentation	10
Github Submission of Final Paper	10
Final Paper	30

There will be two quizzes and a term paper during the term. The quizzes will gauge your understanding of the technical skills as imparted in the course. You will also present and write a paper on a project that is important to you. The presentation will be an outline of the final paper, while the term paper will require you to synthesize the course materials by applying at least three principles from the course, while also extending your knowledge to a problem domain of your choice.

Quizzes
Each quiz will focus on some of the principles and tool types taught in the course. The purpose of these quizzes is to enforce understanding of the concepts presented in class, and to ensure that they are correctly applied in the term paper.

Term paper
Develop a 10-page paper on a hypothetical open-source project that you would like to manage. It could be something that interests you, or something that you have always wanted to bring to fruition. The goal of this paper is to describe your project and the ways in which you would manage this project using open source and working open principles.

The papers from Spring 2023 semester are located here:
https://github.com/OREL-group/Project-Management-SP23/tree/main/Final%20Papers

Presenting your term paper
A 5–10-minute presentation on your term paper is also required. This presentation should summarize your project and provide evidence of how the principles discussed in class apply to the project. This will not be graded, but you must complete this to get full credit for your paper. Presentation times and dates are to be determined.

Policies

Academic Integrity
Please review and reflect on the academic integrity policy of the University of Illinois, http://admin.illinois.edu/policy/code/article1_part4_1-401.html to which we subscribe.

By turning in materials for review, you certify that all work presented is your own and has been done by you independently, or as a member of a designated group for group assignments.

When describing assignments in the syllabus or in other documents that provide the detailed requirements for one of your assignments, I have tried to be quite specific about the degree to which collaboration is encouraged and the degree to which you are expected to submit an original work of which you are the author. If you have any questions regarding the policy regarding a particular assignment, please contact me directly for advice.

Please be aware that the consequences of academic dishonesty will be severe. Students who violate university standards of academic integrity are subject to disciplinary action, including a reduced grade, failure in the course, and suspension or dismissal from the University.

Statement of Inclusion
http://www.inclusiveillinois.illinois.edu/mission.html As the state's premier public university, the University of Illinois at Urbana-Champaign's core mission is to serve the interests of the diverse people of the state of Illinois and beyond. The institution thus values inclusion and a pluralistic learning and research environment, one which we respect the varied perspectives and lived experiences of a diverse community and global workforce. We support diversity of worldviews, histories, and cultural knowledge across a range of social groups including race, ethnicity, gender identity, sexual orientation, abilities, economic class, religion, and their intersections.

Accessibly Statement
To obtain accessibility-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES you may visit 1207 S. Oak St., Champaign, call 333-4603 (V/TTY), or e-mail a message to disability@uiuc.edu.