Project Management (Open-source and Working Open)

Dr. Bradly Alicea

bradly.alicea@outlook.com

Orthogonal Research and Education Lab

Office Hours: Fridays 11am-1pm (Eastern Time – Americas),
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 through the use of 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.

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.
Available at Amazon, but hard to get: https://www.amazon.com/Program-Management-Open-Source-Projects/dp/ 1680509241

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

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

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 (January 16): Introduction to open-source and open access.

* why open and how this is beneficial?

* ethos of working open.

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

Week 2-3 (January 23 and January 30): Introduction to Github and Version-control

* managing documentation, code, and other versioned materials.

* working collaboratively and asynchronously.

* managing open data and metadata.

February 2: take-home quiz on Version Control. One week deadline (February 9). Available on Github: https://github.com/OREL-group/Project-Management/tree/main/Quiz%201

Week 4-5 (February 5 and 13): 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 (February 20 and February 27): 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.

Week 8 (March 20): Project Scope and Types of Contribution

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

* project control systems.

Week 9 (March 13): Midterm Check-in.

Week 10 (March 20): Project Scope and Types of Contribution

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

* project control systems.

March 23: quiz on Issue Management. One week deadline (March 30). Available at: **https://github.com/OREL-group/Project-Management/ tree/main/Quiz%202**

Weeks 11-12 (March 27 and April 3): Project and Community Sustainability

* open-source sustainability (keeping projects alive).

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

Weeks 12-13 (April 3 and April 10): Project Lifecycle

* frameworks for organizing your efforts.

* Agile, rapid prototyping, and other techniques.

* lifecycles for open data.

Weeks 14-15: Financial and Budgeting

* types of legal organization.

* grants and fundraising.

Weeks 15-16: Final Paper Presentations

* discuss your projects and management details.

Assignments

Two quizzes (25% of grade per exam) and a term paper (10 pages, 50% of grade).

There will be two quizzes and a term paper during the course of the term. The quizzes will gauge your understanding of the material. The term paper will require you to synthesize the course materials, while also extending your knowledge to a problem domain of your choice.

Quizzes
Each quiz will be multiple choice, and 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.

You may use this paper as a template (Christian Nnahuibe, iSchool ‘22):
https://github.com/balicea/rokwire-community/blob/master/Tutorials/Open%20Source%20Practicum%20Materials/Spring-2022-final-report.md

As an alternative, the 10-page paper can describe an implementation of version-control and open source data to the library sciences. Again, this might be related to your professional work, or simply a topic you are interested in exploring.

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.

Contact Hours
This course will require approximately 45 contact hours.