Welcome to CS 469!

My name is Eric Vogel, and it is both my pleasure and my privilege to be your instructor for this course. I will do my best to provide you an informative and encouraging course with a great learning experience. If you have any suggestions on this course, you're welcome to contact me at any time.

This course allows you to create a software product of your choice, structured as a software development project. The course materials guide you in planning your project, then provide you with mechanisms for reporting on your project throughout the term until the final results are due. Your work is considered to be a portfolio project, so you can post it publicly on GitHub or on a personal website.

Prerequisites

The official course prerequisite of CS 162 (which also implies CS 161 or ENGR 103) has not yet been added to the Schedule of Classes. Nonetheless, you should be aware that CS 162 is the expected level of programming experience for this course. Please withdraw if you do not have that background.

Course Topics

We will be covering several topics geared towards helping you select, plan for, execute, and then report on your project:

- Motivations and Project Selection
- Planning Your Work
- Managing Changes
- Reporting Progress
- Final Reporting and Demonstration

Course Structure

This is an independent study course, and you will be spending most of your time pursuing your project. Before you start your project work, however, you need to have a plan approved by your instructor. So the first week of the course is quite intense so you can create a Project Plan for your project, after learning about these topics:

- Motivations & Project Selection & Goals
- Breaking Down Your Work
- Sequencing Your Work
- Prioritizing Your Work

Your Project Plan will be your guide for all the project work you carry out over the next 9 weeks (6 weeks during Summer term). During that project work, you will follow your plan to guide your work, and you will also submit a short video progress report each week so your instructor is kept aware of your progress, based on this topic:
Reporting Progress

As your project or product changes, you will need to make adjustments to your Project Plan, following this topic:

- Managing Changes

And at the end of the course, you will have produced a product, and you will have written a report about the project and your development experience, submitted the results of your project, and demonstrated your product:

- Final Project Report, Final Product Deliverables & Demonstration

My Expectations

During the project work phase of the course (weeks 2-7), your work is entirely self-directed except for a short weekly progress report. You are expected to have the personal discipline to expend effort commensurate with a two-credit 400-level course, regardless of other academic, work, or personal challenges. Situations like "I had other midterms that were more important this week, so I didn't make any progress on my project", or "I had to work, so I didn't get much done" are not acceptable reasons to let the project work for this course slide. (Personal emergencies or illness are understandable exceptions, with instructor approval for such circumstances).

Your measure of success will largely be defined by you in your Project Plan (with my agreement). Therefore, it is important that you stay on top of your work so you can meet the commitments laid out in the plan. If things start going south, it is my expectation that you will reach out immediately and not wait until it is too late to make adjustments.

Please go over all the content in the Start Here module. Read the course syllabus carefully. It is also a good idea to look ahead to what you will be expected to produce at the end of the term so you can make informed decisions to maximize your chances of success.

Course Overview

Course Name: Real-World Project Management in Computer Science
Course Number: CS 469
Credits: 2 *
Terms Offered: Every Term **
Instructor Name: Eric L. Vogel
Instructor Email: eric.vogel@oregonstate.edu

* With instructor approval, CS 406 can be taken concurrently to boost the credit hours for longer projects, and time spent working on the project will scale correspondingly. Both courses follow the 469 curriculum, evaluation, and grading approach and receive the same grade. Contact the instructor for details.

** CS 469 can be repeated for up to 16 credits total. Of those, a maximum of 6 credits combined between CS 469 and CS 406 can be applied toward an OSU CS degree.

Course Description

Facilitates the completion of a working software product chosen and designed by the student. Guides students on planning, implementing, and reporting progress on software development work carried out as a structured project.
Prerequisities or Corequisites: CS 162 (which also implies CS 161 or ENGR 103). Even though this prerequisite has not yet been added to the Schedule of Classes, please be aware that CS 162 is the expected level of programming experience for this course.

Measurable Student Learning Outcomes

The learning outcomes for this course are:

1. Apply design, programming, and testing skills to real-world projects.
2. Evaluate and select tools and other resources when implementing projects.
3. Communicate project accomplishments to technical and non-technical audiences.

Course Topics

We will be covering several topics geared towards helping you select, plan for, execute, and then report on your project:

- Motivations and Project Selection
- Planning Your Work
- Managing Changes
- Reporting Progress
- Final Reporting and Demonstration

Course Schedule

You can see the assignment due dates in Canvas.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Motivations and Project Selection End-User Functionality and Tools Breaking Down, Sequencing, and Prioritizing Your Work</td>
<td>Flowchart: Understanding Our Own Motivations Discussion: Post-Project Actions</td>
</tr>
<tr>
<td>2</td>
<td>&lt; Project work begins &gt;</td>
<td>Project Plan</td>
</tr>
<tr>
<td>3</td>
<td>Managing Changes Reporting Progress</td>
<td>Change Management Quiz Week 2 Progress Report</td>
</tr>
<tr>
<td>4</td>
<td>//Reporting Progress</td>
<td>Change Management Quiz Week 3 Progress Report</td>
</tr>
<tr>
<td>5</td>
<td>Reporting Progress</td>
<td>Week 4 Progress Report</td>
</tr>
<tr>
<td>6</td>
<td>Reporting Progress</td>
<td>Week 5 Progress Report</td>
</tr>
<tr>
<td>7</td>
<td>&lt; Project work ends &gt;</td>
<td>Week 6 (last) Progress Report</td>
</tr>
</tbody>
</table>
Workload

Two-credit courses at OSU have a nominal workload of 60 hours. In CS 469, most students spend 10-20 hours on instruction, online activities, and assignments, and 40-60 hours actually working on their project. If you are taking CS 406 concurrently, the time spent working on the project will scale correspondingly.

Textbooks

There are no required textbooks for this course.

Assignments

This course has seven assignments, one of which is a quiz, and eight graded weekly progress reports (six during Summer term).

Grading Policy

Grade Percentages

<table>
<thead>
<tr>
<th>Grading</th>
<th>Letter Grade</th>
<th>Percentage Floor</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>92</td>
</tr>
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<td>A-</td>
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<tr>
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<tr>
<td>F</td>
<td>F</td>
<td>&lt;60</td>
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</tbody>
</table>

Points Available

- Project Planning Explorations, Assignments and Quizzes: 45 points
- Weekly Progress Reports: 25 points
Final Project Report, Final Product Deliverables & Demonstration Assignments: 90 points
Total: 160 points

Grade Weighting

Project Planning: 35%
Weekly Progress Reports: 20%
Final Results: 45%

Late Work Policy

Assignments are accepted up to 24 hours late with a penalty of 10% of the earned points applied. Assignments are accepted from 24 to 48 hours late with a penalty of 25% of the earned points applied. Assignments are not accepted past 48 hours late unless an extension is granted by the instructor.

<table>
<thead>
<tr>
<th>Late Penalties</th>
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</thead>
<tbody>
<tr>
<td>Time elapsed past the due date</td>
</tr>
<tr>
<td>Up to 1 day</td>
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<tr>
<td>Up to 2 days</td>
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<tr>
<td>More than 2 days</td>
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</tbody>
</table>

Extensions

Requests for extensions are considered on a case-by-case basis. Non-emergency requests must be submitted via email at least 48 hours before the due time. (Not having enough time to get the assignment done does not, by itself, constitute an emergency — sorry!). If you have a really tough situation that might affect your progress a lot (illness, job duties, family emergency...), you should contact the instructor immediately. Don't wait until the due date or later to explain your personal situation and ask for an extension. If you don't know if you will need an extension but might, you should ask for one.

Incompletes

Incomplete (I) grades will be granted only in emergency cases (usually only for a death in the family, major illness or injury, or birth of your child), and if the student has at least a C in the course at the time the Incomplete is requested. If you are having any difficulty that might prevent you completing the coursework, please don’t wait until the end of the term; let me know right away — I’m here to help!

AI Chatbot Policy

The policy for this course is as follows:

1. You ARE allowed to use ChatGPT, Google Bard, Bing AI, or similar AI chatbots as you would a library resource. For example, you can use ChatGPT to find solutions for errors the same way you would use Stackoverflow or other Internet resources, or to understand and improve software you are developing.
2. You ARE allowed to use AI chatbots to verify algorithms. You will learn more if you develop your algorithms yourself and use a chatbot to verify them, rather than taking the shortcut of simply (for example) asking ChatGPT to generate the algorithms for you. In fact, you'll learn more about both the problem you are trying to solve and the critical thinking skills that AI cannot replace. In your career,
there are guaranteed to be problems for which AI cannot propose algorithms or solutions. If you have not developed the critical thinking skills to develop solution algorithms on your own, you will be unable to deliver the value your employer expects from a practicing engineer.

3. You ARE allowed to use AI chatbots for small snippets of code, as you would by using online reference like Reddit or a language-specific website that helps engineers understand how to implement certain tasks in different programming languages. In industry, you must be careful that small snippets obtained regardless of the source do not introduce software license restrictions or the possibility of copyright, trademark, trade secret, or confidentiality agreement violations that could put your company at great legal peril. That's why you should be cautious about the number and size of code snippets you include in commercial products, whether they come from programming websites or an AI chatbot. It is wiser and safer to adapt the principles demonstrated in those snippets to your own code, and to the context in which the snippets need to run in the software system you are helping develop, rather than simply pasting something into your code verbatim. Practicing this kind of appropriate use as a student will help establish a foundation for behaviors in your career that will be consistent with your employer's code of ethics.

4. You ARE allowed to use chatbots in manners similar to the above for generating written reports or other creative elements that are not related to code. These uses come with the same possibilities of not learning to think, write, or be creative on your own, and as a result being less able to fulfill employer expectations for high-quality written documents or uniquely creative non-code-related work products.

While you are allowed to use AI chatbots as described above, they are not a panacea. You should never blindly submit something based on AI chatbots without using critical thinking and good judgment to assess the correctness and validity of their results. You won't get proper credit for work based on incorrect or invalid output from these (or any!) sources. (Assessing validity is a wise practice for any tool or source of information you use. Just as you would ignore an Internet source if you determined that the information it provided was wrong, it's no different to apply that same level of discernment to the output of AI chatbots.) And abdicating your creative thought processes to any tool won't necessarily grow your abilities to think creatively, unless you shift your creative focus to other areas. So be thoughtful and judicious about how much you use these or any tools as a replacement for your work rather than just as a supplement to it.

If you are unsure if your intended use of an AI chatbot matches any of the above purposes, send me an email explaining your planned use, and I will give you feedback on whether or not I would consider this to be an allowable use both in the course and in industry.

5. You ARE NOT allowed to use AI chatbots to simply write your software for you, or write your documents for you. Just as you have tools to generate code and documents, we instructors have tools to identify code and documents that were generated. Any student that submits generated responses will be subject to an Academic Integrity violation. Here's why:

Our goal at OSU is to prepare you for a career in industry, where you will be expected to solve problems through critical thinking, and adhere to industry norms for high-integrity, ethical behavior. You will not be expected to let a tool do all your work for you, without you yourself understanding the engineering problem solving process, recognizing whether what you are asking it to do is within its capability, applying it in an appropriate manner, and then being able to assess if its results are credible and reliable enough to be trusted as the basis for making business-critical decisions.

If you want to start to use AI chatbots for the described allowed purposes so you understand the capabilities and limitations of these tools, that's good preparation for being in industry with a broad toolkit at your disposal, and behaviors that mimic industry best practices both technically and ethically. If you want to use AI
chatbots to do your work for you so you can skate by at OSU with minimal thought and effort, you will limit your career opportunities to those that do not require the level of diligence, thoughtfulness, professionalism, integrity, and ethics that are the hallmarks of high-performing software engineers.

There is no question that the use of artificial intelligence and machine learning tools will continue to increase in the fields of software engineering and computer science. At their current stage of development, they are language models that can generate text based on input, and have been successfully able to generate code as well. However, they were not designed to be learning tools, or to understand the context or nuances of a particular software problem. And they are not the only tools or technologies you will need to use to develop software, so it is still important that you learn and develop a strong foundation in the fundamental principles and concepts of software development. This will enable you to understand and adapt to new technologies and tools as they emerge during your software career, and use them effectively and responsibly on behalf of your employer.

Eric Vogel, Instructor

Email: eric.vogel@oregonstate.edu

Availability: I am available 12pm-3pm Arizona time weekdays. During those times, I can do help sessions on Teams or Zoom by appointment. You can also email me, only from your OSU email account (university policy), or message me on Teams without an appointment, and I will try to respond within those windows. For less time-critical communications, you can use any of those means outside my availability hours; I should get back to you within one business day.

Communication Policy

Please communicate with your instructor directly via email; do not use Canvas messaging. Send emails only from your OSU email address (this is required by university policy), and include [CS 469] in your email subject line so your message is less likely to be lost in full inboxes. When you email your instructor, you should expect a response within one business day.

Teams and Ed Discussion: There is no dedicated Teams channel or Ed Discussion board for this course.

Assignment Grading: You can expect your assignments to be graded within three business days of the due date, except for the Project Plan which may take up to two weeks to be graded.

Office Hours: There will be no regularly scheduled office hours for this course because each student will have questions unique to their project. See above for how to schedule a meeting if you feel it is required.

Teaching Assistants: There are no GTAs or ULAs for this course.

Technical Assistance

If you experience any errors or problems while in your online course, contact 24-7 Canvas Support through the Help link within Canvas. If you experience computer difficulties, need help downloading a browser or plug-in, or need assistance logging into a course, contact the IS Service Desk for assistance. You can call (541) 737-8787 or visit the Service Desk online.

Learning Resources

There are no specific learning resources required beyond the course materials. You may decide you need to purchase tools, training courses, or other materials for your specific project.
University Policies

Academic Calendar

All students are subject to the registration and refund deadlines as stated in the Academic Calendar: https://registrar.oregonstate.edu/osu-academic-calendar.

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should be aware of, or who need special arrangements in the event of an evacuation, should make an appointment with the instructor as early as possible, and no later than the first week of the term. Class materials will be made available in an accessible format upon request.

Statement Regarding Religious Accommodation

Oregon State University is required to provide reasonable accommodations for employee and student sincerely held religious beliefs. It is incumbent on the student making the request to make the faculty member aware of the request as soon as possible prior to the need for the accommodation. See the Religious Accommodation Process for Students.

Establishing a Positive Community

It is important you feel safe and welcome in this course. If somebody is making discriminatory comments against you, sexually harassing you, or excluding you in other ways, contact the instructor, your academic advisor, and/or report what happened at studentlife.oregonstate.edu/studentconduct/reporting so we can connect you with resources. Note: Most OSU employees, including faculty, may be required to report suspected sexual misconduct, domestic violence, or discrimination to the Office of Equal Opportunity and Access.

Guidelines for a Productive and Effective Online Classroom
(Adapted from Dr. Susan Shaw, Oregon State University)

Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university’s regulations regarding civility. Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this online course, paying particular attention to the following:

- Unless indicated otherwise, please complete the readings and view other instructional materials for each week before participating in any discussion board.
- Read your posts carefully before submitting them.
• Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
• Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.

Accessibility of Course Materials

All materials used in this course are accessible. If you require accommodations please contact Disability Access Services (DAS).

Additionally, Canvas, the learning management system through which this course is offered, provides a vendor statement certifying how the platform is accessible to students with disabilities.

Academic Support

The Success Studio is your one-stop-shop for academic support in the College of Engineering. The Studio offers a variety of options to support your learning, including free peer tutoring, a programming helpdesk, and study room reservations. They can also connect you with other resources across campus to support your learning and well-being. All you need to do is reach out.

Ecampus Reach Out for Success

University students encounter setbacks from time to time. If you encounter difficulties and need assistance, it’s important to reach out. Consider discussing the situation with an instructor or academic advisor. Learn about resources that assist with wellness and academic success.

Ecampus students are always encouraged to discuss issues that impact your academic success with the Ecampus Success Team. Email ecampus.success@oregonstate.edu to identify strategies and resources that can support you in your educational goals.

Other Ecampus Student Resources

For mental health:

Learn about counseling and psychological resources for Ecampus students. If you are in immediate crisis, in the U.S. you can dial 988 to reach the National Suicide and Crisis Lifeline.

For financial hardship:

Any student whose academic performance is impacted due to financial stress or the inability to afford groceries, housing, and other necessities for any reason is urged to contact the Director of Care for support (541-737-8748).

Expectations for Student Conduct

Student conduct is governed by the university’s policies, as explained in the Student Conduct Code (https://beav.es/codeofconduct). Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility.

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Academic Integrity
Integrity is a character-driven commitment to honesty, doing what is right, and guiding others to do what is right. Oregon State University Ecampus students and faculty have a responsibility to act with integrity in all of our educational work, and that integrity enables this community of learners to interact in the spirit of trust, honesty, and fairness across the globe.

**Academic Misconduct**

The Code of Student Conduct prohibits Academic Misconduct and defines it as:

> Any action that misrepresents a student or group’s work, knowledge, or achievement, provides a potential or actual inequitable advantage, or compromises the integrity of the educational process.

Academic misconduct, or violations of academic integrity, can fall into seven broad areas, including but not limited to: cheating; plagiarism; falsification; assisting; tampering; multiple submissions of work; and unauthorized recording and use.

It is important that you understand what student actions are defined as academic misconduct at Oregon State University. The OSU Libraries offer a [tutorial on academic misconduct](https://asosu.oregonstate.edu/advocacy/rights), and you can also refer to the [OSU Student Code of Conduct](https://asosu.oregonstate.edu/advocacy/rights) and the Office of Student Conduct and Community Standard’s website for more information. More importantly, if you are unsure if something will violate our academic integrity policy, ask your professors, GTAs, academic advisors, or academic integrity officers.

You are expected to do your own work and demonstrate academic integrity in every aspect of this course. Familiarize yourself with the standards set forth in the OSU Code of Student Conduct Section 4.2. You must only access sources and resources authorized by the instructor. You may not show your work to any other current or future students without the instructor’s authorization. Violations of these expectations or the Code of Student Conduct will be reported to the Office of Student Conduct and Community Standards. If there is any question about whether an act constitutes academic misconduct, it is your responsibility to seek clarification and approval from the instructor prior to acting.

**Writing Assistance**

The Oregon State [Online Writing Suite](https://asosu.oregonstate.edu/advocacy/rights) is also available for students enrolled in Ecampus courses.

**Student Learning Experience Survey**

During Fall, Winter, and Spring term, the online Student Learning Experience surveys open to students the Wednesday of week 9 and close the Sunday before Finals Week. Students will receive notification, instructions, and the link through their ONID email. They may also log into the survey via MyOregonState. Survey results are extremely important and are used to help improve courses and the learning experience of future students. Responses are anonymous (unless a student chooses to “sign” their comments, agreeing to relinquish anonymity of written comments) and are not available to instructors until after grades have been posted. The results of scaled questions and signed comments go to both the instructor and their unit head/supervisor. Anonymous (unsigned) comments go to the instructor only.

**Student Bill of Rights**

OSU has twelve established student rights. They include due process in all university disciplinary processes, an equal opportunity to learn, and grading in accordance with the course syllabus: [https://asosu.oregonstate.edu/advocacy/rights](https://asosu.oregonstate.edu/advocacy/rights).