

CIS 315: Introduction to Object-Oriented Systems Analysis and Design

Fall 2015

1. Instructor

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<https://github.com/stefanbund/SDLC-GITHUB>

2. Class Meetings and Office Hours

Class meetings: Monday, Wednesday 2 pm - 3:50 pm @ Bldg 163 2004

Office Hours: Tuesday, Thursday 6 - 7:50 pm, office above

3. Course Description

Our course Introduces object-oriented systems analysis and design using unified modeling language (UML). System development life cycle. Determination of information system requirements. use cases, use case diagrams, domain models, interaction diagrams, and design class diagrams.

This course also introduces design patterns, as well as project management for software development and fundamentals of software testing.

4. Learning Objectives

Students successfully completing this course should have acquired the ability to:

- Foundational knowledge
 - Understand system development life cycle (SDLC) and several methodologies of SDLC, in particular, the rational unified process (RUP).
 - Be able to perform systems analysis tasks, such as identifying systems requirements, producing requirements definition, generating use case descriptions, use case diagram, and domain model.
 - Be able to perform systems design tasks, such as generating sequence diagrams for use cases, and producing design class diagram.
- Application
 - Be able to apply your knowledge and perform systems analysis and design tasks for a case.
- Human Dimensions
 - Work with teammates of your group coordinately in order to produce group-based deliverables for some project milestones.

5. Prerequisites

A minimum grade of C (2.0) in CIS 304, 305

6. Textbook and Software

Required Textbook:

Title: Systems Analysis and Design with UML v2.0: An Object Oriented Approach 5th Edition

Authors: Alan Dennis / Wixom / Teagarden

ISBN-13: 978-1-118-03742-3

Publisher: Wiley, <http://www.wiley.com/WileyCDA/Section/id-826306.html>

Recommended Textbooks and Reference Guides:

- The Object Management Group Websites on UML: <http://www.uml.org/#Links-Tutorials>
- Si Alhir, Sinan. UML in a Nutshell. O'Reilly Press, 1998. http://books.google.com/books/about/UML_in_a_Nutshell.html?id=dCqTP7ySywEC

Software:

For diagramming/UML software:

- Microsoft Word, Microsoft Visio 2010 (free and available on CIS dept website -> MSDNAA Download)
- Google Drive / Lucidchart free edition, UML enabled

For project management software: Microsoft Project 2010 (free and available on CIS dept website -> MSDNAA Download).

7. Exams, Projects and Assignments

Exams: There will be one midterm and one final exam. The final exam is non-cumulative.

Group projects: The goal of the group projects is to apply comprehensive knowledge and skills you learned in class to analyze and design an information system that solves a specific business problem.

Final Project Deliverable. Your team will generate a single paper on an assigned problem domain. Each assignment is to be printed and handed to the instructor on the due date.

Attendance: You will earn attendance points for each class meeting that you attend. Sign the attendance sheet at the front of class each time you go to class, to receive your attendance credit.

Make-up policy: There will be no make-up exams except for serious and compelling reasons that are substantiated with formal documents. For example, medical cases have to be substantiated with valid doctor or hospital note stating that the student is too ill to attend the exam.

Late assignments or projects: No late work is accepted without point deduction. There is a 50% point deduction each calendar day late. Given the team nature of each assignment, the late work may be submitted electronically. Assignments are due at the start of class, with work submitted after the start of class on the due date receiving a one day point deduction.

Tutoring: For free tutoring on campus, contact the Learning Center in the library <http://www.csupomona.edu/~lrc/>

8. Grading

Grade	Percentage
A	93.00-100.00
A-	90.00-92.99
B+	87.00-89.99
B	83.00-86.99
B-	80.00-82.99
C+	77.00-79.99
C	73.00-76.99
C-	70.00-72.99
D+	67.00-69.99
D	63.00-66.99
D-	60.00-62.99
F	0-59.99

Graded Items	%
Mid Term	8
Final Exam	9
4 Assignments, 20% each	80
Attendance	3
Total	100

9. Class Communication

E-mail: All emails must be sent to the instructor via csupomona.edu email account, must be signed with the student's first and last name, and must have "CIS 315" in the subject line, or it may not be read or responded. **Stefan's email at CSU is slbund@cpp.edu.** Since this email is read on a mobile device, you can expect to get very good response times, during normal daylight hours. Do not email after 10 pm on any day of the week.

Email requirements

1. Compose emails carefully, so to avoid offending your reader.
2. Avoid emails with more than several sentences. Ask questions which may be answered simply.
3. At no time may the syllabus or assignment be negotiated. Consult the syllabus and assignment before sending email.
4. Questions are welcome, but must be stated simply. Avoid messages that cannot be answered simply.
5. Review your email several times before sending. Remember, electronic communications are inherently intrusive.

Interactions via Github

Please post all academic questions to our github page, <https://github.com/stefanbund/SDLC-GITHUB>. Select "Issues," then while logged in, post a question. This will be delivered instantly to the Instructor's email, and answered in a timely fashion. Questions posted here will be welcomed by the entire class community, and can initiate extensive discussions. Note that all Issues posted here are visible to the entire class and are public on the Internet.

Blackboard: Course materials including announcements, lecture slides, assignments, projects documents, classroom exercises and solutions, and grades will be posted at:

- <https://github.com/stefanbund/SDLC-GITHUB>.

All student projects will be printed, stapled and presented in person on the due date.

Subject to Change: This syllabus and class schedule are subject to change. If the student is absent from class, it is the student's responsibility to check on announcements made and make up the work while absent. All lecture, assignment and learning materials will be posted to Blackboard for the corresponding week. Please use Blackboard as a guide to what has been covered in class.

Assignments

Assignments bearing the bulk of course credit are available at the start of the course. Rubrics and other details may change. Assignments are always posted to the course github.

10. Course Policies

Classroom environment: The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism

of the instructor, and the general goals of academic freedom are maintained. Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class.

Using laptops, cellphones and other electronic devices:

- Using laptops during the class for anything other than this class, personal conversations, talking or texting on cell phones or other distracting behavior are prohibited.
- As a courtesy to all, please turn off all cell phones and pagers during class. If the student needs to be reached for family medical or significant work-related issues, the student must present evidence to the instructor before the class starts.
- Absolutely no cellphones or other electronic devices may be used during an exam or quiz.

Attendance:

- Arrive on time. Do not disturb other students by asking for directions or help on exercises when arrived late.
- If the student needs to leave early, the student must let the instructor know before the class starts, and choose a seat that minimizes disruption to the class when leaving.
- If the student has to miss the class, the student must send an email to let instructor know before class and explain the reason.
- If the student is sick and contagious, the student should not come to the class and risk getting others sick.
- If the student miss an exam due to this reason, a make up may be given. However students shall not abuse the trust - if the student appears to be sick very often then the student may be asked to present evidence such as doctor notes to the instructor.

Student responsibilities:

- Each student is responsible for the successful completion and submission of all assignments and projects. Corrupted files or incomplete submission will not be credited. Students are also responsible for keeping a backup copy of each submission.
- The instructor will not review your assignments or projects before grading for the entire class to ensure fairness. The instructor will, however, help you understand the expectations and clarify the requirements.
- The instructor will not debug assignments or projects for individual student. The instructor will, however, help you gain knowledge and skills in analysis and design, problem solving, coding, testing and debugging, and answer **specific questions** about course topics. Make sure you have spent significant and reasonable amount of time and effort in research and working on your own before asking help.

Turnitin: Students written assignments will be checked through Turnitin.com for plagiarism detection.

11. University Policies

Students with Disabilities: Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities at <http://dsa.csupomona.edu/drc/>.

Academic Integrity: Students should understand or seek clarification about expectations for academic integrity in this course (including no cheating, plagiarism, or inappropriate collaboration); neither give nor receive unauthorized aid on examinations or other course work that is used by the instructor as the basis of grading; take responsibility to monitor academic dishonesty in any form and to report it to the instructor or other appropriate official for action.

Cheating and Plagiarism: Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work. Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university.

Computing Resources: At Cal Poly Pomona, computers and communications links to remote resources are recognized as being integral to the education and research experience. Every student is required to have his/her own laptop/computer or have other access to a computer with all the recommended software for this course. Find out more about how to access to the university's information resources from [Information Technology Services](#).

Copyright Policy: Copyright laws and fair use policies protect the rights of those who have produced the material. The copy in this course has been provided for private study, scholarship, or research. Other uses may require permission from the copyright holder. The user of this work is responsible for adhering to copyright law of the U.S. (Title 17, U.S. Code). A full description of Cal Poly Pomona's copyright policy is included in the [University's Intellectual Property policy](#). The course web site contains material protected by copyrights held by the instructor, other individuals or institutions. Such material is used for educational purposes in accord with copyright law and/or with permission given by the owners of the original material. Students may download one copy of the materials on any single computer for non-commercial, personal, or educational purposes only, provided that (1) do not modify it, (2) use it only for the duration of this course, and (3) include both this notice and any copyright notice originally included with the material. Beyond this use, no material from the course web site may be copied, reproduced, republished, uploaded, posted, transmitted, or distributed in any way without the permission of the original copyright holder. The instructor assumes no responsibility for individuals who improperly use copyrighted material placed on the web site.

12. Tentative Course Schedule

The Instructor will make the effort to deliver lessons along these guidelines. Students should use the Assignments Timetable as reference for homework that is due.

major theme	assignment	week #	date	Skill	CIS 315 topic	gradeable
			9/28	UML overview	syllabus, introduction to the course	
problem domain analysis	1	1	9/30	venn diagrams	Introduction to Systems Analysis and Design, problem domain and analysis	
		1	9/5	value stream analysis		
		2	9/7	kanban		
		2	9/12	org charts		
		3	9/14	data flow diagrams		
corporate strategy	2	3	9/19	SWOT analysis	Project Selection & Management	A1 due
		4	9/21	cause effect	requirements determination, business process and functional modeling	
		4	9/26	ishikawa		
		5	9/28	business model canvas		
		5	11/2	business motivation		
		6	11/4	business model notation		MT, A2 due
business process analysis	3	7	11/9	BPMN	User Interface Design	
		7	11/11	UML use case	structural modeling, behavioral modeling	

new system design	4	88	11/16	UML activity diagram	moving on to design, class and method design	A3 due
		8	11/18	class diagrams		
		9	11/23	sequence	construction, installation and operations	
		9	11/25	ui wireframes	HCI layer design	
infrastructure, database and deployment	5	10	8/25	deployment diagramming	data management layer design,	A4 due
		10	11/30		physical architecture design	FE, A5 due
			12/2	work time and exam prep		
			12/7-11	final exam week		