CSC394 Software Projects

IS376 Information Systems Project

Professor Clark Elliott

Fall 2020-21

Logistics:

Class meets: Online.
Mondays 5:45 – 9:00 CDT:
      Asynchronous lectures are available on D2L
      Required synchronous group meetings via software.
Professor: Dr. Clark Elliott
Class website: http://condor.depaul.edu/~elliott/394
email: elliott AATT depaul edu.
  [Include "394: " prefix in subject line and MEANINGFUL mail header!]
Course Management: D2L.depaul.edu

Senior Capstone:

The Senior Capstone experience allows students to explore substantive areas of scholarship and creative works within their major. In this class students are given the opportunity to create knowledge within the context of the ideas, perspectives, and research of others in the discipline. The Capstone class further provides students the opportunity to integrate and compare knowledge gained from their major with that which was learned in the domain area and core courses of the Liberal Studies Program. In this culminating experience, students create, under the mentorship of a faculty member, a final project of their own design.

Textbooks: None required this quarter

Recommended text: Schmidt, Terry, *Strategic Project Management Made Simple, Practical Tools For Leaders and Teams* (Hoboken, New Jersey: John Wiley and Sons, Inc., 2009) ISBN-13 978-0470411582 (light reading)

Recommended classic text: Project Management Institute, Inc., A Guide to the PROJECT MANAGEMENT BODY OF KNOWLEDGE (PMBOK® GUIDE), Fifth Edition (Newtown Square, PA: PMI, Inc., 2013) ISBN-13: 893-7485908328

Grading:

Special Fall 2020 change grading scheme to allow Pass/D/Fail by choice.

Because of the all-online quarter in Fall 2020 we will be allowing students to change the grading basis for their undergraduate and graduate courses in CDM. See the DePaul university web pages

You can refer to the table below, but note that for courses that count toward the major in computer science, and for graduate computer science students, *most* classes require a C- to count for credit toward your major, and the "D" options listed in the table below will require that you re-take the course. Check the specifics for your degree program and the grade requirements for each course, in the CDM catalog.

Except for forgetting the deadline, there is no advantage to changing your grade basis before the week starting June 1st, 2020, so you are free to see how the course is going until then.

Here are instructions for changing your grade basis from traditional grading to pass/fail from your student home page:

https://offices.depaul.edu/depaul-central/student-resources/Documents/ChangeGradingBasisSteps.pdf

Exams   20%
Project grades   80% (Including an absolute attendance requirement)
Quizzes   May fall in either category

Missing an in-class project group meeting results in a 4% grade reduction and cannot be made up. Absences are not excused for any reason.

Projects *must run* on the various days they are scheduled for demonstration or the group will suffer a major point reduction. There is a *high* priority on have a running project ready to go.

Each student is responsible for the entire project on the day it is due for demos. All students share the same project grade for demos. Plan accordingly ahead of time.

Grading Scale:

95%	A
90%	A-
86,83,80	B+,B,B-
78,74,70	C+,C,C-
65,60	D+,D

800 points, Project Grades include:

1. Concept demo (shared)
2. Requirements, Design, Plan demo (shared)
3. Project Preview demo (shared)
4. Final Project demo (shared)
5. Printed Project Book (shared / individual)
6. Individual Project Contribution Assessment (individual)
7. Miscellaneous logistical setup
8. Negative 40 points: Missing an officially scheduled class project meeting (individual)

Specific point breakdowns are listed at D2L | Grades.

Note that I reserve the right to raise the grade of a student that has demonstrated exceptional contributions in any of these areas.

All grades are subject to Academic Integrity Sanctions. See the class website and the student handbook for further discussion.

Topics will be drawn from, but are not limited to:

1. Understanding of project responsibilities
   a. Project manager
   b. Planning manager
   c. Chief designer
   d. Implementation manager
   e. Requirements manager
   f. Collaboration software manager
   g. Video / Media specialist
   h. Documentation manager
   i. Testing manager
   j. Webmaster
   k. Presentation manager
   l. One bottom-line name attached to each responsibility
2. Working with people
   a. Listening skills
   b. Leadership through service
   c. Introduction to the idea of personality types

       d. Effective criticism and the idea of a cognitive-unit relationship

       e. How to get people angry at you—or not. Do what you said you were going to do.

       f. Cultural differences—avoiding misunderstandings by being clear on expectations

       g. Giving team members as much responsibility as they can handle

3. Project development

       a. Blue sky creativity—write everything down without critique

       b. Stakeholder analysis

       c. Requirements development

       d. Requirements validation

       e. Dynamic reworking of requirements

       f. Planning bubbles breakdown and the five-hour rule

       g. Dynamic re-planning and pruning of a project's scope

       h. Critical path through a project

       i. Maintaining a central project calendar

       j. Elements of a valid project design

       k. Excising weak links in project implementation before demonstration

       l. Testing-driven design

       m. Signing off on explicit tests, a name required for each test

       n. Critical elements of a successful presentation

       o. Working with users, the communication gap

       p. The difference between a plan and a design

       q. Risk assessment and response

4. Planning under uncertain futures

       a. Expected Value

       b. Utility Value

       c. Sunk Costs

       d. Framing Effects

5. The Logical Framework

       a. Systems thinking—what is the context?

       b. Strategic planning, from objectives to the environment, to the strategy

       c. If-then hypothesis thinking, testing the unknown

       d. Integrating Theory and Best Practices

       e. What are we trying to accomplish? (Objectives)

       f. How will we measure success? (Measures and verification)

       g. What other conditions must exist? (Assumptions)

       h. How do we get there? (Inputs)

Project Deadlines:

The project deadlines are absolute and project demos are due on the day scheduled without exception.

See the course calendar at D2L for demos and other dates.

Demonstrations of the project:

1. Concept demo (must run)
   a. Running early demonstration of SOME group vision, assess your group members
   b. Usually throw out the concept demo and start the real project from scratch
2. Requirements, Design, Plan demo
   a. Requirements for the full final project, including requirements verification and validation, give history of requirements versions and development, etc.
   b. Plan for the project. Show complete breakdown to the five-hour task level, etc.
   c. Design for the full final project, including hardware and software, data, networking, security, platforms, program logic. Do NOT focus on the interface screens.
3. Preview demo (must run)
   a. May be a complete identical run-through of the final project
   b. Complete project ready to go, and just working out the kinks
   c. Recommend freezing the code at this point
4. Final demo (must run!)
   a. Presentation of the *running* final project
   b. Projects that are not running risk failure in the class
   c. Include the entire project from requirements to plan to design to testing to final running demonstration.
5. Project Manual
   a. Typically due for completion a week after the final demo
   b. To get credit for the project manual, each student must be present in class with an individual *printed* copy of the group's project manual in their possession. Plan ahead for printing logistics and costs.

Class structure:

This class will have a recorded lecture component each week, and extensive time during the regularly scheduled hours for collaborative real-time project group meetings. There is an absolute attendance requirement at project group meetings which cannot be made up. There will be a midterm and a final exam.

Office hours for the course are available from my faculty link at cdm.depaul.edu

All assignments, the assignment schedule, and the course materials, are available online at either D2L or the class website.

Writing Component:

This course has an important writing component. Students will write a short essay, or combination of brief essays about the status of their project group, answering specific questions and giving support for their arguments in a structured format. Students will write another essay as part of the final materials for the course specifying the nature of their contributions to the capstone project, again giving support for their arguments within a structured format.

Learning Outcomes:

At the end of class you will…

- have a broad understanding of the central systems principles in planning, designing, testing, implementing and testing a large software project.
- have a clear understanding of the *practical* aspects of implementing a large software project.
- have a good understanding of the basic principles of effectively working within a project team.
- have a good understanding of the basic principles of managing a software project team.
- have demonstrated the ability to produce a running capstone project.
- have demonstrated a broad survey-level knowledge of project management on exams.
- have incidental but sometimes extensive knowledge about the project IT content.
- apply one or more theories or concepts from courses within your major to an analysis of a particular issue relevant to the major
- identify an idea, method, or concept from a discipline outside your major field of study and be able to apply it within the context of your major field of study.
- examine how your previous coursework, including Liberal Studies courses, has contributed to your intellectual development and/or your post-graduation plans.

Academic Integrity:

Cheating, plagiarism, and unethical conduct are not allowed, and will be sanctioned, including referral to the dean's office, and failure in the class. Please refer to the academic handbook by which rules you are expected to abide.

Violations include, but are not limited to: making claims on any checklist for work that has not been done; including ANY un-cited work of others in any documents you turn in; turning in work, including any program, that has been authored by someone other than yourself; and in some cases including *any* work of others, whether cited or not–see the rules for each assignment.

"Minor points" notation:

From time to time I use the point box as a communication vehicle in two specific ways, and I reserve the right to add minor points for this purpose:

- One point extra: I am tipping my hat to you for particularly fine work. That is, if you get 101 points on a 100 point paper, I may be saying, "Hey, I noticed the five extra fine job you did. Good job!"
- Two points extra: If you receive two extra points, I am acknowledging an *exceptional* contribution beyond expectations, so 102 points on a 100 point assignment is something to feel really good about, and is a rare compliment.
- Grade of "1": used as a placeholder to let a student know that I have reviewed an assignment, and am waiting for further information or work as per correspondence. A "1" will *always* be resolved to a different grade.
- Grade of "2": a serious warning that you need to communicate with me about possible plagiarism or some other irregularity that is being investigated.

More Policies

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be addressed during class, posted in D2L, and sent via email.

Online Course Evaluations

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at http://academicintegrity.depaul.edu/. If you have any questions be sure to consult with your professor. There is NO CHEATING OF ANY KIND in this class!

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at: cdm.depaul.edu/enrollment.

Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential.
To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at: csd@depaul.edu.

Lewis Center 1420, 25 East Jackson Blvd.
Phone number: (312)362-8002
Fax: (312)362-6544
TTY: (773)325.7296

Other Course Policies

Attendance: Students are expected to attend each class, or view the class online, typically during the week the lecture is presented. Attendance at in-class project meetings is mandatory, and for the obvious reasons there is no way to make up such an absence; the group has already moved on. The reason for such an absence is irrelevant; there are no excused absences from group meetings.

Class Discussion: Student participation in class discussions in the groups is expected.

Attitude: A professional and academic attitude is expected throughout this course. Measurable examples of non-academic or unprofessional attitude include but are not limited to: talking to others when the instructor is speaking, mocking another's opinion, cell phones ringing, emailing, texting or using the internet whether on a phone or computer. If any issues arise a student may be asked to leave the classroom.

Cell phones / laptops in class: If you need to use your cell phone for any reason, or your laptop for any reason other than following the class slides, and taking notes, *leave the room.* You may quietly leave and re-enter as often as necessary unless I note otherwise. Your peers devote many hours out of their busy lives, and hundreds of dollars, to come to class. They deserve a vibrant, focused, environment. If you have a special case, discuss it with the instructor ahead of time. NO TEXTING, EMAIL, FACEBOOK, etc. in the classroom.

Civil Discourse: DePaul University is a community that thrives on open discourse that challenges students, both intellectually and personally, to be Socially Responsible Leaders. It is the expectation that all dialogue in this course is civil and respectful of the dignity of each student. Any instances of disrespect or hostility can jeopardize a student's ability to be successful in the course.