IST 261 Section 101
Application Development Design Studio I

Instructor	Phil O'Connell
Title	Adjunct IST/CMPSC Lecturer
E-mail	pxo4@psu.edu
On-campus Time & Location	Thu, 346 Woodland 6:00 PM – 9:00 PM
Start Date	Thu 2019-08-29
Course Credits	3.0

Course Prerequisites

BOTH of these are required:

- A grade of "C" or better is required in IST 242; or special permission.

If you have special permission to be in this course, please message me the details.

If you do not have special permission or are not an IST major, then you will need to withdraw from the course.

Course Description

Welcome to IST 261 -- Application Development Design Studio I!!

This is a studio course designed to provide an environment to practice and enhance the skills you learned in previous software development courses, such as IST 140 and IST 242.

The general format of the class will be experiential (learning through experience). Some elements of the environment will be cooperative learning, problem solving, peer review and critiques.

You will learn the common challenges that software developers experience, along with techniques used to manage those challenges. Emphasis will be placed on agile scrum methodologies.

The course will comprise of both individual and team assignments. The individual assignments occur in the first half of the course; the team deliverables will in in the second half.

You will maintain a "design and development journal". It will contain a running account of your design and development ideas, explorations, rationale, and other notes. Occasionally, I will provide a specific topic for you.

At the end of this course, you will be able to complete deliverables in each phase of the systems development life cycle (i.e., problem definition, requirements analysis, design, development, test).

Course Objectives

Students successfully completing this course will be able to:

- Complete deliverables in each phase of the application development lifecycle (problem definition, requirements analysis, design, development, test)
- Effectively review, critique, and improve source code of their peers
- Comprehend and successfully utilize the scrum software methodology
- Conduct application demonstrations and code walkthroughs
- Produce an accurate design & development journal

Canvas

All students are required to check Canvas regularly for announcements and messages. You should enable notifications (https://psu.instructure.com/courses/1780857/pages/profile-and-notifications) and install the app on your phone (https://community.canvaslms.com/docs/DOC-9831-18561185379).

Working at Home

In addition to working in the PSU labs, students will typically work on their personal computers.

However, it is your responsibility to make sure your environment is fully functional. If you are having trouble installing or running software, then you need to resolve that early in the semester.

Computer issues at home will not allow you to deviate from the deadlines and rules of this course.

Tentative Schedule

The following is a tentative schedule, listing the topics in approximate chronological order. They may change slightly during the course of the semester.

Week	Topics
01	Introduction, Java Review
02	IntelliJ IDEA, Coding Standards, GitHub
03	Object Design, Project Planning, Agile Scrum
04	Software Development Tools, Design Reviews and Revisions
05	Fault Tolerance, Project Work, Code Reviews
06	Design Patterns, Discussions, Project Work, Sprint Reviews
07	Serialization, Discussions, Project Work, Code Reviews
08	Java Topics, Discussions, Project Work, Code Reviews
09	Java Topics, Discussions, Project Work, Sprint Reviews
10	Unit Testing, Discussions, Project Work, Code Reviews
11	User Interfaces, Discussions, Project Work, Sprint Reviews
12	Collection Frameworks, Project Work, Code Reviews
13	Discussions, Project Work, Sprint Reviews
	Thanksgiving break
14	Final Presentations
15	Final Presentations

Cancelled Classes

It's extremely rare that I cancel a class. If it's a predetermined cancellation, you will be assigned a video and assignment. If it's an emergency cancellation, I will send you a Canvas message.

Snow closing call: 215-881-SNOW or 215-881-7669

PSU Two-Hour Delay Policy:

- ***Classes starting and ending before 10:00 AM are cancelled for the day***
- Classes will start at 10:00 AM following the normal class schedule.
- Classes that start before 10:00 AM but end after 10:00 AM will start at 10:00 AM and end at the regular time.

See www.abington.psu.edu/weather.

Classroom Security Plan

In the event of an emergency of any kind, such as a fire drill, the class will congregate outside of the building in the parking lot.

If you anticipate needing special assistance in evacuating the building, please inform your instructor, who will attempt to accommodate your special needs.

Campus Security: 215-881-7575, Campus Nurse: 215-881-7350.

Campus Alerts

PSUALERT is a service designed to alert the Penn State community via text messages to cell phones when situations arise on campus that affect the ability of the campus to function normally

https://psualert.psu.edu/psualert

Canvas and Email Access

NOTE: If your semester bill is not paid following the Penn State timeframe, your access to email and Canvas will be disabled and the course grades will be withheld until account settlement with the Bursar's office.

There's no way for me to know if you lose access. If that happens, please send me an email via your personal email address to let me know.

Grading

Rubrics

I don't use rubrics in the traditional sense. I create them to assist with grading. My assignment instructions don't have rubric-like check lists per se. Part of what's expected is that you read the assignments thoroughly and realize all that you need to do. I create my grading checklist according to the tasks specified in the assignment itself.

The points on the rubric don't always add up to 100. So, if you receive 92.7 points out of a total possible 115, then your grade is 80.61%. Not 92.7%. That's because 92.7 points are 80.61% of the total possible 115 points.

Individual Assignments

At-home individual (as opposed to group/team) assignments must be submitted to Canvas on-time. Note that these are *individual* assignments. You are **_not_** to work on the assignment with anyone else (students or otherwise). If you do, all parties involved will receive a *zero* for the assignment.

Immediately after the due day & time, it's considered late. If it's due at 8:00, then Canvas will mark anything after that as late. BE SURE you submit the correct file. Accidentally submitting the wrong file is equivalent to no-submission. I suggest downloading your submission to check that you uploaded the right one.

A penalty will be deducted for up to two calendar days that it is late. If it has not been turned in after 48 hours, you will receive a zero for the assignment.

For example, if an assignment is due Saturday by 8:00 AM:

Date/Time Submitted	Penalty	Note
`- Sat before 8:00 AM`	-0%	(no penalty)
`Sat 08:00 AM - Sun before 8:00 AM`	-15%	Perfect assignment would be graded as 85%
`Sun 08:00 AM - Mon before 8:00 AM`	-25%	Perfect assignment would be graded as 75%
`Mon 08:00 AM -`		Grade for assignment is 0%. Don't bother submitting.

Note that *those penalties are for at-home individual assignments*. There is *no lateness allowed for other types of submissions* (labs, web activity, group work).

Also note that there may be cases where even some individual assignments have no lateness allowed. That will be known when I give the assignment.

Note about "8:00 AM" – I used to have submissions due by 11:59 PM. But over the years, I've extended that to be 8:00 AM the following morning. Reasons are (1) it coincides with the start of class, (2) it gives more time to students who need to work late, (3) the earliest I would ever start grading assignments would be 8:00 AM.

Labs

Most classes will include a lab exercise. At the end of class, you will submit the exercise to Canvas, and it will be graded.

The labs **_MUST_** be done on the **classroom lab computer**, **_NOT_** a laptop (which are not allowed anyway).

> **_If you miss a class, and we did a lab exercise, you will receive a zero for that lab._**
> **_However, I do drop the lowest lab grade._**

Group Project

Teams will be randomly (or alphabetically) generated to work on the "Team Project Deliverables". Each team member is required to contribute to the project. There will be "Teamwork Accountability" spreadsheets to complete by all team members. If you do not contribute, your overall grade for the class will be **_heavily impacted_**. There will also be an overall "Final Project" grade, which will include a presentation. (For web-only classes, this may be a recorded video)

There are no late allowances for the team project deliverables.

Criteria for Grading of Assignments and Projects

The following is the general basis for grading of assignment and projects. There may be additional criteria, depending on the situation.

- Correctness
    - Programs compile & run
    - Language constructs are used appropriately
    - Diagrams (e.g. UML) make correct use of symbols
- Completeness
    - Programs and written work address all aspects of the problem as described in the assignment specification
- Clarity
    - Programs are formatted professionally, and include adequate & appropriate comments
    - Written work and diagrams are
        - free of typographical and grammatical errors
        - formatted neatly

Attendance

Since this is a studio course, attendance is critical. Classes will involve hands-on programming activities, teamwork, and discussions.

Student attendance history can be viewed in Canvas. Check it daily (ideally, right after class) to ensure it's accurate. If you feel it's not, let me know as soon as possible.

Lateness
I use the default Canvas lateness grading. That is, 100% for a class if you're on time. 80% if you're late. "Late" for this course means 6:06 or later. 0% if not present.
Transportation schedules (bussing, train, carpool, etc...) that don't align with our class, do not excuse you from any aspects the attendance policy.
Three late attendances (regardless of being "in a row") will count as one absence.

PSU Attendance Policy: http://www.psu.edu/oue/aappm/E-11-class-attendance.html

Absence
An absence will be excused only in extreme cases -- such as military duty, jury or other court obligations, serious illness or medical conditions treated by a physician, death in the immediate family, childbirth, or a disability for which you have made prior arrangements with Penn State's Office of Disability Services (http://equity.psu.edu/ods). Absences due to work-related events are not excused.

If you are absent, it is your responsibility to determine what content you missed. Check the corresponding Canvas module. If you then have specific questions, please send me a Canvas message. I will be happy to clarify anything.

I will drop the lowest attendance grade.

Grading Scale

Numerical %	Letter
>= 93.0	A
>= 90.0	A-
>= 87.0	B+
>= 83.0	B
>= 80.0	B-
>= 77.0	C+
>= 70.0	C
>= 60.0	D
>= 00.0	F

Midterm and Final Exams

The date for the midterm exam will be announced near the beginning of the semester.
The date/time for the final exam is at http://abington.psu.edu/final-examination-schedule.

Final Grades

When final grades are released, please do not message me asking to be bumped up to a higher grade, or for individual extra credit. I will not reply to such messages. In fairness to all students, I don't do either of those.

Total Grade Distribution

Category	Percentage of Final Grade
Individual Assignments (approx. 4)	30 %
Teamwork Accountability	15 %
Team Project Deliverables (approx. 4)	12 %
Midterm Exam	09 %
Final Exam	09 %
Attendance / Participation	10 %
Developer Journal	07 %
Project Presentation	05 %
Labs (approx. 20)	03 %

Participation can be thought of as an extra-credit in the Attendance category. If I think you have outstanding participation, I may bump up your attendance grade (unless it's already 100%)

Academic Integrity

Academic integrity is the pursuit of scholarly activity in an open, honest, and responsible manner.

It is a basic guiding principle for all academic activity at the Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights, and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts.

Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation, or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others.

The following practices constitute, for the purposed of this policy, violations academic integrity:

- Cheating
- Tampering with work
- Acts of aiding and abetting
- Computer program theft
- Submitting previous work
- Plagiarism
- Altering exams
- Copying from classmates
- Copying on a test
- Ghosting
- Unauthorized possession
- Providing your work for copying

Group discussions and exchanging ideas among peers is permitted. However, copying programming code from your peers or from the internet, or outsourcing your programming to a third-party entity is prohibited. It will result in a severe grade penalty. If two or more students' submissions are identical in part or in full, all involved will receive a 0% grade.

A student caught committing any of these violations will be subject to a sanction ranging from a document official warning to failure of the course. In extreme cases, failure due to violations of academic integrity will be noted on the student's official transcript as an *XF* and become part of his or her permanent record.

PSU Calendar

http://www.registrar.psu.edu/academic_calendar/fall19.cfm

Classroom Behavior

Civility in dealing with our fellow students is expected. Intolerance, profanity, harassment of any kind, and disrespect are characteristics not worthy of any of us and will not be tolerated. Individuals demonstrating uncivil behavior will be asked to leave.

During class, do not use or play on phones, laptops or other electronic devices.

Educational Equity

Consistent with University Policy AD29, students who believe they have experienced or observed a hate crime, an act of intolerance, discrimination, or harassment that occurs at Penn State are urged to report these incidents as outlined on the University's Report Bias webpage

http://equity.psu.edu/reportbias

Learning Center

The Learning Success Center at Penn State Abington, located in room 315 Sutherland Building, is a resource to aide students in achieving academic success. Professional and peer tutors with an extensive background in a variety of subject areas are available to assist students in: Mathematics, Writing and English, ESL, Languages, Sciences, Accounting and Statistics. Workshops on study skills, time management, note taking, and college reading strategies are also offered.

The Learning Success Center is open 8am to 6pm, Monday through Friday. Tutoring is available to students as walk-in appointments, however, scheduling appointments in advance is strongly encouraged. Students can register and make appointments at https://abington.mywconline.com.

Free Online Tutoring is available through NetTutor for all Penn State Abington students. Students can register by visiting, https://www.nettutor.com, click the "Students" button and follow the log-in directions.

Disability Policy

Penn State welcomes students with disabilities into the University's educational programs. Every Penn State campus has an office for students with disabilities. Tiffany Ostrowski is the Student Disability Resources Coordinator at the Abington Campus. Her contact information is

> Name: Tiffany Ostrowski
> Email: tmo5227@psu.edu
> Phone: 215-881-7962
> Office: 223 Sutherland 223

In order to receive consideration for reasonable accommodations, you must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: http://equity.psu.edu/sdr/guidelines.

If the documentation supports your request for reasonable accommodations, Student Disability Resources will provide you with an accommodation letter. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. You must follow this process for every semester that you request accommodations.

Counseling and Psychological Services (CAPS)

Many students face personal challenges or have psychological needs that may interfere with their academic progress, social development, and/or emotional well-being. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, and mental health screenings.

These services are provided by clinicians who welcome all students and embrace a philosophy respectful of diversity and inclusion. You can contact the CAPS Coordinator directly or feel free to visit the CAPS website abington.psu.edu/CAPS to learn more about their services and therapists.

Counseling and Psychological Services at University Park (CAPS)

(http://studentaffairs.psu.edu/counseling): 814-863-0395

Counseling and Psychological Services at Commonwealth Campuses

(http://senate.psu.edu/faculty/counseling-services-at-commonwealth-campuses)

Penn State Crisis Line (24 hours/7 days/week): 877-229-6400

Crisis Text Line (24 hours/7 days/week): Text LIONS to 741741