Course Instructors

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Instructors’ Office Hours

Please visit the web sites of the course instructors to view their office hours. Using the “appointment slots” feature of Google Calendar, you can select an available meeting time. After picking your time slot, the reserved meeting will appear in both your Google Calendar and the instructor’s.


Course Communication

Throughout the semester, students and faculty will use Slack to support course communication. Whenever possible, students are also encouraged to post appropriate questions to a channel in Slack, a sign up for which is available at https://join.slack.com/t/cs-seniorthesis2019/signup. Moreover, all students are required to use GitHub repositories to submit all of the deliverables for this course’s various projects. Finally, students should add a course Google calendar called CS Thesis 2019-2020.

Required Textbooks


(References to the textbook are abbreviated as “WFCS”).

Course Schedule

Organized according to the calendar month during which an activity takes place or a project is due, the following table outlines this course’s schedule for the entire academic semester. Some of these dates are approximate and, if the need to do so presents itself, it is possible for the course instructors to modify the proposed schedule and notify the class of any changes via email or Slack. Unless it is otherwise noted that there is no class session, it is assumed that, even if there is a course project due or a research task to complete, you will still attend a research group meeting during the scheduled session for this course. During senior thesis defenses no group meetings will be held. You are responsible for completing writing and peer reviewing tasks electronically during those weeks and to schedule office hour meetings to meet with your first and second readers individually as needed.

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 27</td>
<td>No class on the first day of the semester</td>
</tr>
<tr>
<td>September 3</td>
<td>Ensure your correct registration for CMPSC 600 with First Reader</td>
</tr>
<tr>
<td>September 10</td>
<td>Release Project 1: Senior Thesis Proposal</td>
</tr>
<tr>
<td>September 17</td>
<td>Release Project 2: Status Update</td>
</tr>
<tr>
<td>October 1</td>
<td>Submit Project 2: Status Update</td>
</tr>
<tr>
<td>October 8</td>
<td>Release &amp; Submit Project 3.2: Peer Edit Thesis Proposal Draft</td>
</tr>
<tr>
<td>October 15</td>
<td>Fall Break — No Class</td>
</tr>
<tr>
<td>October 16</td>
<td>Submit Project 1: Senior Thesis Proposal</td>
</tr>
<tr>
<td>October 22</td>
<td>Theses Defenses (No group meetings)</td>
</tr>
<tr>
<td>October 29</td>
<td>Gator Day — No Class</td>
</tr>
<tr>
<td>November 5</td>
<td>Release Project 4: Senior Thesis Chapters</td>
</tr>
<tr>
<td>November 12</td>
<td>Get Technical Report Number from Pauline Lanzine</td>
</tr>
<tr>
<td>November 19</td>
<td>Release &amp; Submit Project 3.3: Peer Edit Outlines of Thesis Chapters</td>
</tr>
<tr>
<td>November 26</td>
<td>Release &amp; Submit Project 3.4: Peer Edit Drafts of Thesis Chapters</td>
</tr>
<tr>
<td>December 3</td>
<td>Release &amp; Submit Project 3.5: Peer Edit Drafts of Thesis Chapters</td>
</tr>
<tr>
<td>December 10</td>
<td>Submit Project 4: Senior Thesis Chapters</td>
</tr>
<tr>
<td>November 4 – November 26</td>
<td>Oral Defense of Thesis Proposal (see schedule below)</td>
</tr>
<tr>
<td>November 26 – December 3</td>
<td>Oral Defense of Thesis Proposal (see schedule below)</td>
</tr>
<tr>
<td>November 4 – November 8</td>
<td>Register for CMPSC 610 with first reader</td>
</tr>
<tr>
<td>September through December</td>
<td>Communicate with instructors and students in Slack</td>
</tr>
</tbody>
</table>
outlining their thesis proposal and answer questions of their thesis committee. In case a more in-depth discussion of the proposal is deemed necessary by the committee, a follow-up defense will be scheduled either on November 26, December 3 or a date before December 3 that is mutually agreed upon by the student and the committee. Further details about the structure of the thesis proposal defense can be found in the following section. Please note that unless the faculty are presented with a documented evidence of severe extenuating circumstance no thesis proposal defenses will be rescheduled. Students who fail to defend their thesis proposals will automatically receive a grade of “F” in CMPSC 600 and will have to repeat the course. Additionally, students who fail to submit their thesis proposal document will not be allowed to proceed with their thesis proposal defense.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Name</th>
<th>Room</th>
<th>Readers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 22</td>
<td>1:30 pm</td>
<td>Simon Burrows</td>
<td>Alden 101</td>
<td>GK, AM</td>
</tr>
<tr>
<td>Oct. 22</td>
<td>1:30 pm</td>
<td>Alex Butler</td>
<td>Alden 109</td>
<td>OBC, DL</td>
</tr>
<tr>
<td>Oct. 22</td>
<td>1:50 pm</td>
<td>Andrew Everitt</td>
<td>Alden 101</td>
<td>GK, JJ</td>
</tr>
<tr>
<td>Oct. 22</td>
<td>1:50 pm</td>
<td>Dillon Thoma</td>
<td>Alden 109</td>
<td>AM, OBC</td>
</tr>
<tr>
<td>Oct. 22</td>
<td>2:10 pm</td>
<td>Jef Cerda Mejia</td>
<td>Alden 101</td>
<td>OBC, JJ</td>
</tr>
<tr>
<td>Oct. 22</td>
<td>2:10 pm</td>
<td>Chris Cook</td>
<td>Alden 109</td>
<td>AM, GK</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>1:15 pm</td>
<td>Robert Samuel</td>
<td>Alden 101</td>
<td>GK, OBC</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>1:15 pm</td>
<td>Jonathan Reibel</td>
<td>Alden 109</td>
<td>AM, JJ</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>1:40 pm</td>
<td>Trent Faulkner</td>
<td>Alden 101</td>
<td>GK, JJ</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>1:40 pm</td>
<td>Zachary Andrews</td>
<td>Alden 109</td>
<td>AM, OBC</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>2:05 pm</td>
<td>Carson Quigley</td>
<td>Alden 101</td>
<td>JJ, GK</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>2:05 pm</td>
<td>Devin Spitalny</td>
<td>Alden 109</td>
<td>OBC, AM</td>
</tr>
<tr>
<td>Nov. 12</td>
<td>1:15 pm</td>
<td>Dubbs Walker</td>
<td>Alden 109</td>
<td>OBC, JJ</td>
</tr>
<tr>
<td>Nov. 12</td>
<td>1:40 pm</td>
<td>Xingbang Liu</td>
<td>Alden 101</td>
<td>JJ, GK</td>
</tr>
<tr>
<td>Nov. 12</td>
<td>1:40 pm</td>
<td>Ben Watto</td>
<td>Alden 109</td>
<td>AM, OBC</td>
</tr>
<tr>
<td>Nov. 12</td>
<td>2:05 pm</td>
<td>Jordan Durci</td>
<td>Alden 101</td>
<td>JJ, AM</td>
</tr>
<tr>
<td>Nov. 12</td>
<td>2:05 pm</td>
<td>Isaac Barreuzeta</td>
<td>Alden 109</td>
<td>OBC, GK</td>
</tr>
<tr>
<td>Nov. 19</td>
<td>1:15 pm</td>
<td>Michael Eltman</td>
<td>Alden 101</td>
<td>AM, JJ</td>
</tr>
<tr>
<td>Nov. 19</td>
<td>1:15 pm</td>
<td>Mikey Spurr</td>
<td>Alden 109</td>
<td>OBC, GK</td>
</tr>
<tr>
<td>Nov. 19</td>
<td>1:40 pm</td>
<td>Zachary Leonardo</td>
<td>Alden 101</td>
<td>JJ, AM</td>
</tr>
<tr>
<td>Nov. 19</td>
<td>1:40 pm</td>
<td>Matt Baldeosingh</td>
<td>Alden 109</td>
<td>GK, OBC</td>
</tr>
<tr>
<td>Nov. 19</td>
<td>2:05 pm</td>
<td>Jacob Van Slyke</td>
<td>Alden 101</td>
<td>OBC, AM</td>
</tr>
<tr>
<td>Nov. 26</td>
<td>1:15 - 2:20 pm as needed</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Dec. 3</td>
<td>1:15 - 2:20 pm as needed</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Please note that, unless evidence of extenuating circumstances is presented in writing to all of the instructors, a student’s grade in the course will be reduced if the stated deadlines are not met. Students who have questions or concerns about these deadlines should talk with their first reader.
Overview of the Grading Policies

Final grades are determined after the entire faculty of the Department of Computer Science — not just your course instructor for CMPSC 600 — review and discuss all of the submitted deliverables. Your grade in CMPSC 600 will be based on a combination of the following activities and deliverables. Percentages are not given because we recognize that the senior thesis experience differs from one student to the next and that there are many variables, such as the nature of the project and the availability of external resources, that can influence the relative importance of these criteria. However, it is important to note that a large percentage of your grade depends upon your written thesis proposal, the oral defense of your thesis proposal, and your two thesis chapters.

- **Class Participation**: As previously mentioned in the “Course Schedule” section, all students are required to attend all of the Tuesday class sessions and to fully participate in their research group meetings. Additionally, this also requires regular contributions, in the form of peer editing, questions and comments, to the course’s Slack team. If it is required that additional meetings are necessary with the first and/or second reader, then an appointment should be made during that reader’s office hours.

- **Course Repositories**: This involves students creating, at minimum, a GitHub version control repository for each of the assigned course projects. Students should click the relevant link in the Slack team to accept and begin working on the assignment. Now, you may follow the instructions in your repository’s README file to complete and submit the assignment, regularly using the Travis system and GitHub’s tagging mechanism to release PDFs of your proposal with versions that adhere to the semantic versioning standard. Course instructors will only grade and provide feedback on projects that are stored and released through GitHub.

- **Status Update**: This document should describe the progress that a student has made on identifying a topic for their senior thesis and completing the preliminary research needed to demonstrate its feasibility. Written with feedback from your first and second readers, your status update should be stored and released through the appropriate GitHub repository.

- **Written Thesis Proposal**: This document must be submitted, through the appropriate GitHub repository, to both your first and second reader. Subject to multiple rounds of extensive revision, this technical document must be formatted according to the Department’s thesis proposal style requirements and approved for a subsequent defense by your first reader.

- **Proposal Defense**: This event has been pre-scheduled by the computer science faculty. The first reader reserves the right to cancel student’s proposal defense if the thesis proposal document does not meet minimum requirements outlined below. A follow-up thesis defense maybe scheduled if the committee determines there is a need for a more in-depth discussion of the thesis proposal.

- **Thesis Chapters**: Any two chapters of your final senior thesis must be submitted to the course instructor by the aforementioned deadline. Written in a professional and scientific style, these chapters must be formatted in the Department’s thesis style; note that this style, which is different from the proposal style, will be available in an appropriate GitHub repository.

Details About Course Expectations and Deliverables

Class Participation

You must regularly attend a research group meeting on Tuesday lead by your first reader, who will report on your participation when the department’s faculty meet to assign final grades for this course. In addition to participating in the class session activity, students are expected to come to
each class meeting with a status update on their progress and a meeting agenda. Students should
conclude each meeting by listing the tasks that they want to complete before the next meeting.
Students should also regularly participate in the discussions on the relevant channels in the Slack
team for our course. Your participation on Slack may involve giving a quick status update to your
first reader, inviting your first reader to examine a draft of your proposal or compile and run a new
version of a program, or, within the bounds of the Honor Code, answering a question from another
senior conducting their thesis research.

GitHub Repositories

Every student must accept each of the course projects given as an assignment via GitHub Classroom,
thus creating a GitHub repository customized for the student and that specific project. All
of these GitHub repositories should have a README file that clearly explains the steps that a
student took to complete and release the final version of the assignment. In addition to containing
the LaTeX source code that fulfills the assignment, each GitHub repository should feature releases of
the compiled PDF files that are tagged with numbers that adhere to the semantic versioning stan-
dard described at http://semver.org/. The release of a compiled PDF file can be accomplished
automatically by using both the tagging and releases feature provided by GitHub and, additionally,
the continuous integration system provided by Travis. Your first and second readers will download,
read, and comment on a released PDF at semantic version 1.0.0 or higher. Students who are not
able to automatically release PDFs of their projects may instead manually create them by using
the GitHub interface. Please see an instructor if you have questions about using GitHub. Failure
to either regularly commit to your GitHub repositories or to make releases of your PDFs will lead
to a decrease in your final grade for CMPSC 600.

Thesis Proposal

The proposal should follow the Department’s proposal style and thus must include an abstract, the
main body of your proposal with the description of the proposed work, the importance and relevance
of the work, proposed methodology and demonstration of its feasibility, a tentative schedule for
completing the project, a bibliography, and any other information deemed important by your first
reader. These other details will often include one or more of the following: a survey of the existing
literature; an overview of your proposed technique; technical diagrams and formal statements of
algorithms illustrating your main approach; the description of an evaluation method; examples or
code artifacts or other evidence that you understand the nature of the work you are proposing and
can feasibly complete it in the time available. Finally, the proposal must fully adhere to professional
standards of writing.

Although your first reader will be your primary contact person as you write and revise your
thesis proposal, you may involve your second reader as appropriate. That is, your first reader
will make suggestions on your submitted documents under the expectation that you will revise
multiple proposal drafts. You must work at a pace that will ensure that you complete an approved
senior thesis proposal before the stated deadline. Failure to complete a final thesis proposal by
the due date will result in the reduction of your final grade in CMPSC 600 and may result in the
cancellation of your scheduled defense.

Proposal Defense

Lasting twenty minutes in total, a proposal defense starts with a prepared, formal presentation
of about five minutes in which you lay out the essential parts of your chosen project under the
assumption that your first and second reader have already studied your thesis proposal. Following
the presentation, you will participate in a short 10-minute discussion with your readers to identify
potential challenges, refine or extend some aspects of the thesis proposal, and ensure that your
project is feasible and appropriate. After a question and answer discussion, the readers will de-
liberate privately and inform the student of either a passing thesis proposal or a need for more
in-depth discussion of the proposed thesis. If the committee finds the need for more time to deter-
mine whether the project is relevant or feasible, a follow-up defense will be scheduled. During the
follow-up defense, a further discussion of the proposal’s challenges will be discussed and potential
refinement or extension of the proposal will be identified.

**Thesis Chapters**

Your two chapters, due on the previously stated date, should represent a significant addition to or
extension of the material in your proposal. Don’t simply “split the proposal into two chapters” —
this usually does not work well since your chapters must represent work completed, not work being
proposed. Chapters are judged according to the same professional standards as the proposal; they
must include a full bibliography, a preliminary table of contents, lists of any figures and tables, and
any other items (e.g., the formal statement of key algorithms) required by your first reader.

As you write your chapters in consultation with your readers, allow these individuals to comment
on your drafts and then make all of their requested changes. You will also be given the opportunity
to plan and revise your thesis chapters during certain meetings of your research group. You should
plan to write several drafts of the chapters before submitting them on the due date; failure to turn
them in by the stated deadline will result in the reduction of your final grade in CMPSC 600.

**Using Email**

Although we will primarily use Slack for class communication, we will sometimes use email to send
announcements about important class matters. It is your responsibility to check your email at least
once a day and to ensure that you can reliably send and receive emails. This class policy is based
on the statement about the use of email that appears in *The Compass*, the student handbook.

**Honor Code**

The Academic Honor Program that governs the academic program at Allegheny College is described
in the Allegheny Academic Bulletin. The Honor Program applies to all work that is submitted for
academic credit or to meet non-credit requirements for graduation at Allegheny College. This
includes all work assigned for these classes (e.g., source code, technical diagrams, and your written
content); deliverables that are nearly identical the work of others will be taken as evidence of
violating the Honor Code. All students who have enrolled in the College will work under the Honor
Program. Each student who has matriculated at the College has acknowledged the following pledge:

I hereby recognize and pledge to fulfill my responsibilities, as defined in the Honor Code,
and to maintain the integrity of both myself and the College community as a whole.

**Disability Services**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides
comprehensive civil rights protection for persons with disabilities. Among other things, this leg-
islation requires all students with disabilities be guaranteed a learning environment that provides
for reasonable accommodation of their disabilities. Students with disabilities who believe they may need accommodations in this class are encouraged to contact Disability Services at 332–2898. Disability Services is part of the Learning Commons and is located in Pelletier Library. Please do this as soon as possible to ensure that approved accommodations are implemented in a timely fashion.

**Welcome to an Adventure in Computer Science**

CMPSC 600 affords you the opportunity to pursue independent research in computer science and to ensure that your work has a positive influence on your future plans, the students and faculty at Allegheny College, and a broader society that relies heavily on computer hardware and software. At the start of your senior year, we invite you to pursue this class with great enthusiasm and vigor.