CS20 Programming for Engineers Fall 2017

Description
Introduction to computer programming principles using MATLAB, with applications chosen from civil, electrical, environmental, and mechanical engineering.

Professor
Alison Pechenick, Senior Lecturer
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Graduate Teaching Assistant
Ali Javed
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Office hours:
Mondays 3:30-5:30 p.m.
Thursdays 10:00-11:30 a.m.

Office hours:
Tuesdays & Thursdays, 10-noon
Mansfield Basement

See Blackboard "Getting Help" for additional TA help hours and locations.

Required Materials – Bring clickers and laptop to every class

- **Laptop** installed with MATLAB software (free, courtesy of your UVM Technology Fee). *Installation instructions are here.*
- **Your choice of the following:**
  - iClicker Plus [standalone device](#)  
    **Please do NOT** register on clicker website. Instead, [register on BB’s main page](#).
  - iClicker Reef [mobile app](#)

Composition of Course Grade

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Online BB Activities</td>
<td>10%</td>
</tr>
<tr>
<td>In-class Clicker Quizzes*</td>
<td>10%</td>
</tr>
<tr>
<td>HW Coding Assignments</td>
<td>25%</td>
</tr>
<tr>
<td>Hourly Exams (15% each)</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam (Based on Final Project)</td>
<td>25%</td>
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*Clicker grades will be curved to accommodate one excused absence*
MidTerm Exam Dates
Exam 1: Tues, Sept 26 6:00-9:00 p.m. Fleming 101
Exam 2: Mon, Oct 30 6:40-9:40 p.m. Fleming 101

Final Exam Dates
CS 020 A (4:25 section): Tues, Dec 12 4:30-7:15 p.m. Kalkin 003
CS 020 B (2:50 section): Thurs, Dec 14 10:30 a.m-1:15 p.m. Waterman 427

CS 20 Online Course Spaces

1. Use Blackboard to access all assignments and support materials.
   - Syllabus provides overview and expectations
   - Week at a Glance lays out the entire semester, week by week
   - What’s Next folders contain each week's lessons and assignments
   - Getting Help links to many additional help hours, plus grader contact information

2. Use Piazza for all class discussion and course-related e-mails. This system is designed to get you help quickly and efficiently from classmates, G/TAs, and professor.
   - Post your question to “Entire Class” or indicate specific individuals by name.
   - Use “Instructors” to reach entire team (Instructor + G/TAs).
   - Do NOT include your homework solution in questions you post to Entire Class.
   - You are also encouraged to answer questions your classmates have posted. (Student answers will be vetted by a member of the instruction team.)

Policies and Expectations

1. Meeting deadlines is a highly valued professional skill. Unburdened by backlog, you are primed to meet the next project with new skills and optimal focus.
   *Homeworks submitted within 24 hours of the deadline will be assessed a 20% late penalty.
   *Homeworks submitted more than 24 hours beyond the deadline will receive a zero.

2. MATLAB coding assignments that throw errors will earn a zero. Be sure your scripts and functions run with NO SYNTAX OR RUNTIME ERRORS.
   How to tell? These errors appear as “red ink” messages in the Command Window.
   How to avoid? Before submission, check your work by using the Run (and NOT Run Section) button in the MATLAB desktop.

3. Our guarantee: Assignment feedback will be available one week after the due date. Any grade appeal must be submitted to GTA Ali Javed within one week after grades are posted. In your appeal, clearly explain why you think you deserve a different grade.
4. You are expected to prepare for clicker quizzes in advance (see BB Course Materials) and attend all class meetings. To accommodate unavoidable classroom absences, your iClicker quiz average will be curved, effectively allowing one excused absence.

There are no quiz makeups. You will not be allowed to make up clicker quizzes due to lateness, forgotten clickers, dead batteries, or expired reef app licenses.

5. You may not miss an exam without prior permission, and only then in case of an exceptional and documented situation. An undocumented exam absence will result in an exam grade of zero.

6. Coding, like walking, is best learned by doing. Unless explicitly instructed otherwise, you are honor bound to neither give nor receive assistance on any graded activity.

Approach this course as if training for any desired mastery (think of your passions, and the hours you invest therein). With steady effort, you are highly likely to achieve success. Please reach out to Professor Pechenick and the G/TAs early and often, whenever you need assistance.

Academic Integrity

UVM is committed to our “learning, creating, and sharing knowledge responsibly”. You are responsible for familiarizing yourself with, and upholding, the UVM Code of Academic Integrity.

Collaboration is permitted and encouraged during in-class exercises and exam prep. Unless explicitly specified, providing or accepting solutions to quizzes, exams and homework is strictly prohibited. Discussing homework strategies and concepts is always fine. However, the only reason you should ever view a classmate’s actual code before the due date + 24 is to help them identify and fix an error. And if you do this, do NOT show/describe your own code.

Because integrity matters…

Plagiarism Detection Software.

Please note: All submitted programming assignments are subject to originality verification through software designed and used for the Measure of Software Similarity (MOSS).

All violations will be reported to Center for Student Conduct. Results may range from zero on an assignment, to an "Academic Dishonesty" F in the course, so please do not risk this.

We want you to have fun with this course -- if you are struggling with content, or time management, please reach out to Professor Pechenick and the G/TAs (that’s why we’re here).
Accommodations and Religious Observances

In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact Student Accessibility Services (ACCESS) as early as possible. SAS staff work with students to create reasonable and appropriate accommodations. Students are responsible for discussing their accommodation letter with the instructor.

Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time.

About Your Instructor

Alison Pechenick has advanced degrees in Environmental Engineering and Computer Science, a background in General Engineering (EE concentration) and Engineering Management, and industrial experience as an engineer with IBM and General Motors. She has conducted research using GIS data and statistical methods to study the impacts of road networks on riparian geomorphology (river health), and has worked overseas (Taiwan, Pakistan, Sweden) and in various regions within the U.S. With early experience “stuffing” and testing circuit boards in the family business (design and manufacture of industrial process controls), Professor Pechenick has locally been a network engineer, IT support specialist, and technical trainer; loves to cruise and race sailboats; cycles, skies and snowshoes to campus; skates and kayaks on Malletts Bay; and has served as faculty advisor to the UVM Sailing Team and UVM Engineers Without Borders.