Class meetings

section 010: TR 9:30–10:45 in MCS 105
section 020: TR 11:00–12:15 in MCS 105

Instructor

Rob LeGrand
e-mail: rlegrand@angelo.edu
webpage: www.cs.angelo.edu/~rlegrand
office phone: 325-486-5422
office location: MCS 205I
office hours: online MTWRF 2:00–4:00 on demand and by appointment

Textbooks


Description

Computer game development for Android handheld computing devices. Programming topics include graphics, audio, user interfaces and development tools. Other topics may include content creation, developer workflow, hardware acceleration and power management.

Prerequisites

CS 2336 (Data Structures and Algorithms) is a prerequisite for this course. Please see me if you haven’t taken CS 2336 or if you’re unsure about your programming proficiency. Prior Java experience in particular is recommended (though CS 1351 is not a listed prerequisite).

Grading breakdown

60% assignments/quizzes/homework
40% projects/exams

Student learning outcomes

After successful completion of this course, students will

• identify, install and evaluate development software for a handheld computing device.
• create application software for a handheld computing device using a high level programming language.
• create multimedia content suitable for use in an application program for a handheld computing device.
• author an application program for a handheld computing device that demonstrates 2D and/or 3D graphics.
• author an application program for a handheld computing device that demonstrates audio.
• author an application program for a handheld computing device that demonstrates interactive user input.
• author an application program for a handheld computing device that launches other application programs.
• explain techniques for applications created for handheld computing devices to reduce their power usage.
Class format

Current circumstances require a much different class format than I would prefer. I need to accommodate those students who won’t be coming to campus, so I will use a “flipped classroom” style. I will post everything you need (videos, reading assignments, other materials, announcements, instructions, assignments, quizzes, exams, etc.) online. It is very important that you watch all assigned videos and do all assigned reading before coming to class.

I plan to use face-to-face class meetings only to answer questions and give help; I won’t cover any course material that I don’t also cover online. If it becomes necessary, I will divide the class in two groups: one that attends only on Tuesdays and one that attends only on Thursdays. I will take attendance, and you will need to sit in the same place all semester. Attendance is encouraged but will not directly affect your grade. You will be given access to MCS 105 to make it easier for you to work on the assignments outside of class; you must use this access responsibly.

Discussion and giving and receiving help are generally encouraged, but all work you turn in must be your own; anything you turn in you must understand thoroughly and be prepared to explain in detail. Whenever you work with anyone but me (including tutors) in any way, you must write fully detailed comments in your code describing the help: who helped, how they helped on which part(s), etc. Failure to do so is considered taking credit for work not done and thus cheating. I will be glad to help you on assignments and projects when you need it.

Instead of exams during the semester and a comprehensive final exam, I am planning a midterm project and a larger final project. If we have a final project, I will suggest ideas for projects and approve project proposals sometime in the second half of the semester. Project demos/presentations will be scheduled for the last regular week of classes.

Blackboard ([blackboard.angelo.edu](http://blackboard.angelo.edu)) will be used to keep track of grades and assignments. You should check Blackboard, the course webpage and your ASU e-mail at least once a day to make sure you’re not missing anything. In particular, your ASU e-mail is the only reliable way I have of contacting you, so please don’t neglect it.

Safety

In compliance with university policy, students in this class are required to wear a mask covering both mouth and nose before, during and after class meetings. Students must also complete the required ASU Wellness Screening each day before coming to class and keep as much distance from other students as is reasonably possible. When entering the classroom, students should use provided disinfecting wipes to clean their desk area. For the safety of everyone, any student not appropriately wearing adequate facial covering will be asked to leave the classroom immediately; the student will be responsible to make up any missed class content or work. Continued noncompliance with university policy may result in disciplinary action through the Office of Student Conduct.

For safety reasons, I will hold office hours online on demand using Blackboard Collaborate. Please take advantage of face-to-face class meetings to ask questions and get help, but when you need help outside of class just get in touch and I’ll do what I can to help.

Computer requirements

You may use PCs in the computer labs, but I recommend that you have your own Windows 10 computer ready to use when you can’t get to a lab. You may need to download and install free software, such as the Respondus LockDown Browser. It is your responsibility to have and use a reliable Internet connection; for best results, use an Ethernet cable to connect to your Internet source instead of relying on Wi-Fi. You will need a webcam to use Blackboard Collaborate for virtual office hours.
Semester schedule

This schedule of topics should be considered approximate and tentative.

<table>
<thead>
<tr>
<th>week of</th>
<th>topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 18th</td>
<td>intro to Android Studio</td>
</tr>
<tr>
<td>August 25th</td>
<td>Java intro/review</td>
</tr>
<tr>
<td>September 1st</td>
<td>Android programming basics</td>
</tr>
<tr>
<td>September 8th</td>
<td>Android programming basics</td>
</tr>
<tr>
<td>September 15th</td>
<td>event-driven programming</td>
</tr>
<tr>
<td>September 22nd</td>
<td>event-driven programming</td>
</tr>
<tr>
<td>September 29th</td>
<td>2D graphics in Android</td>
</tr>
<tr>
<td>October 6th</td>
<td>2D graphics in Android</td>
</tr>
<tr>
<td>October 13th</td>
<td>game framework in Android</td>
</tr>
<tr>
<td>October 20th</td>
<td>game framework in Android</td>
</tr>
<tr>
<td>October 27th</td>
<td>game framework in Android</td>
</tr>
<tr>
<td>November 3rd</td>
<td>audio and graphic creation</td>
</tr>
<tr>
<td>November 10th</td>
<td>audio in Android</td>
</tr>
<tr>
<td>November 17th</td>
<td>publishing Android apps</td>
</tr>
</tbody>
</table>

Final exam

The final exam for this course is scheduled for Tuesday, November 24th, 8:00–10:00 (section 010) and Saturday, November 21st, 10:30–12:30 (section 020). If we have a final project rather than a final exam, I plan to use this time to view late demos of final projects.

Academic honesty

Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. By remaining enrolled in this course you agree not to commit academic misconduct as defined in section I.B.1 of the Student Handbook, available at www.angelo.edu/student-handbook.

Important university policies

- You must contact Student Disability Services in order to request and to implement academic accommodations.
- For ASU’s policy on absences due to religious holy days, see OP 10.19 at www.angelo.edu/opmanual.
- I am obligated to report any knowledge of sexual misconduct to the Title IX office; see www.angelo.edu/services/title-ix for more.

Modifications

This syllabus, including grade evaluation and course schedule, is subject to modification. In particular, the COVID-19 pandemic may require significant changes in course delivery and content on potentially short notice.