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
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office hours: MTWF 2:00–4:00 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

70% assignments/quizzes/homework
30% 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**

This class meets in a computer lab, and most class sessions will feel like a cross between a regular lecture class and a lab session; I call this approach a “studio” format. Some studio sessions will be basically a guided lab exercise, a way to learn by doing, and some will be a short lecture followed by class time to work on the relevant assignment; some will require considerably more creativity than others. I hope that, by combining lecture and homework in this way, classes will be more interesting and effective. You will be given access to MCS 105 so that you can also work on the assignments outside of class; you must use this access responsibly.

Discussion and giving and receiving help are generally encouraged during studio sessions. You must list everyone you worked with in any way on each assignment. Failure to do so is considered taking credit for work not done and thus cheating.

Participation is especially important for this class, which makes attendance important. You have a duty to inform me as soon as you know that you’ll have to miss a class. Missing class can hurt your grade both directly and indirectly.

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 ([http://blackboard.angelo.edu/](http://blackboard.angelo.edu/)) will be used to keep track of grades and assignments.

**Semester schedule**

This schedule should be considered approximate and tentative.

<table>
<thead>
<tr>
<th>week of</th>
<th>topic</th>
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<tbody>
<tr>
<td>August 27th</td>
<td>intro to Android</td>
</tr>
<tr>
<td>September 3rd</td>
<td>Java intro/review</td>
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<tr>
<td>September 10th</td>
<td>Java intro/review</td>
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<tr>
<td>September 17th</td>
<td>Android programming basics</td>
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<tr>
<td>September 24th</td>
<td>Android programming basics</td>
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<tr>
<td>October 1st</td>
<td>event-driven programming</td>
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<tr>
<td>October 8th</td>
<td>event-driven programming</td>
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<tr>
<td>October 15th</td>
<td>2D graphics in Android</td>
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<tr>
<td>October 22nd</td>
<td>2D graphics in Android</td>
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<tr>
<td>October 29th</td>
<td>game framework in Android</td>
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<tr>
<td>November 5th</td>
<td>game framework in Android</td>
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<td>November 12th</td>
<td>game framework in Android</td>
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<tr>
<td>November 19th</td>
<td>audio and graphic creation</td>
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<tr>
<td>November 26th</td>
<td>audio in Android</td>
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<tr>
<td>December 3rd</td>
<td>publishing Android apps</td>
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**Final exam**

The final exam for this course is scheduled for Thursday, December 12th, 8:00–10:00 (section 010) and Tuesday, December 10th, 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 to adhere to the Academic Honor Code. It and the Student Handbook are easily found on the ASU website.

**Accommodations**

Persons with disabilities which may warrant academic accommodations must contact Student Services in order to request and to implement academic accommodations. For ASU’s policy on absences due to religious holy days, please see OP 10.19 at [http://www.angelo.edu/opmanual/](http://www.angelo.edu/opmanual/).