

# CS 3372: Handheld Game Development

Fall 2021

Course syllabus

<b>Class meetings</b>	section 010: TR 9:30–10:45 in MCS 111A section 020: TR 11:00–12:15 in MCS 111A
<b>Instructor</b>	Rob LeGrand e-mail: <a href="mailto:rlegrand@angelo.edu">rlegrand@angelo.edu</a> webpage: <a href="http://www.cs.angelo.edu/~rlegrand/">www.cs.angelo.edu/~rlegrand/</a> office phone: 325-486-5422 office location: MCS 205I office hours: online MTWRF 2:00–4:00 and by appointment
<b>Textbooks</b>	<i>Recommended:</i> Mario Zechner, J. F. DiMarzio and Robert Green. <i>Beginning Android Games</i> . 3rd edition. Apress Media, 2016. ISBN: 978-1-4842-0473-3.  <i>Optional:</i> Reto Meier and Ian Lake. <i>Professional Android</i> . 4th edition. Wrox Press, 2018. ISBN: 978-1-118-94952-8.  <i>Optional:</i> Bill Phillips, Chris Stewart and Kristin Marsicano. <i>Android Programming: The Big Nerd Ranch Guide</i> . 3rd edition. Big Nerd Ranch, 2017. ISBN: 978-0134706054.
<b>Description</b>	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.
<b>Prerequisites</b>	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).
<b>Grading breakdown</b>	<b>65%</b> assignments/quizzes/homework <b>35%</b> projects/exams
<b>Student learning outcomes</b>	After successful completion of this course, students will <ul style="list-style-type: none"><li>• identify, install and evaluate development software for a handheld computing device.</li><li>• create application software for a handheld computing device using a high level programming language.</li><li>• create multimedia content suitable for use in an application program for a handheld computing device.</li><li>• author an application program for a handheld computing device that demonstrates 2D and/or 3D graphics.</li><li>• author an application program for a handheld computing device that demonstrates audio.</li><li>• author an application program for a handheld computing device that demonstrates interactive user input.</li><li>• author an application program for a handheld computing device that launches other application programs.</li><li>• explain techniques for applications created for handheld computing devices to reduce their power usage.</li></ul>

## **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 to make it easier for you to work on the assignments outside of class; you must use this access responsibly.

I will take attendance, and you will need to sit in the same place all semester. 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.

You will generally be asked to work individually on assignments. Discussion and giving and receiving help are generally encouraged when working on assignments, 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 concepts 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 ([angelo.blackboard.com](https://angelo.blackboard.com)) will be used to keep track of grades and assignments. You should check Blackboard 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 outside of class, so please don’t neglect it.

## **Safety**

I strongly recommend and encourage wearing a mask covering both mouth and nose before, during and after class meetings. I also recommend keeping as much distance from others as is reasonably possible.

For safety reasons, I will hold office hours online 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.

week of	topic
August 24th	intro to Android Studio
August 31st	Java intro/review
September 7th	Java intro/review
September 14th	Android programming basics
September 21st	Android programming basics
September 28th	event-driven programming
October 5th	event-driven programming
October 12th	2D graphics in Android
October 19th	2D graphics in Android
October 26th	game framework in Android
November 2nd	game framework in Android
November 9th	game framework in Android
November 16th	audio and graphic creation
November 23rd	audio in Android
November 30th	publishing Android apps

**Final exam**

The final exam for this course is scheduled for Thursday, December 9th, 8:00–10:00 (section 010) and Tuesday, December 7th, 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](http://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](http://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](http://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.