

Video Game Development

CS 4173
310 MSCS and 2203 Main Hall
2:00-3:15 p.m. Tuesday, Thursday
Spring 2020

Dr. Douglas R. Heisterkamp
508 MSCS and 321 NH
918-200-9377
doug@cs.okstate.edu

Primary Text (require): Joseph Hocking, *Unity in Action: Multiplatform game development in C#*, 2nd edition, Manning Publications (2018). ISBN : 978-1-61729-496-9.

Secondary Text (recommended): Rob Miles, *C# Programming Yellow Book*, available at <https://www.robmiles.com/s/CSharp-Book-2019-Refresh.pdf>. A copy will be placed on canvas.

Background Text (optional): Jason Gregory, *Game Engine Architecture*, 3rd Edition, CRC Press, 2019. ISBN 978-1-138-03545-4.

Prerequisites: CS 2133, CS 2433, and MATH 2144 or equivalent courses.

Course Catalog Description: History of video games. A survey of various game platforms. Computer graphics, audio tools and techniques, and artificial intelligence for game development. Game engines. Game development tools and techniques. An overview of the video game industry from a development perspective.

Office Hours: Tuesday, 12:30-1:30 p.m.
Wednesday, by appointment in Tulsa.
Thursday, 3:30-4:30 p.m.
Other times available by appointment.

TA: Ipsita Ghosh, ighosh@ostatemail.okstate.edu,
Office hours : TBA

Grading:	Online quizzes	5%	Grading Scale:	for score x in	
	Individual assignments	35%			
	Team assignments	25%	<hr/>	$90\% \leq x$	A
	Midterm Exam	15%		$80\% \leq x < 90\%$	B
	Final Exam	15%		$70\% \leq x < 80\%$	C
	Game Reviews	5%		$60\% \leq x < 70\%$	D
	Graduate project	10%		$x < 60\%$	F

Dates: **Midterm Exam** : **March 12**
Spring Break – class does not meet : March 17 and 19
Final Exam : **May 5, 2:00-3:50 p.m.**

Examinations: During an examination period, no communication of any kind about the exam (except with the instructor or proctor) is allowed.

Assigned work: Programs will be required to use the Unity framework. Solutions may be submitted via drop box on canvas or using git (information on git will be given in class). Solutions submitted to drop box must be archived using zip or tar. All files needed to build and run the program must be submitted (including the unity solution). Typically, assignments will be due at 11:59 p.m. on Fridays. If assignments are turned in late, they lose a percentage of their graded point values according to the following schedule:

Written and Programming Exercises		
On time	:	0%
One week	:	25%
More than one week	:	100%

Online Quizzes: quizzes will be posted on canvas. Typically will be due at 11:59 on Wednesdays.

Software/Hardware requirements:

- *Unity Hub* from <https://unity3d.com/get-unity/download>, which installs and manages Unity. Unity runs on Windows, Macs, and linux. It is also installed in the MSCS 222, the Mac Lab.
- A *git* client for your operating system (available in the visual studio installer on Windows and in the XCode command line tools on Mac). You may also wish to add a git GUI client, but all course instructions will be for the command line.
- A Xbox compatible gamepad that will communicate with your machine (optional, but recommended).
- A headset, or speakers and a microphone (optional, but recommended).
- A laptop computer (optional). If you have one, bring it to class. The OSU library has some for checkout.

Collaboration:

Discussion of concepts, ideas, and techniques is allowed. After discussion, each student (or team in group assignments) must write up his/her own solution. Copying another person's work, in part or whole, is not allowed. Giving another student your work, in part or whole, is considered cheating as well. If you are unsure whether your collaboration is acceptable, speak with the instructor in advance. Any violation of academic integrity would result in a non-droppable grade of zero for that assignment and an additional reduction of one letter grade in the course and a report to the university administration. Major violations will result in a grade of F!

Disabilities act: If any student feels that they have a disability and needs special accommodations of any nature whatsoever, the instructor will work with you and the Office of Disabled Student Services to provide reasonable accommodations to ensure that you have a fair opportunity to perform in this class. Please advise the instructor of such disability and the desired accommodations at some point before, during, or immediately after the first scheduled class period.

Syllabus Attachment: See <http://academicaffairs.okstate.edu/sites/default/files/documents/Fall%202019%20Syllabus%20Attachment.pdf> for Stillwater's syllabus attachment. Both Stillwater and Tulsa's syllabus attachments will also be uploaded to canvas.