Unity for Educators: A Beginner's Guide
Course Book

This course planner will help you get ready to bring Unity into your classroom. During the *Unity For Educators* course, you will be guided through completing each of the sections below. By the end of the course, you will have a completed teaching plan and access to many resources that you can use to teach Unity.

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Teaching Plan - Game Design

Use this template to draft a plan for how you will teach Unity in your course/program/class. Add fields and spaces as necessary to customize it to best suit your needs. Each section of this template corresponds to a Planning Lab activity in *Unity for Educators* course on Unity Learn.

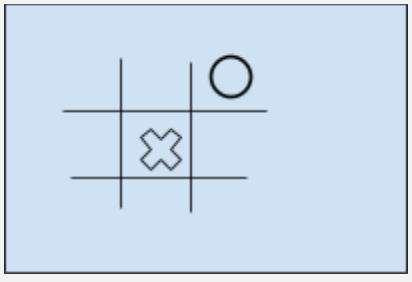
Section 1 - Course Overview (Game Design)

Course Objectives	**By the end of the course, students will:** (using Bloom's Taxonomy Learning Objectives via Univ of Arkansas)
	1. Deconstruct games into their essential rules, mechanics, and strategies
	2. Build an analog "paper prototype" of their final project using design thinking methods
	3. Explain and paraphrase ("pseudocode") what their game should do/look like/feel and how the programming sequencing will occur
	4. Use design thinking to judge others' work and iterate through their own game design development.
	5. Develop a final project based on their prototype, using their new programming skills

Course Duration		18 weeks	[months]/[weeks]/[days]
	*	5 hrs / wk	hours per [month]/[week]/[day] (including homework or lab time)
	=	90 hrs	total student work hours

Course Projects

Course Project #1	**Project #1 Title**	Fix Tic-Tac-Toe
	Duration	2 hrs
	Link	(analog)
	Description	- Clarify the original rules - Determine the problems with the game - Change any rule(s) to fix the problem(s) - Test alone,, then open beta with the class



Course Project #2	**Project #2 Title**	Modify a Game (in Unity)
	Duration	2 hrs
	Link	(download within Unity Hub Software)
	Description	Open a completed project (Micro Cart) and test it, modify it, and re-test it. Go ahead &, break it.

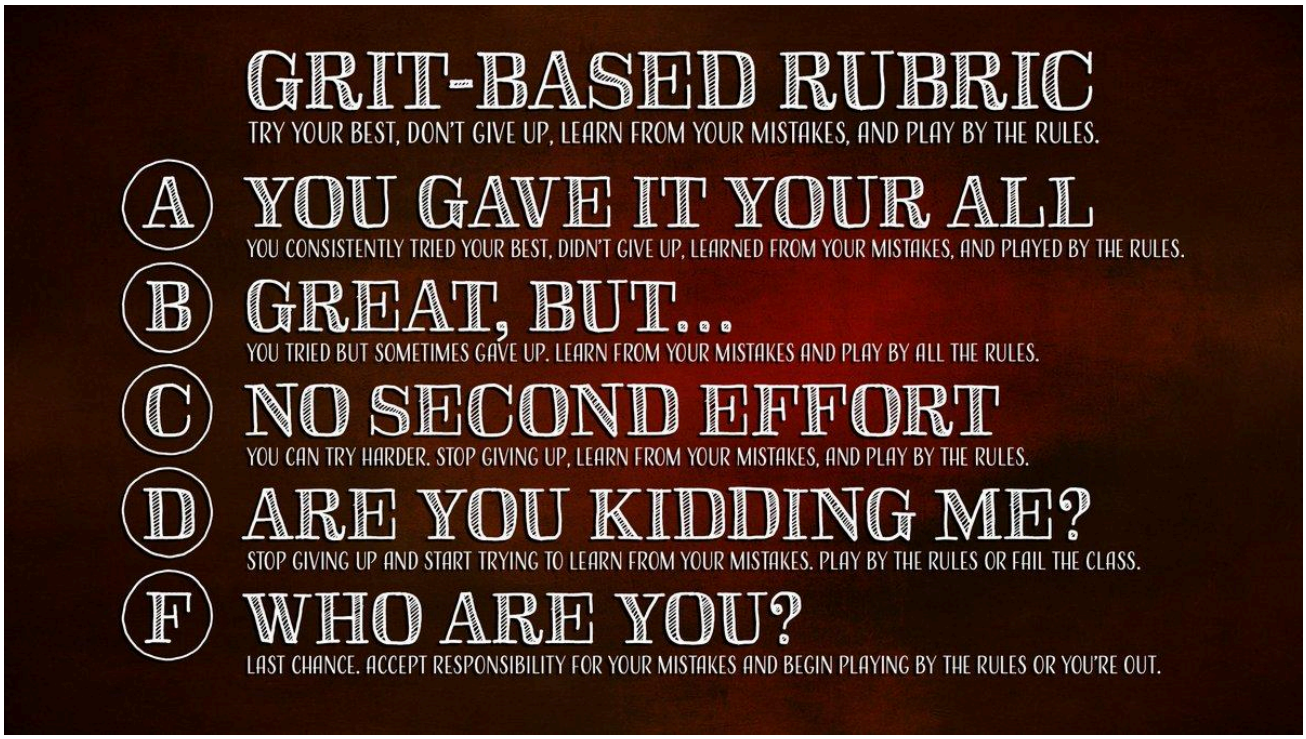


Additional Projects? (delete if not needed - replicate to add more)	**Project Title**	Create with Code Ch. 1, 2, 3
	Duration	24 hrs
	Link	https://learn.unity.com/course/create-with-code
	Description	Get comfortable with Unity, C#, and iterative design through projects. START THINKING FINAL PROJECT...



Additional Projects? (delete if not needed - replicate to add more)	**Project Title**	Final Project
	Duration	∞
	Link	
	Description	**SEE GRIT BASED RUBRIC BELOW.** Plan it. Paper Prototype it. Present it. Build it. Iterate it. **The FASTEST way to drop your grade is to utter the taboo words, "I'M FINISHED".**





Version 2 with Point Values:

My Grit Rubric

	Growth (4-Advanced)	Mixed (3-Proficient)	Fixed (2-Basic)
Taking on Challenges	You look forward to the next challenge and have plans for new challenges last on.	You might take on challenges when you have some past experience with being good at it.	You don't really take on challenges on your own. You feel that challenges are too scary.
Learning from Mistakes	You look at a mistake as a right now problem and make a plan for the next time that situation comes up.	You look at a mistake as a right now problem, but are not sure what to do next.	You look at a mistake as something you can't get better at so you do not try.
Accepting Advice from others	You welcome advice from others. You come up with new plans from the advice you are given.	You see advice as helpful only sometimes. You are not always motivated by advice to keep going.	You feel badly when others give you advice and often stop the activity you are working on.
Practice and Using Strategies	You love practicing and see it as part of getting better at something. You create your own ways to get past challenges and accomplish a goal.	You practice but a challenge can make you want to give up. You ask for someone to tell you how to get past a challenge.	You do not practice and avoid practicing. You do not have any strategies of your own to accomplish your goals.
Perseverance (focus on task)	You "stick to it" and work confidently until the task is done.	You may persevere with support. Sometime you give up when it gets too hard.	You have little persistence on completing your goals. You give up at the first sign of it being hard.
Asking Questions	You ask detailed questions about your own learning and look for challenges in all activities.	You might ask questions about a part that you feel like you can do. If you think it is too hard, you might not get help.	You do not ask questions or do not know which questions to ask. You usually say I don't get it when asked.
Taking Risks	You begin tasks confidently, risk making mistakes and openly share the work you make.	You will take risks if the task is something you feel comfortable with. You will turn in work that is not complete.	You do not take risks and if something is too hard you usually don't hand in anything or hand in a small part of it.

Section 2 - Course Format

Determine how the course will be delivered in your classroom

Choose a course configuration that works for you			
Configuration Options			
• Teacher-led, In-class	X	• Video-led, In-class	X
• Independent, In-class	X	• Independent, At-home/Remote	☐
• Other:			☐

What challenges do you anticipate?	What strategies might you use to overcome them?
Students advancing at different paces:	Slower: Faster:

Section 3 - Course Assessment

Assessment Type

Technical Rubric	Assessment of the quality of the student's end product and ability to stay on track	Link to appendix
Mindset Rubric	Assessment of the student's effort and attitude towards their work, regardless of the end product	Link to appendix

Assessment Rubric

Learning will be evaluated based on the following: *[choose, adapt one or both from the appendix, or create your own]*

Assessment Weighting

%	Item	Description
%	*[e.g. quizzes]*	

%	*[e.g. challenges]*	
%	*[e.g. project]*	
%	*[e.g. effort and mindset]*	

Section 4 - Course Logistics

License Type?	Unity can be installed on lab computers using the education grant license *[education license grant]*. If students use a personal computer, they should install the Unity Student Plan *[student plan]*. Both license types are free and can take up to 7 business days to process.If you need to start right away, use Unity Personal Edition (also free) for immediate individual access. *[personal license]*	
LMS Integration?	How will students access Unity Learn content?	
	H*ow will students submit work for review?*	
	Other logistical notes regarding the LMS?	
Project Submissions	Students will submit their work for review by *[uploading their Unity projects for review] / [uploading screencasts of their projects] / [presenting their work in front of the class] / [peer evaluation] / [other?]*	
Group Work?	*Will students be working in groups? If so, how will this be done?*	
Other Concerns?		

Course Reflections

Week 1

Unity in Context

Things I can share with my students about real-time 3D development *What industries use Unity? What is the current demand for Unity creators in these industries?*

What are some of the reasons that you want to teach Unity?

What are three resources you've seen on Unity Learn that might be suitable for your course? Explore Teach Unity for free resources and materials for educators and learners – lesson plans, standards alignment, projects, assessments, and organizers.

Facilitating Unity

What strategies might you use to champion diversity and inclusion in your learning space?

What are three strategies you can deploy in your teaching to create a co-learning environment?

List some ways you might be able to form relationships between subjects for your students; for example, is there a learning theme across subjects at your institute/school? Do you have a colleague in a different area who you collaborate well with? Is there an event coming up in your community or institute/school that might lend itself to a cross-curricular opportunity?

Week 2

Unity in Context

Make a list of companies and/or organizations that you can connect with to support your students' learning

Make a list of some interesting "real world" problems you could solve through real-time 3D creation. Would any of these be appropriate for students to work on for personal projects?

Creating with Unity

List 5-10 different ways you might adapt the gallery environment project.

Which aspects of the personal project set-up did you find easiest and/or most difficult?

On the basis of those reflections, how would you support learners with their first project?

Facilitating Unity

What strategies might you use to support learners who find Unity challenging?	**How might you extend high capacity learners?**

Record some of the steps Mark's students take when they do paper prototyping.

Week 3

Unity in Context

How might you create opportunities to improve students' confidence in areas they may not feel confident in, e.g. public speaking?

Creating with Unity

What difficulties did you encounter with this exercise, and how will you help your students avoid the same

issue(s)?

Facilitating with Unity

Consider how you will ensure your students know how they will be assessed.

Week 4

Creating with Unity

How do you plan to share and improve your personal project? How will you facilitate your students sharing and improving their Unity projects in the same way?	How might you use the WebGL publishing option for your students' projects?

Facilitating Unity

Which elements of the Project Strategy Guide do you plan to use in your classroom?

Unity in Context

For students that want to go further and explore opportunities outside of the classroom with Unity, what might you suggest they do?	Consider what the next steps are to continue your learning with Unity?

Appendix

Rubric Suggestions

Technical Rubric

4 - Excellent	3 - Good	2 - Fair	1 - Unsatisfactory
- The project runs without error - All functionality present and operating as expected - Code and hierarchy are neat & commented, using correct conventions - Used their Unity and/or C# skills in a novel and creative ways - Project contains all of the features outlined in their project plan - Stayed on track with their planned milestones	- The project runs without error - All functionality present and operating mostly as expected - Code and hierarchy are mostly neat & commented, using correct conventions - Used their Unity and/or C# skills in new, but not necessarily creative ways - Stayed mostly on track with their planned milestones	- The project runs with some issues - Some functionality missing, and overall not operating as expected - Code and hierarchy are disorganized, using inconsistent conventions - Did not use their Unity or C# skills in any new ways - Did not really stay on track with their planned milestones	- The project barely runs - Most functionality absent - Code and hierarchy are messy, with no sign of consistency in conventions - Did not demonstrate an ability to apply skills they learned in the course - Did not stick to their planned milestones

Mindset Rubric

Growth	Mixed	Fixed
- You look forward to the next challenge.	- Took on challenges after having success in related challenges. - Motivated by feedback when it wasn't too critical and if you are	- Did not want to take on challenges alone.

- Saw mistakes as temporary setbacks, something to be overcome. - Reflected on what you learned and apply that learning. - Invited feedback and criticism and applied it to improve your project. - Used different strategies and asked others about their strategies. - Showed stamina while working on your project until it was complete. - Asked specific questions, including questions about your own thinking, and challenged others' ideas. - Showed confidence in taking risks and happily shared mistakes you made and what you learned.	comfortable with the person providing feedback. - Open to strategies that help to meet a challenge but tend to work on things you are already "good at." - Persevered with prompting and support. - Asked questions about things in Unity that you feel more confident with but less likely to do so if it is outside your comfort zone. - Took risks if the task was already fairly familiar to you.	- Saw mistakes and failures as proof the task was too difficult and not worth pursuing. - Avoided feedback or saw it as a reason to give up. - Did not demonstrate any effective strategies for accomplishing project tasks or goals. - Showed little or no persistence through challenges. - Did not ask questions or seek guidance and support. - Did not take risks

Getting Started Checklist

Set up the computer lab and method for students to submit assignments		
Get Unity licenses	■ You can either (a) apply for Unity Educational licenses through the license grant program or (b) have students create individual Unity ID's and use the Student Plan or Personal Edition. Each of these license types is free.	☐
Install Unity software in computer lab	■ Download Unity Hub and install the Unity version compatible with the projects you are hoping to teach (likely 2018.4 or 2019.4), or higher then test to make sure that Unity opens successfully	☐
	■ If students will be creating with code, install Visual Studio and test to make sure that Visual Studio opens successfully	☐
Set up system for students to submit their work	■ Using your school's LMS, Google Classroom, or other system, make sure your virtual classroom is set up so that students can submit their work. Students can submit screenshots/screencasts of their projects (recommended) or submit zip files of their Unity assets ■ It is possible to use version-control software like Github to track and evaluate students' projects ○ Unity has a built-in version-control tool called Unity Collaborate, but this will not work with Unity Edu licenses	☐

Prepare to teach and connect with a support community		
Schedule time for training	■ Regardless of the course configuration you have chosen, it is recommended that you complete *at least* the first few tutorials yourself ■ If you intend to do any teacher-led activities, it is strongly recommended that you complete that content in the on Unity Lean independently prior to leading	☐

	the students	
Connect with the Unity teacher community	■ Click and register to join the Unity Connect teacher support community and the Unity Teach Community on Facebook, where you can get help from experts and connect with other new teachers	☐

If relevant, purchase Certification licenses

Purchase Certification Exams	■ Will you incorporate certification exam testing into your course? ■ Which certification(s)?_____ ■ If you intend on having students attempt Unity certifications, you will need to purchase licenses for the exams. Find purchase information on our certification website.	☐