The Computer Simulation and Gaming (CSG) program in the Tandy School of Computer Science at the University of Tulsa, provides students with a hands-on, project-based, leading-edge curricular that combines the multiple disciplines of computer science, art, music, film, and storytelling.
Computer Simulation & Gaming (CSG)

Interdisciplinary Program

The Computer Simulation & Gaming (CSG) undergraduate program provides majors with two options:

- CSG Design option features courses in graphics, 3D modeling, and animation. Students in this option receive both a minor in Computer Science and Art.
- CSG Development option features courses in developing game engines and provides students with both a minor in Computer Science and Mathematics.

CSG Majors

As of Fall 2020, there are currently 53 students majoring in Computer Simulation & Gaming (CSG) at the University of Tulsa.

CSG Majors by Gender

ComputerScience.org states that only 18% of all computer science graduates are women. The TU CSG program by comparison is much more gender diverse.

CSG Majors Grade Point Average (GPA)

TU CSG majors average a 3.5 GPA. The national average GPA for college students according to Prescholar.com is 3.15.

It is also common for CSG majors to double major in Computer Science (CS).

To provide the environment and educational experiences that will enable our students to achieve their educational goals, and to be successful in the workplace and/or successful in graduate school.

- To provide our students with the desire and the ability for long-term learning that will be necessary in the changing field of computer science.
- To provide our students with a basis for ethical behavior, conduct, and responsibility for computer science professionals.
- To conduct scholarly research in computer science and related fields.
- To provide professional service to the university and regional community.
The dedicated Computer Simulation & Gaming (CSG) classroom & lab is located in Rayzor Hall room 2055 and is equipped with 20 pcs plus teacher station.

CSG Classroom

The Computer Simulation & Gaming (CSG) classroom & lab is located in Rayzor Hall room 2055 and is equipped with 20 pcs plus teacher station.

CSG Computer Specs

- Alienware Aurora R6 Base 1
- NVIDIA(R) GeForce(R) GTX 1080 with 8GB GDDR5X
- Intel(R) Core(TM) i7-7700 Processor (4-Cores, 8MB Cache, Turbo Boost 2.0, up to 4.2GHz)
- 256GB M.2 PCie SSD (Boot) + 2TB 7200RPM SATA 6Gb/s (Storage)
- Dell 27 Gaming Monitor - S2716DG

GamIng Equipment

- 4k 75" Television monitors x 2
- HTC VIVE System x 2
- VivE Trackers x 6
- Oculus Quest
- Hololens 1
- Heart Pulse Sensor
- XYZprinting Handheld 3D Scanner
- GoPro Fusion 360 Digital VR Camera
- Sony HD camcorder
- Panasonic HC-V770 camcorder
- Takstar Mic & Boya Lavaliere Mic
- Led Light Kit

More than 50% of all games today are developed on the Unity game engine. The Computer Simulation and Gaming (CSG) degree program at TU is a proud member of the Unity Academic Alliance (UAA).

Unity Academic Alliance

UAA provides support and products needed to expand our CSG curriculum in areas such as AR, VR, XR, Game Design & Development, New Media, Interactive Arts, Computer Science, and more.

Students in the CSG program are eligible to take the Unity Certified Associate exam at no extra cost to the student, during their senior year. This industry-level certification is designed for future game developers, validating their mastery of core Unity skills and concepts.

CSG Student Organizations

Tulsa University Game Designers (TUGD) is a student chapter of the International Game Developers Association (IGDA) and aims to bring together computer scientists, artists, filmmakers, and entrepreneurs with a passion for developing unique and original games.

TUGD members assist in hosting campus events such as the Global Game Jam and the Computer Simulation & Gaming Conference (CSGC).

Throughout the year the club also participates in many outreach programs through collaboration with K-12 schools and non-for-profit organizations focused on teaching kids programming.

Tulsa University Game Designers

TUGD STUDENTS TEACH CODING

Esports at the University of Tulsa

The university has an ever-growing Esports community consisting of several different teams and made up of students from all over campus.

To join a team or to support one, join the discord for updates discord.gg/mZHRnBg

Esports at the University of Tulsa

The university has an ever-growing Esports community consisting of several different teams and made up of students from all over campus.
CSG Student Spotlight

Cheyenne Wheat - CSG Senior

“Through the TU Undergraduate Research Challenge (TURC) I was able to connect with Dr. Pickering in the Anthropology department and together we wanted to explore what Fort Gibson was like in 1840, when it was the most westerly fort in the United States, functioning as a hub for trade and communication. Working on this project, opened my eyes to the community need for developing engaging digital experiences. From there I began work on developing the Museum, a game production studio focusing on developing interactive experiences for non-profits and education. I have also been interested in storytelling and I know when entering college I wanted to be deeply involved in the tech industry. At first I didn’t think I could find a technology focused degree that included the storytelling creative elements I was really deeply desiring. Then I heard about the Computer Simulation & Gaming (CSG) at TU. The CSG program allowed me to fuse the tech and storytelling together bridging the gaps between art and technology.”

Watch Cheyenne’s full interview on Youtube: https://youtu.be/KEB9GQDQ5sE

CSG Development Consortya

Morgan Dunn a CSG Development major, reflects on his second summer interning at indie game studio Moonlight Games.

“This summer at Moonlight Games I felt very productive working on their forthcoming game, Moonlight Games "This summer at Moonlight Games I felt very productive working on their forthcoming game.."

Gaming the Museum

CSG Design senior Cheyenne Wheat believes that games have the potential for more than just entertainment and is working towards starting her own studio.

The majority of my time was spent on minor bug fixes. However, this year I was given a task to create a 3D model of future 3D Design Intern at Lockheed Martin

CSG Design senior Alex King shares his experience at Lockheed Martin, a global security and aerospace company, where he worked as their very first 3D Design Intern.

After only a short time on the project I had become their primary VR designer, cinematic animator, and environmental artist. I was recently informed that this project was awarded a $1 million budget to finalize the renovation of the building. It has been extremely rewarding to know that I was able to make a difference in the company.

If it wasn’t for the Computer Simulation & Gaming program, I would have never felt as prepared as I was going into this internship. I am extremely grateful for the opportunity I was given and I hope to keep maintaining this success for years to come.

Want to see what our CSG students have been developing in their courses? As part of their portfolio work students are required to upload playable in browser games to itch.io, a popular gaming platform for independent digital creators with a focus on video games. CSG Instructor Akram Taghavi-Burris has compiled a showcase of students’ games on her own itch.io profile to share and enjoy with others. https://professorakram.itch.io/
CSG students are encouraged early to network with professionals and actively take part in the game development community. Both the CSG student body and faculty have built strong ties with the local indie game development community throughout Oklahoma. Our CSG students and faculty have also had the opportunity to take part and speak at prestigious events including but not limited to:

- Computer Simulation & Gaming Conference
- Oklahoma Game Development Summit
- SWSU Game Development Conference
- Global Game Jam

The Global Game Jam (GGJ) event takes place every January and is the world’s largest game jam event (game creation) taking place around the world at physical locations. GGJ at TU is coordinated by CSG Instructor Akram Taghavi-Burris in collaboration with our Tulsa University Game Designer (TUGD) student organization. This public event spanned just 48-hours, in which, participants are challenged with forming a game development team, producing a game design pitch, and developing a functional game by the end of the weekend. This is the second year CSG hosted the GGJ at TU and found that the games produced were even more amazing and participation doubled from the year before.

Unity Tulsa User Group

Most recently, our Tulsa University Game Designer (TUGD) student organization has teamed up with the Tulsa Game Developer Group to form Unity Tulsa User Group. This user group is open to Unity designers and developers of all experience levels who would like to share and learn more about building games and experiences using the Unity game engine.

For the latest information and to learn more about the Unity Tulsa user group please join us on Facebook and Discord discord.gg/TrzF59y

Community Involvement

- Computer Simulation & Gaming Conference
- Gaming at the Museum at Gilcrease
- Tulsa Technology Festival
- TU Day of Innovation

Global Game Jam

The Global Game Jam (GGJ) event takes place every January and is the world’s largest game jam event (game creation) taking place around the world at physical locations.

GGJ at TU is coordinated by CSG Instructor Akram Taghavi-Burris in collaboration with our Tulsa University Game Designer (TUGD) student organization. This public event spanned just 48-hours, in which, participants are challenged with forming a game development team, producing a game design pitch, and developing a functional game by the end of the weekend. This is the second year CSG hosted the GGJ at TU and found that the games produced were even more amazing and participation doubled from the year before.

Computer Simulation & Gaming Conference

The Computer Simulation & Gaming Conference (CSGC) aims to bring together students, educators, professionals, and enthusiasts for two days of STEM learning, innovation, networking, and gaming. Due to the global pandemic, CSGC 2020 had to quick move to a virtual platform allowing for participating, speakers and exhibitors to connect around the world. Making CSGC purely an international event.

Each year CSGC features over a dozen speakers on topics ranging from design, development and technology. The formats of these talks vary from panel discussion and lectures to hands-on workshops.

CSG is also host to acclaimed competitions in Game Development & Design and Simulations & Graphics, open to students K-12, college and indie professionals. On average over 100 competitors compete in our six different CSG competitions ranging from game development to digital art and animation.

The CSGC takes place every April and is organized and coordinated yearly by CSG Instructor Akram Taghavi-Burris in collaboration with our Tulsa University Game Designer (TUGD) student organization. CSGC is made possible by the support of our generous sponsors.

To learn more about CSGC or to enter in one of our competitions visit our website csgconf.com

Unity Tulsa User Group

Most recently, our Tulsa University Game Designer (TUGD) student organization has teamed up with the Tulsa Game Developer Group to form Unity Tulsa User Group. This user group is open to Unity designers and developers of all experience levels who would like to share and learn more about building games and experiences using the Unity game engine.

For the latest information and to learn more about the Unity Tulsa user group please join us on Facebook and Discord discord.gg/TrzF59y

To learn more about CSGC or to enter in one of our competitions visit our website csgconf.com
<table>
<thead>
<tr>
<th>CSG Design - 4 Year Plan</th>
<th>CSG Development - 4 Year Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN - Fall Semester</strong></td>
<td><strong>FRESHMAN - Fall Semester</strong></td>
</tr>
<tr>
<td>Freshman Experience</td>
<td>Freshman Experience</td>
</tr>
<tr>
<td>Intro to Computer Science</td>
<td>Intro to Computer Science</td>
</tr>
<tr>
<td>Game Design Concepts</td>
<td>Game Design Concepts</td>
</tr>
<tr>
<td>Drawing I</td>
<td>Drawing I</td>
</tr>
<tr>
<td>Design I</td>
<td>Design I</td>
</tr>
<tr>
<td>Precalculus or higher</td>
<td>Block II: Historical &amp; Social Interpretation †</td>
</tr>
<tr>
<td><strong>SOPHOMORE - Fall Semester</strong></td>
<td><strong>SOPHOMORE - Spring Semester</strong></td>
</tr>
<tr>
<td>Digital Drawing and Illustration</td>
<td>Digital Drawing and Illustration</td>
</tr>
<tr>
<td>Film Genres</td>
<td>Film Genres</td>
</tr>
<tr>
<td>Intro Physics I &amp; Lab (PHYS 1011)</td>
<td>Intro Physics I &amp; Lab (PHYS 1011)</td>
</tr>
<tr>
<td>General Elective</td>
<td>General Elective</td>
</tr>
<tr>
<td><strong>JUNIOR - Fall Semester</strong></td>
<td><strong>JUNIOR - Spring Semester</strong></td>
</tr>
<tr>
<td>Game Assets: 3D Character Design</td>
<td>Game Assets: 3D Character Design</td>
</tr>
<tr>
<td>Data Structures</td>
<td>Data Structures</td>
</tr>
<tr>
<td>Digital Video &amp; Animation</td>
<td>Digital Video &amp; Animation</td>
</tr>
<tr>
<td>Writing for the Professions *</td>
<td>Writing for the Professions *</td>
</tr>
<tr>
<td>Block II: Historical &amp; Social Interpretation †</td>
<td>Block II: Historical &amp; Social Interpretation †</td>
</tr>
<tr>
<td>General Elective</td>
<td>General Elective</td>
</tr>
<tr>
<td><strong>SENIOR - Fall Semester</strong></td>
<td><strong>SENIOR - Spring Semester</strong></td>
</tr>
<tr>
<td>Game Level Design</td>
<td>Game Level Design</td>
</tr>
<tr>
<td>Senior Software Projects I</td>
<td>Senior Software Projects I</td>
</tr>
<tr>
<td>CSG Elective</td>
<td>CSG Elective</td>
</tr>
<tr>
<td>CS Elective</td>
<td>CS Elective</td>
</tr>
<tr>
<td>Block I: Aesthetic Inquiry &amp; Creative Experience †</td>
<td>Block I: Aesthetic Inquiry &amp; Creative Experience †</td>
</tr>
</tbody>
</table>

For more information contact:
CSG Instructor Akram Taghavi-Burris
akram-burris@utulsa.edu | 918-631-3864

*Introduction to College Writing or its equivalent may be prerequisite in some cases.
†Courses that fulfill Blocks I, II, and III are listed each semester in the advising center and in

The University of Tulsa is an equal employment opportunity/affirmative action institution. For EEO/AA information, contact the Office of Human Resources, 918-631-2616; for disability accommodations, contact Dr. Tawny Rigsby, 918-631-2315. To ensure availability of an interpreter, five to seven days notice is needed; 48 hours is recommended for all other accommodations.