Virtual Environments
INF 385T
Unique Number 27580
Spring Semester

Class Day and Time: Tuesdays 9:00am-12:00pm

Class Location: UTA 1.504

Instructor: Dr. Jakki Bailey
Pronouns: She/Her/Hers

University Catalog Course Description

Virtual environments have become an integral component of people’s everyday lives for multiple uses such as socializing, learning, and behavior change. The focus of the course is to examine people’s social and psychological experiences of virtual environments, such as in virtual reality. Through the course students will learn about the research behind people’s experiences of virtual environments. The course includes finding and presenting cutting-edge research in the field, examining the intersection between research and the design of virtual environments as well as interacting with VR hardware and software to build 3D virtual environments. Finally, for their final project students will design their own research study/intervention that utilizes virtual environments.

Weekly readings are to be completed before class, and students are expected to participate in discussions as well as submit relevant examples that incorporate that week’s readings and/or assignments.

Course Objectives and Learning Outcomes

Students will be able to:

- Understand and employ research and theory for creating virtual environments
• Identify how users experience different elements and aspects of virtual environments.

• Develop interpersonal communication skills and collaborative work skills

• Develop skills related to creating virtual environments

**Course Requirements**

**Classroom Expectations**
Attendance is required for the course. Many of the course activities and assignments are completed in class and in groups. Failing to attend course penalizes your grades and consequently the other members of your group.

Bring the appropriate material for note taking, and writing. Although laptops are permitted, inattentive or discourteous behavior will be noticed and penalized. Before the start of each class, silence all devices such as cellphones, tablets, and computers.

To foster open discussion, students are asked to be tolerant and considerate of others' viewpoints.

Small snacks and drinks are welcome in the classroom but meals are not. This policy will remain in effect until it becomes a distraction or disruption.

**Course Materials**
All relevant class information will be posted on the course website on Canvas. This includes the most recent syllabus, PDFs of the weekly readings, and any relevant links. Lectures will cover the readings as well as material not covered in the readings. The course calendar and readings are subject to change.

According to the class schedule, students will need to bring or have access to a laptop in class for lab work.

**Assignments**

**Assignment Overview**
Class Participation and Attendance: 20%
Research Assignments & Presentations: 25%
Final Project: 55%
  Research Proposal Memo: 15%
  Final Research Proposal: 25%
  Demo: 10%
Presentation & Collaboration Statement: 5%

Participation & Attendance
Class participation will comprise of 20% of the final grade. Weekly readings are to be completed before class. All students are expected to participate in discussions/activities in class and on the course website. The criteria for successful participation in class are attendance, evidence during discussion that you have done the readings, including a willingness and ability to summarize, synthesize and evaluate.

Part of class participation will include presentations made to the class. Participation may include students posting content related to the readings such as a discussion question or an example of an artifact. These submissions are designed to help you prepare for class as well as the assignments. To receive full credit, responses must explicitly refer to and synthesize the readings of the week.

Students are expected to attend all class sessions, to arrive on time and stay for the duration of class. Students cannot to take this course if they are enrolled in other courses that conflict with our class time. Participation is crucial and the quality of your involvement contributes to your success and the success of the class by creating a collaborative learning environment.

Attendance will be taken during each class period. Absences will only be excused in situations following University policy (i.e., illness, religious holy days, participation in University activities at the request of university authorities, and compelling absences beyond your control) with proper documentation and timely notification (prior to class for non-emergencies). Students that need classroom accommodations will need to provide documentation to the Dean of Student’s Office so the most appropriate accommodations can be determined.

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, I will give you an opportunity to complete the missed work within a reasonable time after the absence. Excessive tardiness may be considered as an unexcused absence except in situations following university policy.

Research Assignments
Research assignments will consist of teams of 3 to 4 students. Groups will investigate an area related to the use and development of virtual
environments. Research assignments consist of synthesizing the course readings and integrating additional resources. Research assignments are a combination of a written assignment and in-class presentation of your findings. Finally, each group member will individually submit a collaboration statement providing their perspective on the quality of the overall group collaboration. The purpose of the research assignments is to expand on the course material to gain an in-depth understanding of virtual environments and users. Furthermore, it provides an opportunity for the students to be a resource for one another. Research assignments consist of 25% of the final grade. All assignments must use APA 6th edition formatting and style.

**Final Project Proposal**
In collaborative groups of 3 or 4, students will create a proposal for a research study and/or intervention using a virtual environment (see official prompt for details). The final project proposal will consist of 1) a literature review of past research and the group’s research question(s) on the use of a virtual environment (i.e., virtual reality), 2) how the user’s experience will be tested and measured, and 3) a discussion on the potential outcomes and meaning of the project. In addition, the project will consist of a demo illustrating at least one aspect of the study as well as an in-class presentation. Finally, each group member will individually submit a collaboration statement providing their perspective on the quality of the overall group collaboration. The final project will consist of 55% of the final grade. All assignments must use APA 6th edition formatting and style.

**Course at a glance**

<table>
<thead>
<tr>
<th>Week, Date</th>
<th>Topic</th>
<th>Note or Deadline</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Introduction</td>
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<tr>
<td>Week 2</td>
<td>Tracking, Rendering, &amp; Displays I</td>
<td></td>
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<tr>
<td>Week 3</td>
<td>Tracking, Rendering, &amp; Displays II</td>
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<tr>
<td>Week 4</td>
<td>Presence &amp; Immersion</td>
<td>Research Assignment #1 Due</td>
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<td>Week 5</td>
<td>Embodiment</td>
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<tr>
<td>Week 6</td>
<td>Social Influence</td>
<td>Research Assignment #2 Due</td>
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<tr>
<td>Week 7</td>
<td>Building Environments</td>
<td>Research Assignment #3 Due</td>
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Grading
This class employs a plus/minus grading system. For more information on this system, please consult the University's General Information Catalog. Below is the grade scale the University employs and which will be used in this class:

<table>
<thead>
<tr>
<th>Meets major requirement</th>
<th>Does not meet requirement</th>
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<tbody>
<tr>
<td>Grade</td>
<td>Points/Percentage</td>
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<tr>
<td>A</td>
<td>≥94.00</td>
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<tr>
<td>A-</td>
<td>90.00-93.99</td>
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<tr>
<td>B+</td>
<td>87.00-89.99</td>
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<tr>
<td>B</td>
<td>84.00-86.99</td>
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<tr>
<td>B-</td>
<td>80.00-83.99</td>
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<tr>
<td>C+</td>
<td>77.00-79.99</td>
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<td>C</td>
<td>74.00-76.99</td>
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Course Policy

You are responsible for reading and following these class policies, and any additional policies that develop over course of the semester.

Instructor Communication
E-mail is the official mode of communication for the university and the most reliable means of contacting me. It is always helpful if your e-mail includes a focused subject line that begins with “INF 385T.” Do not use the
messaging facilities in Canvas; these messages do not arrive in my e-mail inbox. Please allow at least a 24-hour window for email responses and plan accordingly. Please limit emails to 5 sentences or less. If your question about a reading or an assignment takes more than 5 sentences to express, please come see me in office hours. If you cannot make office hours, please email me to arrange an appointment.

Copyright Notice
These materials may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials.

Classroom Recording
To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student’s own private use.

Original Work
Cheating and plagiarism not are tolerated. If an assignment turned in for credit is found to have been plagiarized, you will receive a grade of 0 points and a formal reprimand in your student file. You will be subject to the University’s disciplinary penalties, including the possibility of failure in the course. Some assignment require submission of individual work while other assignments are submitted as a group. It is your responsibility to identify the requirements for each assignment. If you have any questions about the requirements, please contact the instructor.

Late assignments
I do not accept late assignments. Students who anticipate difficulties with completing assignments on time should consult with the instructor as soon as possible so that alternate solutions can be discussed. When negotiated in advance, arrangements can often be made.

Style manual
Please use the American Psychological Association’s style manual (i.e., APA 6th edition). In particular, please be sure to follow its citation formats and rules on language bias.
Example guide:
https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html
Religious holy days
A student who misses classes or other required activities, including examinations, for the observance of a religious holy day should inform the instructor as far in advance of the absence as possible, so that arrangements can be made to complete an assignment within a reasonable time after the absence.

Use of E-mail for Official Correspondence
All students should become familiar with the University’s official e-mail student notification policy. It is the student’s responsibility to keep the University informed as to changes in his or her e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. It is recommended that e-mail be checked daily, but at a minimum, twice per week. The complete text of this policy and instructions for updating your e-mail address are available at http://www.utexas.edu/its/help/utmail/1564

Documented Disability Statement
You will need to provide documentation to the Dean of Student’s Office so the most appropriate accommodations can be determined. Specialized services are available on campus through Services for Students with Disabilities (SSB 4.104, 471-6259). Any student who requires special accommodations must obtain a letter that documents the disability from the Services for Students with Disabilities area of the Division of Diversity and Community Engagement (471-6259 voice or 471-4641 TTY for users who are deaf or hard of hearing). Present the letter to the professor at the beginning of the semester so that needed accommodations can be discussed. The student should remind the professor of any testing accommodations no later than five business days before an exam. If you plan to make use of specialized services through SSD please inform me before the second class meeting. For more information, visit http://www.utexas.edu/diversity/ddce/ssd/

Personal Pronoun Preference
Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student’s legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.
Student Rights & Responsibilities

- You have a right to a learning environment that supports mental and physical wellness.
- You have a right to respect.
- You have a right to be assessed and graded fairly.
- You have a right to freedom of opinion and expression.
- You have a right to privacy and confidentiality.
- You have a right to meaningful and equal participation, to self-organize groups to improve your learning environment.
- You have a right to learn in an environment that is welcoming to all people. No student shall be isolated, excluded or diminished in any way.

With these rights come responsibilities:

- You are responsible for taking care of yourself, managing your time, and communicating with the teaching team and with others if things start to feel out of control or overwhelming.
- You are responsible for acting in a way that is worthy of respect and always respectful of others.
- Your experience with this course is directly related to the quality of the energy that you bring to it, and your energy shapes the quality of your peers’ experiences.
- You are responsible for creating an inclusive environment and for speaking up when someone is excluded.
- You are responsible for holding yourself accountable to these standards, holding each other to these standards, and holding the teaching team accountable as well.

University Policies

Academic Integrity
Each student in the course is expected to abide by the University of Texas Honor Code: “As a student of The University of Texas at Austin, I shall abide by the core values of the University and uphold academic integrity.”

Plagiarism is taken very seriously at UT. Therefore, if you use words or ideas that are not your own (or that you have used in previous class), you must cite your sources. Otherwise you will be guilty of plagiarism and subject to academic disciplinary action, including failure of the course. You are responsible for understanding UT’s Academic Honesty and the University Honor Code which can be found at the following web address: http://deanofstudents.utexas.edu/sjs/acint_student.php

Q Drop Policy
If you want to drop a class after the 12th class day, you’ll need to execute a Q drop before the Q-drop deadline, which typically occurs near the middle of the semester. Under Texas law, you are only allowed six Q drops while you are in college at any public Texas institution. For more information, see: http://www.utexas.edu/ugs/csacc/academic/adddrop/qdrop

**University Resources for Students**

Your success in this class is important to me. We will all need accommodations because we all learn differently. If there are aspects of this course that prevent you from learning or exclude you, please let me know as soon as possible. Together we’ll develop strategies to meet both your needs and the requirements of the course. There are also a range of resources on campus:

**Services for Students with Disabilities**
This class respects and welcomes students of all backgrounds, identities, and abilities. If there are circumstances that make our learning environment and activities difficult, if you have medical information that you need to share with me, or if you need specific arrangements in case the building needs to be evacuated, please let me know. I am committed to creating an effective learning environment for all students, but I can only do so if you discuss your needs with me as early as possible. I promise to maintain the confidentiality of these discussions. If appropriate, also contact Services for Students with Disabilities, 512-471-6259 (voice) or 1-866-329-3986 (video phone). http://ddce.utexas.edu/disability/about/

**Counseling and Mental Health Center**
Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.

All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. http://www.cmhc.utexas.edu/individualcounseling.html
The Sanger Learning Center
Did you know that more than one-third of UT undergraduate students use the Sanger Learning Center each year to improve their academic performance? All students are welcome to take advantage of Sanger Center’s classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70 courses in 15 different subject areas. For more information, please visit http://www.utexas.edu/ugs/slc or call 512-471-3614 (JES A332).

Undergraduate Writing Center: http://uwc.utexas.edu/
Libraries: http://www.lib.utexas.edu/
ITS: http://www.utexas.edu/its/
Student Emergency Services: http://deanofstudents.utexas.edu/emergency/

Basic Needs Security
Any student who faces challenges of affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believe this may affect their performance in the course, is encouraged to contact the Office of the Dean of Students – Student Emergency Services (SES) for support. Please notify the instructor if you are comfortable doing so and I will make efforts to provide any resources that I may possess to help you navigate issues of food insecurity or residential displacement. SES Concerns and Emergencies: http://deanofstudents.utexas.edu/emergency/concernsemergencies.php
SES Food Pantry: http://deanofstudents.utexas.edu/emergency/pantry.php
SES Confidential Advocacy and Support: http://deanofstudents.utexas.edu/emergency/advocacysupport.php

BeVocal
BeVocal is a university-wide initiative to promote the idea that individual Longhorns have the power to prevent high-risk behavior and harm. At UT Austin all Longhorns have the power to intervene and reduce harm. To learn more about BeVocal and how you can help to build a culture of care on campus go to wellnessnetwork.utexas.edu/BeVocal

Important Safety Information
If you have concerns about the safety or behavior of fellow students, TAs or Professors, call BCAL (the Behavior Concerns Advice Line): 512-232-5050.
Your call can be anonymous. If something doesn’t feel right – it probably isn’t. Trust your instincts and share your concerns.

The following recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, http://www.utexas.edu/safety/

Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.

- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- Link to information regarding emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency

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**Course Readings/Schedule**

**Part I: Virtual Reality as Technology**

**Week 1**
January 22, 2019

*Introductions, review syllabus and course expectations.*
Week 2

January 29, 2019
Tracking, Rendering, and Displays I


Week 3
February 5, 2019
Tracking, Rendering, and Displays II


READ:
• “Introduction” to “Consequences and Implications of Cybersickness”(pp. 47-50)
• “Contributing Factors to Cybersickness in Virtual Environments” to the END (pp. 52-54)

Part II: Virtual Reality as Experience

Week 4
February 12, 2019
*Research Assignment #1 Due
Presence & Immersion


**Week 5**  
February 19, 2019

**Embodiment**


**Week 6**  
February 26, 2019

**Research Assignment #2 Due**

**Social Influence**


**Part III: Building Virtual Environments for Users**

**Week 7**  
March 5, 2019

**Research Assignment #3 Due**  
*Building Environments for Users*
Software Tutorials
Group Work Session

Finalize Final Project Work Groups

**Week 8**
March 12, 2019
Building Environments for Users
Software Tutorials
Group Work Session

**Week 9**
March 19, 2019
Spring Break - NO CLASS

**Week 10**
March 26, 2019
*Research Proposal Memo Due*
Building Environments for Users
Software Tutorials
Group Work Session

**Week 11**
April 2, 2019
Building Environments for Users
Software Tutorials
Group Work Session

**Week 12**
April 9, 2019
Building Environments for Users
Software Tutorials
Group Work Session

**Week 13**
April 16, 2019
Building Environments for Users
Group Work Session

**Week 14**
April 23, 2019
Building Environments for Users
Group Work Session

**Week 15**
April 30, 2019
*Project Presentations* and *Demos*
Final Research Proposal, Demo, and Collaboration Statement Due

*Conclusions*