Communication 166/266
Virtual People
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Professor

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Course Overview

Virtual Reality (VR) is becoming mainstream, with more than 20 million systems in the United States alone. This class examines VR from the viewpoint of various disciplines, including popular culture, engineering, behavioral science, and communication. Each student will receive a Meta Quest 2 headset, and the bulk of our learning will occur while immersed in VR.

Course Structure

Each week will follow roughly the same structure:

- Students will be expected to complete the course **readings** each week prior to VR Journeys.
- **VR journeys** (individual VR experiences based on the topic of that week) and readings must be finished by Tuesday, 5pm PST.
- Students will turn in a **one-page response paper** by Tuesday at 5pm PST that relates the VR journeys to the readings each week. This response paper will include at least **one question** about the VR journeys or the readings for that week in **bold** typeface.
- During Wednesday's in-person lecture time (9:30am–10:50am), typically a **student panel** will discuss the readings and VR journey with Professor Bailenson or our guest speaker while the rest of the class observes.
- During Friday's lecture time (9:30am-10:50am), **discussion sections** will occur in VR each week using the ENGAGE platform for 20 minutes, followed by a **brief survey**. For the final hour of lecture, we will be working on our **Built VR scenes**.

- On Fridays after class, students will receive a **short quiz** (Canvas) covering all of the prior activities from the week (e.g., readings, VR journeys, student panels) which will be released Fridays at 11:00am and due at 11:59pm on Sundays.

Required Readings

Each week's reading assignment will consist of selected chapters from two books which were written specifically as textbooks for this course—*Experience on Demand*, and *Infinite Reality*. Some weeks will also include additional readings and videos. All readings, including PDFs of both books, will be available on Canvas. See the Reading Schedule for more details.

Canvas

Canvas is the platform we will be using for coursework submissions. *All course information (i.e. course readings, quizzes) can be found on Canvas.* You may need to self-enroll in the COMM166/266 Canvas site, but should have access to it already. Check this as soon as possible and report any problems.

Course Structure and Student Evaluation

Evaluation in this course is a combination of the following:

Participation in Student Panels [In Person]	15%
Quizzes (x8) [Canvas]	14%
Discussion Section participation [VR]	20%
VR Journeys (Documented by Screenshots) [VR / Canvas]	10%
Response Papers [Canvas]	20%
Built VR Scene in ENGAGE [VR / Canvas]	21%
[Storyboard, Progress Update, and Final Delivery]	

Student Panels
All students will be required to join <u>one</u> of the student panels in person during the quarter. Each panel will consist of approximately 15 students who will discuss the reading with Professor Bailenson. Students will choose one date for which they will be a panelist and prepare questions, ideas, and topics for the panel. These sessions will be observed by the rest of the class. Content from the panels, including new content, will be testable and on quizzes.

Sign up here for student panels:
https://docs.google.com/spreadsheets/d/1ZZIEcFJAsOVMt7oLeliZqrLkvkrzybJ2fL33XxMVuW0/edit?usp=sharing

Quizzes
Each week there will be a quiz covering the material. The quizzes will be short, and can be taken between Friday at 11am and Sunday at 11:59pm. Once a student begins the quiz, they will have 20 minutes to complete it. Quizzes will be made up of approximately 10 multiple

choice items and one short answer question. If a student encounters technical difficulties while taking the quiz, they can request a second attempt. The quiz window is a hard deadline: unless there is an OAE exception, students will not receive extensions on quizzes. At the quarter's end, the student's lowest quiz grade will be dropped, and their quiz grade will be calculated using the average from the remaining seven quizzes.

Discussion Section Participation

Students must attend 20-minute sections using their headsets via the ENGAGE platform, and be prepared to participate actively. This means having read and thought about course content prior to section, and being prepared to describe key points, arguments, and questions. You will be guided with specific prompts throughout the discussion. Discussions will occur during the first 20 minutes of class time. Please show up on time and in your appropriate section. Each student will record and turn in a .MyRec file of the discussion session for the teaching staff to review asynchronously. At the end of each section, students will be asked to fill out a brief survey – **in order to receive credit for attending and actively participating, students must both turn in the .MyRec files and complete these surveys.** We will be checking discussion recordings and survey completion. Students may make up *ONE* missed discussion section with an assignment. Sections will be supervised asynchronously – if for any reason you feel marginalized, harassed, or uncomfortable in section, please let the Teaching Team know. Please email the TAs if you anticipate missing a discussion section.

VR Journeys

We will be doing many different activities in VR, and it is critical that everyone participate in these journeys. These journeys will typically take about one hour. Students will turn in a screenshot documenting their participation in the VR journeys by 5pm PST on Tuesday.

Response Papers

Each student will turn in a one-page (300 – 500-word) response to the readings each week. Response papers should be submitted by 5pm PST on Tuesday and will relate the readings to the VR journeys. Response papers are intended to build on the reading, not summarize them. For example, one might suggest a new VR application based on the week's topic, discuss the ethics of VR, or apply the readings to current events in the world. In addition, students should ask one response question about the reading at the bottom of the paper in **bold** typeface. This question **needs also to be submitted separately** on Canvas to be shared with other students. Submitting this question to its separate thread is necessary to receive full credit for weekly responses papers.

Built VR Scene in ENGAGE

Each student will focus on building their own VR scene using tools in ENGAGE, and can build interactive demos using the scripting language in ENGAGE. Those who are familiar with gaming engines or 3D modeling software may use them to create assets for their scenes in ENGAGE. Those not familiar with programming can use the menu-driven IFX commands to create a scene. Students may work alone or in groups of up to 5. Groups should be solidified and indicated on the Storyboard assignment. Grades will be calculated based on the Storyboard assignment, the Progress Update assignment, and the final product. The final scenes will be presented during the last week of class (Week 10).

Weekly Schedule

Week 1) Introduction/Hardware/ENGAGE. September 28
VR Journey: None
Reading: Experience on Demand, Chapter 10; Infinite Reality, Chapter 3
Response Paper: None
Wednesday: Headset pickup (In Person)
Friday: ENGAGE training (In VR)

Week 2) Tracking, Rendering Display, and Presence. October 5
VR Journey: None
Reading: EoD, Chapter 2; Lee, 2004
Response Paper: None
Wednesday: Advanced ENGAGE training (In Zoom) and scavenger hunt (In VR)
Friday: Student panel on Presence/Tracking (In Person)

Week 3) Accessibility. October 12
VR Journey: Accessibility audit on a Top 10 Oculus Store experience
Reading: IR, Chapter 14, Mott et al. 2019, Mott et al. 2020
Response Paper: Critical review of application via Mott et al.'s frameworks
Wednesday: Student panel with Dr. Martez Mott (Guest via Zoom, class in Person)
Friday: Discussion section on pitching Built VR Scene ideas (In VR)

Week 4) Avatars. October 19
VR Journey: Visit at least 3 social VR worlds and build an avatar
Reading: EoD, Chapter 7; IR, Chapter 4; Herrera, Oh, & Bailenson, 2020
Response Paper: Idea for Built VR Scene project
Wednesday: Student panel on avatars (In Person)
Friday: Discussion section on Built VR Scene storyboards (In VR)
To-do before Week 5: Sign up for a Meditation Session in VR [Find a date to RSVP here]

Week 5) Medical. October 26
VR Journey: Meditation Session in EvolVR in AltspaceVR by Jeremy Nickel and Caitlin Krause (In VR)
Reading: EoD, Chapters 5 & 6; Weiss et al. 2021
Response Paper: Reflection on the VR journey and readings
Wednesday: Student panel on Medical VR (In Person)
Friday: Discussion section (In VR)
Assignment: Storyboard for Built VR scene project

Week 6) Education. November 2
VR Journey: Sports reels; Field trips from list, TBA (In VR)
Reading: EoD, Chapter 9; Makransky and Petersen, 2021.
Response Paper: Reflection on the VR journey and readings

Wednesday: Student panel on VR & Education (In Person)
Friday: Discussion section (In VR)

Week 7) Empathy. November 9
VR Journey: Clouds Over Sidra, 1000 Cut Journey, [Choose one from]: The Party, 6X9, Traveling While Black, Notes on Blindness (In VR)
Reading: EoD Chapter 3, IR, Chapters 5 and 6, Cogburn et al. 2020
Response Paper: Reflection on the VR journey and readings
Wednesday: Student panel with Dr. Courtney Cogburn (In Person)
Friday: Discussion section (In VR)
Assignment: Built VR Scene Progress Update [due Wednesday, 5 pm PST]

Week 8) Climate Change. November 16
VR Journey: Crystal Reef, Coral Compass, Wevr demos, Explore (In VR)
Reading: Markowitz & Bailenson, 2021; EoD Chapter 4
Response Paper: Reflection on the VR journey and readings
Wednesday: Student panel with Dr. Erika Woolsey (In Person)
Friday: Discussion section (In VR)

– Thanksgiving Recess (no classes) –

Week 9) Ethics, Privacy, and the Future of VR. November 30
VR Journey: TBA
Reading: IR, Chapter 9 and 11, Slater et al. 2020
Response Paper: Reflection on the VR journey and readings
Wednesday: Student panel (In Person)
Friday: Discussion section (In VR)

Week 10) Final Presentations. December 7
VR Journey: None
Reading: None
Response Paper: None
Wednesday: Full Class Presentations of Built VR Scene in ENGAGE (In VR)
Friday: Full Class Presentations of Built VR Scene in ENGAGE (In VR)

Submitting Your Work

Work will be submitted electronically through Canvas. **It is your responsibility to ensure that your work is properly submitted via Canvas: the Teaching Team will not be accepting any assignments sent via E-Mail.** You should verify that this is the case and seek support, or at least let the instructors know within the hour, if you are encountering technical difficulties submitting work. We will keep the Canvas calendar up to date, which is a helpful means to know what is due, when, and how to submit work. **Deadlines for Response Papers, VR Journeys, Quizzes, and Built VR Scene in ENGAGE are hard deadlines.** If a student has an OAE Accommodation Letter, this is to be submitted to the Teaching Team before an assignment is due, not after.

Attendance: Synchronous Class Panels and Sections

Class will meet during its scheduled time of 9:30am PST on Wednesdays, and via VR and Zoom on Fridays. Regular attendance for class is strongly recommended as there will be substantial time devoted to discussion in class.

Sections will be held synchronously, and students must attend. Sections cover information that is important for quizzes.

ABC: **A**lways **B**e **C**harging your VR Headset.

Recordings
If, for some reason, we are using Zoom, the Teaching Team would love to see your faces, and we hope to make this classroom a place where everyone feels safe and comfortable using video. However, we also understand that these are unusual times that require us to video-conference in from varying situations, and therefore we will not penalize you if you need to turn off your video feed. That said, you should expect to be called upon when in class.

Per the University's academic calendar, this quarter begins on September 26th and concludes on December 9th. There will be no midterm or final exam. If you are experiencing difficulty attending or studying for this course, please contact the instructors as early as possible to discuss possible solutions or resources for assistance.

Research Participation

This class is one of the first large-scale courses in history to be taught largely in VR. Hence, we are studying the process. Students will sign a consent form in the first week of the course, and will answer short questionnaires at the end of each discussion section (TAs will leave ample time each week to administer the questionnaire during section time). Stanford Institutional Review Board (IRB) has decided all students should fill out the surveys each week, and if students choose not to consent to participate in the study, then their data will be deleted. Neither the Professor nor the TAs will know which students have given consent, as that process will be monitored by an independent third party. Students should keep their decision about study participation strictly confidential and not discuss it with other students.

Grading Policies and Re-reviews:

Your course grade will be based on completion of student panels, discussion sections, reaction papers, VR Journeys, Quizzes, and the Built VR Scene. In completing course requirements, you are expected to abide by Stanford's Code of Academic Integrity and Acknowledging the Work of Others.

Grades will be based on the following scale:

		B+	87-89%	C	73-76%	F	Below 60%
A	93-100%	B	83-86%	C-	70-72		
A-	90-92%	B-	80-82%	D	60-69%		
		C+	77-79%				

If you have questions or concerns about any grade you receive, then you may submit a **1 page written request for grade re-review within three days** after you receive the grade. It is important to note that a grade re-review may result in a higher or lower grade as the instructors may review your entire assignment.

VR Support

In this class we are trying something new—an entire class taught in VR with over 150 students—and there will be inevitable bumps in the road. Many of you will experience technical problems, and some of you may find the medium taxing. **If you are experiencing any discomfort with the medium, or content within the medium, at any time, please contact Professor Bailenson or your TA immediately**.

A lot of problems will be solved by careful planning—for example, always charging the headset in advance on days it will be used, having batteries nearby for the hand controllers, and logging in to discussion section 15 minutes before the scheduled start of an event. We will be actively utilizing a Canvas Discussion Thread for technical questions. In general, you should try for about 20-30 minutes to find an answer to your question before reaching out to fellow students, the TAs, or the instructor. We are more than happy to help you when you're struggling, but we also want to know that you've tried to help yourself first. When you ask for help, let the person you're asking know what you've already done. This makes it easier to answer your question quickly.

Picking up Your VR Headset

If you do not have your own VR headset, we will provide one (Meta Quest 2) for you for the duration of the course on the first day of class.

We have designated pick-up windows that will ensure you get your headset before the first class on Wednesday. If neither of those pick-up windows work for you, please email Patty and Brian ASAP to schedule another time.

IMPORTANT: *Keep all packaging (boxes, cardboard, etc.) and everything else that comes with your headset.* You will need to return everything just as you found it at the end of the quarter so that we can continue to teach this course in the future. Thank you for your cooperation and mindfulness!

Returning Your VR Headset

You will need to return your headset at the end of the quarter before you leave for Winter Break. We will send an email by the end of Week 10 detailing drop-off logistics. However, **ensuring the headset gets returned is *your* responsibility.** If you know you will be leaving campus early or if you miss the email from the teaching staff, please be proactive and reach out to anyone on the team who can help arrange a headset drop-off.

Again, you must return the headset with *all* **the packaging and materials.**

Students with Disabilities

Students with disabilities that need accommodations are encouraged to contact the Office of Accessible Education (OAE) as soon as possible (i.e., during the first week of classes, barring extenuating circumstances that prohibit this) to ensure that such accommodations are implemented in a timely manner. In general, and to ensure fairness to all students, the instructors will not make accommodations for disabilities without documentation from the OAE office. We also realize that VR is a unique medium and may present its own challenges. The Teaching Team will work with the OAE for any students who need accommodation.

Academic Integrity at Stanford University

Students are expected to comply with University regulations regarding academic integrity. If you are in doubt about what constitutes academic dishonesty, speak to the instructors before the assignment is due and/or examine the University web site. Academic dishonesty includes, but is not limited to, cheating on an exam (e.g., copying others' answers, providing information to others, using a crib sheet) or plagiarism of a paper (e.g., taking material from readings without citation, copying another student's paper). Failure to maintain academic integrity on an assignment will result in a loss of credit for that assignment—at a minimum. Other penalties may also apply, including academic suspension. The guidelines for determining academic dishonesty and procedures followed in a suspected incident of academic dishonesty are detailed on the website. For more information, visit: https://web.stanford.edu/dept/lc/language/courses/academicIntegrity.html

Sexual Harassment Policy

Stanford University strives to provide a place of work and study free of sexual harassment, intimidation or exploitation. Where sexual harassment has occurred, the University will act to stop the harassment, prevent its recurrence, and discipline and/or take other appropriate action against those responsible. For more information, please visit: the Sexual Harassment Policy Office. This policy extends to our engagements in virtual reality. For confidential support, please contact CST (Confidential Support Team) at https://vaden.stanford.edu/cst.

ADDITIONAL RESOURCES

We recognize this is a difficult time for many students, and we would like to share easily-accessible links on how to get support you need. Please know that the teaching team is available for you.

Disability Resources

If you need an academic accommodation based on the impact of a disability, reach out to the Office of Accessible Education (oae.stanford.edu). Professional staff will be available to support you. They will evaluate your request, recommend accommodations, and prepare an Accommodation Letter for faculty. Unless you have a temporary disability, these letters are issued for an entire academic year. Please reach out to OAE as soon as possible to help coordinate accommodations. Further resources can be found here: https://diversityandaccess.stanford.edu/disability-access/disability-related-resources

Well-Being, Stress Management, & Mental Health Resources

The COVID-19 pandemic is a stressful time for us all and may be challenging for mental health. If you or someone you know is feeling overwhelmed, depressed, or is in need of support, services and support are available to help. We have highlighted three options.
Note: All of the below resources are free.
Counseling and Psychological Services (CAPS): CAPS is the university's counseling center dedicated to student mental health and well-being. CAPS provides a broad range of services including crisis counseling, individual therapy, medication assessment and management, and group therapy. They also offer 24/7 immediate mental health crisis assistance at 650-723-3795. Please note that CAPS services are currently only available via TeleHealth to students who are in-state due to legal restrictions. If you are out-of-state, you can call 650-723-3785 24/7 for a consultation on how to best support your needs, including finding referrals to counselors in your area. You can make an appointment at https://vaden.stanford.edu/caps and through the Vaden Student Portal: https://vaden.stanford.edu/make-appointment.

The Bridge Peer Counseling Center: The Bridge provides anonymous, confidential, and online peer counseling sessions with trained student counselors. In addition to providing emotional support, they can help you navigate other Stanford resources. They are available via Zoom during the academic school year. To connect to the Bridge or find out more, see the instructions on their website https://web.stanford.edu/group/bridge/.

Well-Being Coaches at Stanford: Well-being coaches are available to offer support when you are struggling and can support your holistic wellness. To schedule an appointment, visit this website to find a coach who best suits your needs and look for available times in their schedule: https://vaden.stanford.edu/well-being/coaching.

Academic Resources

Writing and oral communication support: You can schedule free one-to-one sessions at the Hume Center for Writing & Speaking to work with trained writing consultants. They are available to help students brainstorm and get started on assignments; learn strategies for revising, editing, and proofreading; and improve organization, flow, and argumentation. You can make an appointment with a lecturer / advanced graduate student consultant, or drop-in to meet an undergraduate peer tutor.
For further information, to see hours and locations, or to schedule an appointment, visit the Hume website at:http://hume.stanford.edu

Academic skills coaching: Academic Coaches are available through the Stanford Learning Program to work with students to tackle challenges such as time management, procrastination, motivation, exam preparation and anxiety, reading and note-taking strategies, and communicating effectively. You can find more information and book an appointment here: https://studentlearning.stanford.edu/academic-skills/academic-coaching#undergradfaqs.

General Technology Resources

Lathrop Equipment & Laptop Lending: The Lathrop Tech Desk offers free loaner laptops and other tech equipment to any actively enrolled students. Shipping is available for off-campus students, depending on academic need. For more information, see their website https://thehub.stanford.edu/check-out-equipment-and-laptops.

Free and Low-Cost Internet Access: The Hub at Lathrop has compiled a list of low-cost and free internet providers. You can find more information here: https://thehub.stanford.edu/get-help-with-home-internet-access

For more available resources, you can visit this list compiled by Stanford students from the Basic Needs Coalition.