Introducing the ExoTerra Imagination Lab

The ExoTerra Imagination Lab is a collaborative speculative research lab for undergraduates, which can be added as a mandatory or optional course component to any undergraduate course, including STEM, Social Science, Humanities, and Arts courses. ExoTerra can operate as a plug-in for existing classes, and we are also soliciting proposals for new courses designed for it.

For courses which usually have lab components, ExoTerra can substitute for lab activities that are not possible with pandemic restrictions, or serve as an alternative for students who cannot do in-person labs. For courses which have not had labs before, ExoTerra offers the chance to add a creative lab experience, letting students apply course content to an active project, and polish research skills in a collaborative format optimized for the pandemic (i.e. online, with small-group discussions led by course assistants, and an online peer community to counter the stressful isolation of social distancing).

What is ExoTerra?

ExoTerra is an educational role-playing game (RPG) like Model UN, but integrated into courses as an online lab module, and with a greater focus on research, and on the interrelationships of science, technology, society, and culture. In ExoTerra students imagine themselves on a space colony ship traveling from Earth to a newly-terraformed exoplanet, where they must design their new world. The students in each lab section play a committee tasked with planning a specific part of the new world, appropriate to each class. An economics course might be the committee in charge of designing the new world’s economic policies, an animal biology course its ocean biosphere, an architecture course its capital city, a philosophy course its educational system, a chemical engineering course its fuel and power systems, or a pre-med course its plan to study the medical effects of differences between Earth and the new planet. A course on postcolonial literature might develop a plan for the new society to address and memorialize the relationship between space colonization and Earth’s colonial histories, while an arts course might create maps, building designs, an anthem, or artworks for the new world.

During the quarter, students in each ExoTerra lab will meet via weekly Zoom discussion sections and asynchronous online text chat overseen by course assistants. They will plan their projects together, divide up and conduct research, write up their proposals, and present them to an online community consisting of all students in all ExoTerra lab sections. All groups will see and respond to the proposals developed in other courses, and students will then adapt their proposals to work together (for example the energy committee collaborating with the transportation committee to plan a solar road project, or the committee on colonization’s legacy collaborating with the urban planning committee on a museum square). Undergraduates in all participating courses will develop their new world together through a shared online community (very valuable in this period of social separation), and create an ongoing...
ExoTerra Memo for Instructors

narrative via the decisions they make, and their responses to plot revelations introduced by the orchestrators (for example discoveries on the new planet). The ExoTerra program and its story will run for all three quarters of 2020/21, but each class will be a self-contained segment wrapped up within that quarter, with no ongoing obligations for instructors or students.

How Will ExoTerra Fit into Classes?

A central ExoTerra admin team, led by Ada Palmer (History) will support participating instructors throughout the quarter, and provide course assistants to lead weekly lab discussion sections, support students with office hours, and grade ExoTerra assignments. The team will work with each instructor to create a class-specific lab plan focused on the skills and content you want students to cover, and to create exactly as many graded ExoTerra assignments as you wish to add to your syllabus, whether just a few, or the bulk of your assignments, as you prefer. You can require all students in your course to participate in ExoTerra, or make it an optional alternative to traditional assignments and discussions—this can be a great way to subdivide larger classes for discussion sessions, some doing the ExoTerra discussion with the course assistant, the rest a standard discussion with you. If only a few students in a course do ExoTerra, they may be combined into a shared lab section with students from similar courses, but you will still decide the focus and number of graded assignments your students complete.

Participating instructors may choose how much you personally want to engage with ExoTerra. At a minimum you would work with the team to choose the topic and assignments, and have the course assistant report to you and turn in grades at the end. Or you may do more: joining lab discussions, responding to proposal drafts, even playing a character, however much or little you want to participate.

Merits of ExoTerra During a Pandemic

The pandemic and related crises have created what many have recognized as a World Mental Health Epidemic. Chronic exposure to fear, anxiety, and social separation have traumatic effects on the nervous system, especially higher cognitive functions such as concentration and writing skills. For college students, one of the most traumatic disruptions has been the dissolution of their social world. College is many young people’s first experience of being the primary decision-makers in their lives, and of forming a community of friends which fills one’s whole experience, not just the school day. This has been ripped apart, and students are starved for social interaction, and for the feeling of control. First-year and transfer students especially will struggle to enter this disrupted social world, and to form friendships across distances (whether six feet or a thousand miles).

ExoTerra is designed to help. Students in ExoTerra will be part of a small, intimate social group within their own labs, and a larger online community uniting multiple majors and years. Gamification, especially Role-Playing Games (RPGs), are extremely effective at forming communities. Classes which use RPGs, in addition to seeing high information retention and increased class participation, regularly see students learn each other’s names more, socialize outside of class more, and form strong, long-lasting friend groups at an even higher rate than intensive study abroad. The game world will also give students a sense of power and self-determination, as students shape a new world, and debate and vote on major decisions (such as the system of government, or the location of the capital city), an inclusive and non-threatening way to explore democracy and governance. The excitement of ongoing science fiction plot twists will provide a therapeutic break from the daily crises of 2020, while the parallels to real-world issues (constitution-writing, climate, colonialism), will give friend groups tools to discuss the crises of our time within the fun, lower-stress game world. The story will continue over the three
quarters of 2020/21, and students whose ExoTerra courses have ended will remain part of the online community, retaining and continuing relationships. Friendship, community, feelings of empowerment and control, tools for ethical and political discussion—these help counter the traumatic neurological effects of the crisis, aiding students’ ability to concentrate, write, and learn.

Is This Like those O-Week ARG Events, Parasyte and Terrarium?

ExoTerra is Role-Playing Game (RPG), which similar to an Augmented Reality Game (ARG), but not identical. In an ARG, participants play as themselves, i.e. as a student at U Chicago, same name, same home, same year, but with game elements layered on top of their lived reality (a secret society, a magic machine). In an RPG, participants create a characters who are not their everyday selves, with a different name, background, and goals, and often living in an imagined other world (in our case a space fleet). Both ARGs and RPGs are powerful educational tools, but ARGs tend to make extensive use of the real physical environment (campus), while an RPG can step further from our present (and its troubles), using spaces which are equally accessible from anywhere, ideal for geographic separation.

How Do I Learn More about Adding ExoTerra to My Course?

Please contact Ada Palmer (adapalmer@uchicago.edu) to discuss options and details.

Can I Propose a New Course for ExoTerra?

The College is welcoming proposals for new courses in any field which want to use ExoTerra. Faculty, graduate students, and postdoctoral fellows are all welcome to propose courses. Please reach out to Ada Palmer with a brief, informal course idea to start, and we will work together toward a proposal.

Particularly welcome would proposals for courses on:

- Climate, planetary science
- Colonialism, post-colonialism, colonization
- Ecosystems, oceanography, plant or animal biology, marine biology
- Constitutional design or the foundation of governments
- Cities and urban planning
- Agriculture, industry, energy, infrastructure
- Literatures of travel, exploration, foundation
- Economic policy, economic disparities
- Utopias, speculative fiction
- Astrophysics, astronomy
- Ethics, political philosophy, educational philosophy, educational theory
- Minerology, geology, space engineering, space economics
- Medical technologies, medical ethics
- Transportation and its effects (social, economic, environmental, political)
- Diaspora, community identities
- Space exploration examined through any lens (politics, war, culture, engineering, gender)
- Courses with creative writing, arts, architectural design, or composition components interested in exploring the creative aspect (designing buildings, monuments, anthems, artworks)