

OVERVIEW

Summer 2022 Seminar Offerings

Tufts Summer Accelerator (TSA)

Last updated: 5/16/2022

The [Tufts Summer Accelerator](#) offered through [Tufts Pre-College Programs](#) and [University College](#) will host seminars for residential, commuter, and virtual opportunities for Summer 2022! Placements in seminars are open for highly motivated high school sophomores, juniors, seniors, and recent Spring 2022 high school graduates to learn from distinguished scholars, staff, and faculty in a wide array of disciplines across the University.

Please see the links above for program details. Here are some important notes for you:

- The Tufts Summer Accelerator will be occurring over the summer in two sessions:
 - Session 1: July 10 - 22, 2022
 - Session 2: July 24 - August 5, 2022
- The 2 sessions will also offer morning and afternoon slots for seminar options:
 - Morning: 9:30AM - 11:30AM EST
 - Afternoon: 1:30PM - 3:30PM EST
- Additional seminar openings will be listed as they become available, and seminars will be marked as 'filled' as soon as possible when slots are no longer available.
- Any seminars that are listed as 'unavailable' are seminars that have currently filled for the summer and are no longer available.
- Admission to this program is competitive and rolling!
 - During the admissions process, you will be permitted to select up to two seminar preferences per session
 - After you are accepted, we will process your seminar selections on a first-come, first-served basis
 - If your seminar preferences are no longer available when you are admitted, we may reach out to you to discuss other options if they are available
 - You will have a limited amount of time to accept your offer of admission and deposit before your spot is given to another student

Our staff are available for questions and advice in selecting seminar preferences. Please contact us at precollege@tufts.edu.

Session 1 Morning Seminar Offerings

The Bilingual Brain

Tufts School and Department: School of Arts and Sciences, Philosophy

Seminar Leader: Ann Kochupurackal, Graduate Student

Modality/Modalities Offered: Hybrid (In Person and Virtual)

Most people around the world are not actually monolingual, but bi- or multilingual. Drawing upon data from diverse bilingual populations, this course will consider both the advantages and disadvantages of knowing more than one language, as well as the implications of multilingualism for shaping our knowledge of thoughts, society, and culture. The goal of the course is to have an understanding of multilingualism as both an individual and societal phenomenon informed by perspectives from linguistics, psychology, sociology, etc. Students will learn how to extract information and understand reading scientific articles.

“Culture and Childhood” with Melissa Lovitz

Tufts School and Department: School of Arts and Sciences, Psychology

Seminar Leader: Melissa Lovitz, PhD Student in Child Study and Human Development

Modality/Modalities Offered: In Person ONLY

Have you ever wondered if child development is the same across the world? Are you interested in understanding how cultural practices and contexts are related to child development - including your development? Are you curious to know how children of different ages experience and are impacted by culture? In this seminar, we will work to answer these questions using case studies, readings, and video excerpts portraying the multiple realities of childhood across the world. We will also critically examine our own 'cultural lens' and upbringing to help us understand variations in children's development across the world.

What is History

Tufts School and Department: School of Arts and Sciences, History

Seminar Leader: David J. Proctor, Senior Lecturer

Modality/Modalities Offered: Hybrid (In Person and Virtual)

What is History? There are many answers to this question and many of those answers depend on individual views and experiences. In this class we will try to understand the challenges faced by the historian and to try and figure out what history actually represents. Who tells the story? How do they tell it? What biases are in play? How do the times a historian writes shape their attitudes? Does the historian make the history or does the history shape the historian? By the

end of the seminar you will have a better sense of your own view of history as well as the power and responsibility that comes with telling and understanding history, the story of humanity.

Women in Classical and World Mythology (also offered in AM slot)

Tufts School and Department: School of Arts and Sciences, Classical Studies

Seminar Leader: Marie-Claire Beaulieu, Associate Professor

Modality/Modalities Offered: Virtual ONLY

An exploration of legendary and mythical female figures from Greek and Roman mythology, Native American, African, Japanese, and South Asian. We will pay special attention to exploring and defining the nature of female empowerment in these stories and in modern representations of these female mythological figures through film and contemporary art.

Session 1 Afternoon Seminar Offerings

Chaos Theory, Chaos Practice

Tufts School and Department: School of Engineering, Computer Science

Seminar Leader: Anthony Bucci, Lecturer

Modality/Modalities Offered: Virtual ONLY

"Chaos", as a mathematical term, refers to a phenomenon in highly-interconnected systems whereby they become sensitive to small perturbations in their conditions. Sometimes called "the butterfly effect", this sensitivity can make such systems difficult to understand and predict; even the act of observing them can change their future course significantly. We live our lives literally surrounded by chaotic systems, most notably the weather and climate systems. We are also increasingly turning our human-made systems, like the internet, the electric grid, and the financial system, into complex and potentially chaotic systems. In this seminar, we will explore chaos theory as a field of study, and we will explore chaotic systems in practice using a variety of computational tools, with a view towards developing a deeper appreciation of our complex world.

Child Psychology

Tufts School and Department: School of Arts and Sciences, Psychology

Seminar Leader: Corrine Mahoney Kavanaugh, Lecturer

Modality/Modalities Offered: Hybrid (In Person and Virtual)

The child psychology course will introduce students to the disorders and treatment specific to the child and adolescent populations, discussing how they are different in children than adults and evidence based treatments. It will address social, emotional and developmental factors that

influence the mental health of children, as well as current topics in the field that are relevant to psychopathology (e.g. race/ethnicity, technology, marijuana use).

Metamorphoses: Identities in Transition in Visual Arts, Music, and Film

Tufts School and Department: School of Arts and Sciences, Music and FMS / History of Art and Architecture

Seminar Leader: Alessandra Campana, Associate Professor / Chiara Pidotella, Lecturer

Modality/Modalities Offered: Hybrid (In Person and Virtual)

This seminar, co-taught by faculty in Art History and in Music and Film and Media Studies, attends to transformation, change, and the very event of becoming other(wise). We will look at and listen to examples ranging from European early modern paintings and sculptures to global cinema, video and animation. Complemented by museum visits and film screenings, the seminar considers in depth the fascination for metamorphosis as a theme running through different medial practices and art histories. From how Renaissance paintings and sculptures competed in rendering the mythical stories of characters as they turn into plants, animals, and minerals, to episodes in opera and musical theaters where the characters are caught as they transit through realms and spaces, and to the sound design and musical scoring of films about fantastic and monstrous transformations. The theme of metamorphosis is caught in its still compelling poetic force. To close, the students will imagine an aftermath: the metamorphosed lives of those plants and animals, of those monsters and characters, in images and sounds.

Responsibility in the Law

Tufts School and Department: School of Arts and Sciences, Philosophy

Seminar Leader: Cindy Xin Yi Ling, Graduate Student

Modality/Modalities Offered: Hybrid (In Person and Virtual)

When the law holds us responsible, it typically holds us responsible for something we have done. Sometimes, however, we can also be held responsible for something we have not done, but which we should have done, as in cases of negligence.

What, then, are the criteria for establishing responsibility, according to the law? What is the persistent thread underlying judgements of responsibility, legal or otherwise – if there is any such thread at all? Lastly, how do (or how should) our understanding of causal or moral responsibility impact how we think about legal responsibility?

This seminar aims to explore these questions in light of influential contemporary ideas in legal philosophy, ethics, and metaphysics.

Session 2 Morning Seminar Offerings

Police, Policy, & Punishment: Ethically Evaluating the U.S. Criminal Justice System

Tufts School and Department: School of Arts and Sciences, Philosophy

Seminar Leader: Brittany Bryant, Graduate Student

Modality/Modalities Offered: Hybrid (In Person and Virtual)

Is our criminal justice system completely broken? What role should the police play in a just society? How can we tell when a criminal punishment is just? This seminar will tackle these questions and more, using philosophical theories of punishment to critically evaluate the current criminal justice system in the United States. No previous philosophy or legal experience necessary: This course is designed for any student interested in examining how the law impacts our lives, the ethics of punishment, current political issues, and true crime.

Women in Classical and World Mythology

Tufts School and Department: School of Arts and Sciences, Classical Studies

Seminar Leader: Marie-Claire Beaulieu, Associate Professor

Modality/Modalities Offered: Virtual ONLY

An exploration of legendary and mythical female figures from Greek and Roman mythology, Native American, African, Japanese, and South Asian. We will pay special attention to exploring and defining the nature of female empowerment in these stories and in modern representations of these female mythological figures through film and contemporary art.

Session 2 Afternoon Seminar Offerings

How Vaccines Work

Tufts School and Department: Tufts University School of Medicine, Center for Science Education

Seminar Leader: Berri Jacque, Faculty

Modality/Modalities Offered: In Person

Students will be introduced to immunology with a focus on COVID-19 and how vaccines work. First, students will use COVID-19 as a context to learn what happens when the body encounters an infectious agent, along with the different parts of the immune system and how they co-operate as they respond to clear infection. Second, students will expand and integrate their

understanding of the immune system as they explore how vaccines harness immune memory to prevent disease.

This is an elective biology course designed to be accessible to pre-college with a basic background in high school level biology and chemistry, who are interested in health and medicine. The course provides a unique opportunity to learn about advanced medical topics using approaches that are common in medical education, including team-based learning and clinical case studies. In addition, it provides a metacognitive strand focused on strategies to effectively navigate the demands of online undergraduate-level courses.

Classes are team-taught by medical faculty and staff from The Center for Science Education at Tufts Medical School.

Learning How to Learn in STEM

Tufts School and Department: School of Arts and Sciences, Physics & Astronomy

Seminar Leader: Vesal Dini, Lecturer

Modality/Modalities Offered: In Person ONLY

A majority of students in STEM courses approach their learning by memorizing information and reproducing it for summative assessments. For many, that's the extent of what it means to learn. In this seminar, we will use introductory physics as the conceptual space to develop students' metacognition—that is, their thinking about what they are thinking and doing. Along the way, we will engage in domain general scientific practices, including in drawing on life experiences/common sense/analogies while constructing explanations; not being satisfied with the first thing that comes to mind or produce only one way of thinking about a problem; seeing mathematics as communicating physical meaning; identifying inconsistencies and striving to pinpoint and articulate confusions; and listening and responding to others' ideas.

Social Psychology of Prejudice, Discrimination and Racism with Sanjana Kadirvel

Tufts School and Department: School of Arts and Sciences, Psychology

Seminar Leader: Sanjana Kadirvel, Graduate Student

Modality/Modalities Offered: Hybrid (In Person and Virtual)

This course will examine a social psychological perspective on stereotypes, prejudice, and discrimination where we will examine implications for social perception and social experience for individuals' thoughts, behavior, and outcomes. We will explore and discuss original research studies in intergroup relations that shed light on potential ways to address discrimination. This course will include lecture based content, peer- and group-discussions, understanding psychological science, and a final project for students to design a study.



UNIVERSITY COLLEGE

Pre-College Program