

## IMSA Intersession 2021 Course Catalog

### Hello IMSA Students!

Intersession 2021 will be conducted remotely from **January 12 - 14, 2021**. Each session's "Schedule" lists the number of synchronous Zoom sessions. For example, a session listed "60 minutes / Three Days" will meet on Zoom on January 12, 13, and 14 for one hour each day for a total of 180 minutes. Due to the distance learning format of Intersession, some sessions may include some additional asynchronous engagement. The exact days and times of each session will be determined after all student selections have been submitted, but all synchronous meetings will be held between 9:00am and 2:30pm CST each day.

**Intersession participation is required.** Students will be enrolled in a **minimum of 300 minutes** of synchronous session time over the three days. Students are welcome and encouraged to exceed 300 minutes to participate in their sessions of interest.

In the Google Form linked below, students will identify their Intersession choices. The form asks students to create two lists of sessions:

1. **Ideal Schedule:** Students identify between 1-8 sessions that comprise their ideal schedule. The list must surpass the 300 minute requirement.
2. **Backup Options:** Students identify three (3) additional sessions beyond their ideal schedule that can serve as replacements.

**NOTE:** In both lists, students should not list the same session more than once. Repeating a selection will not increase the likelihood of placement in that session.

Priority in placement will be given on a first come, first serve basis with additional factors such as enrollment caps and schedule informing final placements. We will try diligently to place all IMSA students into their preferred sessions.

Please use the google sign-up sheet here:

**<https://forms.gle/eRQussKaQgbP8nk46>**

## 2021 Intersession Courses

### 1. JHMC Problem Writing Workshop

**Schedule:** 120 minutes / Three Days\* students can attend any amount as a fill in as needed

**Description:** Each year IMSA's Mu Alpha Theta math honor society produces a math contest for middle schools. The contest is student-written, organized, and coordinated (with a little faculty help and supervision, of course). Each year we need dozens of good math problems. Participants in this session will work with each other and the faculty mentor to produce and refine problems and get the contests ready! The session will run continuously during intersession week so that you can participate any time you are not part of another intersession!

**Session Category:** Service Learning - Session provides an opportunity for students to support a community or organization

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Micah Fogel

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** fogel@imsa.edu

**Summary of Qualifications:** Have been involved with math contest creation for over 20 years.

**Add'l Sponsor Name:**

**Relation to IMSA:** Current IMSA Faculty or Staff

### 2. Advanced Python: Object Oriented and More!

**Schedule:** 90 minutes / Three Days

**Description:** This intersession will pick up where CSI left off. You will learn tools to enable you to use the Python language for more advanced topics.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives

**Prerequisite(s):** Completed CSI, or approval by instructor.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Tom Meyer

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** tmeyer@imsa.edu

**Summary of Qualifications:** Currently teach CS

### 3. Evil Is a Noun: The Ethics of the Star Wars Universe

**Schedule:** 60 minutes / Three Days

**Description:** How should we understand a world in which there are two sides of equal power and in which the two sides battle without end? In this intersession, students will learn about the ethics of the Star Wars universe, how that universe has problematized its heroes, and how it struggles to exonerate certain of its villains.

By the end, students will be able to identify major ethical questions posed by the Star Wars universe and begin to understand how such problems are engaged in the real world.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Eric Smith

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** esmith@imsa.edu

**Summary of Qualifications:** Have taught a version of this intersession before.

**Add'l Sponsor Name:** Tracy Townsend

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** ttownse@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Has co-taught this intersession with the sponsor before.

## 4. Game Jam

**Schedule:** 120 minutes / Two Days

**Description:** Video games are a major industry of the modern world, blending together engineering and artistic efforts to create something that communicates with its players. While modern AAA games require teams of hundreds of people and years of development effort, you can create a fun game in as little as 48 hours by focusing on a solid core and a mantra of “it doesn’t have to be pretty, it just has to work.” In the spirit of game jams like Ludum Dare, students will come together to produce a working game in a couple of days. Modern game engines like Unity have made this easier than ever and allows people of all skill sets to engage and contribute. And in the process will be exposed to important skills like project planning and feature scoping.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** Exposure to programming is helpful but not required.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Aaron Doukas

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** aarondoukas@gmail.com

**Summary of Qualifications:** 13 years as a software developer and participation in multiple game jams and hackathons

## 5. CSS3 & HTML5: Hands-on Experience for Nifty Websites

**Schedule:** 120 minutes / Three Days

**Description:** Learn some new tricks and tools in CSS3 and HTML5 to help make your websites more beautiful and nifty. We will go over many concepts including borders, bounding boxes, flex boxes, gradients and more with hands-on mini-projects to help you gain an in-depth understanding of what they are and how to use them.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** Some programming experience would be helpful but not required

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Cathy Li

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** coolibutter@gmail.com

**Summary of Qualifications:** Software Engineer on Chromium Browser project with many years of experience in frontend/web technologies development, implementation. Facilitated similar CSS3/HTML5 introductory seminars for other developers at Google

## 6. Venture Capital - the Financing of Innovation

**Schedule:** 90 minutes / Three Days

**Description:** Do you want to know how Instagram, Doordash, Peloton and countless others were able to grow so quickly? What is a term sheet, dilution, or an IPO? Were companies always able to do this or what changes contributed to enable massive, rapid growth? Why do some companies survive while others fail and how do the best venture capital investors in the world decide how and where to place capital?

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** No; but I would like them to write 2-5 sentences on why they are interested.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 26-50 students

**Primary Sponsor Name:** Raymond Colletti

**Relation to IMSA:** I'm an IMSA alum from '05

**Primary Sponsor Email:** raymondcolletti@gmail.com

**Summary of Qualifications:** It has been my career (both at startups and investing in startups) for a decade.

## [7. How to Build Teamwork with League of Legends/Valorant](#)

**Schedule:** 90 minutes / Three Days

**Description:** Good teamwork is vital independent of field. Researchers, for example, continuously have to communicate effectively in an environment where technical backgrounds may vary. Effective teamwork strategies will be presented and tested in an environment with a steep knowledge curve that leans heavily on team function— League of Legends, a free online game with low computer system requirements but high teamwork requirements. We may also play Valorant, depending on student system capabilities and desire.

No prior experience is necessary, and teams will be formed based on relative experience level at first. Then, they will be mixed and pitted against each other.

By the end of the session, students will know how to effectively communicate with their team independent of technical knowledge background and how to encourage effective teamwork in a group.

**Session Category:** Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** Install League of Legends and Discord, create accounts for each, and launch each program once before first session (to allow for updates). Both are free.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 26-50 students

**Primary Sponsor Name:** Alexander Romanov

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** romanov3@illinois.edu

**Summary of Qualifications:** I have prior experience on technical teams (like my current research project and current internship) and my strategies will follow established strategies for effective teamwork.

The activity itself builds teamwork, according to the study cited below, and I hope to further improve on the effectiveness with teamwork guidelines.

I also have experience with the game, which will help minimize technical issues.

Keith, M. J., Anderson, G., Gaskin, J., & Dean, D. (2018). Team Video Gaming for Team Building: Effects on Team Performance. *AIS Transactions on Human-Computer Interaction*, 10(4), 205-231.

<https://doi.org/DOI: 10.17705/1thci.00110>

DOI: DOI: 10.17705/1thci.00110

## 8. Drones: Flying, Creating Videos, and Producing Maps and Models

**Schedule:** 120 minutes / Three Days

**Description:** In this intercession, participants will learn the safety behind flying drones and how to become a certified FAA Remote Pilot. Participants will receive all the resources needed to pass the FAA certification exam. Additionally, participants will learn how to create and edit drone (aerial) videos and use the data to create 3D models and spatial maps using a geographic information system (GIS). Learn about the useful applications of drones and how they are being used in many workspaces. The emphasis in this learning experience will be on how to fly drones safely and use what you have learned to use spatial software and solve problems from a unique perspective. If you have ever wanted to learn about drones, their applications, and how to become an FAA Certified Remote Pilot, this is the experience for you.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 26-50 students

**Primary Sponsor Name:** Dr. Rich Schultz & Christine Zhang

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** [rschultz@imsa.edu](mailto:rschultz@imsa.edu) / [czhang1@imsa.edu](mailto:czhang1@imsa.edu)

**Summary of Qualifications:** Sponsor is a certified FAA Remote Pilot and teaches courses on drone safety at local community college. Sponsor has over twenty years of teaching experience at the higher education level. Sponsor has taught professional development sessions for the use of geographic information systems (GIS) in education for over twenty years.

## 9. Anxiety Slayers

**Schedule:** 90 minutes / Three Days

**Description:** Podcasts come in all shapes and sizes. Some podcasts tell stories, some are funny and some are educational. As of November 2020, there are just over 1 million podcasts, but over 600 million blogs! Podcasting is a much less crowded and competitive space than blogging, making now the perfect time to get started. This session will introduce the students to the basic structure of creating a podcast including the recording and the editing process and uploading and promoting the podcast. Students will create a podcast about Mental Health and share it with their classmates on the last day of the session.

**Session Category:** Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Namrata Pandya

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** npandya@imsa.edu

**Summary of Qualifications:** CS faculty currently at IMSA

## 10. Investing

**Schedule:** 60 minutes / Two Days

**Description:** A broad overview of investing in companies. Whether you're an entrepreneur, a stock/mutual fund owner, or a Google employee getting significant compensation in equity, you're an investor, and this session aims to help you understand how to be a good one. Presented by a Wall Street analyst and portfolio manager.

**Session Category:** Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None



**Class Size:** 25 students

**Primary Sponsor Name:** Will Pan

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** willcpan@gmail.com

**Summary of Qualifications:** 10 years as a Wall Street equity analyst. I am happy to team up with other people interested in providing a similar session. I am happy to narrow or broaden the session to better suit the Intersession agenda

## [11. Independent Reading](#)

**Schedule:** 90 minutes / Three Days

**Description:** Every wish you had more time to read things you liked?

In the Zoom version of this popular intersession, your class will become a culture of readers. Led by Dr. Kotlarczyk, you will discuss the research on independent reading and compare it to your own experience. Mostly, you'll read.

Studies show that "independent, self-selected reading" enhances your reading comprehension, vocabulary, knowledge, and empathy. In one study, American students who frequently engaged in reading for pleasure scored higher in reading than peers who did not. A British study also found that independent reading can significantly reduce stress.

You must provide your own reading material for this session – fiction, nonfiction, poetry, graphic novels, anything. The only requirements are (1) it cannot be reading for a class or test, and (2) no screen reading unless you arrange it in advance with me, so please arrange to get your reading from a local public library or bookstore, Amazon, etc.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives

**Prerequisite(s):** Students need to provide their own reading material, possibly from their public library or other means

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Adam Kotlarczyk

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** akotlarczyk@imsa.edu

**Summary of Qualifications:** Lifelong reader, Ph.D. in English, have taught English for almost 20 years, 12 of them at IMSA.

## 12. Introduction to Quantum Computing

**Schedule:** 120 minutes / Three Days

**Description:** Participants will get an introduction to the concepts behind quantum computing. They will learn what a qubit is, how it differs from a classical bit, and what the quantum gate model is. Students will dive into creating their own quantum circuits using the cirq framework within a python notebook. We will survey the most well-known quantum algorithms and explore several ways people have attempted to build a quantum device.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** CSI or knowledge of python. MI-2 or understanding of matrix multiplication.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Doug Strain

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** doug.strain@gmail.com

**Summary of Qualifications:** M.S. in Computer Science. Currently employed as a Staff Software Engineer leading Google's Quantum Computing Service.

**Add'l Sponsor Name:** Pat Patankar

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** ppatankar@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Current Computer Science Faculty at IMSA

**Add'l Sponsor Name:** Anastasia Perry

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** aperry@imsa.edu

**Add'l Sponsor Name:** Brent Yen

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** byen@imsa.edu

**Add'l Sponsor Name:** Smriti Shankar

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Summary of Qualifications:** Smriti is doing an Independent study on Quantum Computing and will be a great help to facilitate discussion and interaction with students.

### [13. An Introduction to Computational Economics](#)

**Schedule:** 120 minutes / Three Days

**Description:** This session will provide an introduction to computational methods in economics. In particular, we will use Python to conduct common economic analyses including examining data, solving models, and conducting experiments on simulated economies. The exact topics we will cover will be voted on by enrolled students. Examples include, but are not limited to: How can we model the dynamics of the wealth distribution and how are measures of inequality affected by the properties of wage income and returns on assets? What are the aggregate ramifications of individuals having mild preferences to live near people who are similar in terms of race, social class, or education level (Schelling Segregation Model)? How can we model transitions between unemployment and employment using factors like impatience, unemployment insurance, and current and likely future wages (McCall Search Model)?

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** Basic knowledge of Python

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Rupal Kamdar

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** rkamdar@iu.edu

**Summary of Qualifications:** I received my PhD in Economics from the University of California Berkeley in 2019 and am currently an Assistant Professor of Economics at Indiana University, Bloomington. At Indiana University, I teach an upper-level undergraduate course called Computational Macroeconomics. It is this class that I will model my intersession after.

## 14. Idea of the Individual. .. Intersession Time!!!

**Schedule:** 60 minutes / Three Days

**Description:** In our fabulous Idea of the Individual section, there was one text we did not get to--Karen Joy Fowler's "we are all completely beside ourselves". In this Intersession, any students from the class AND anyone who is interested in reading and talking literature is invited for lively and engaging discussions. We will go as in-depth as possible in the time frame, without risking over-Zooming!! (note: DO NOT READ THE BACK COVER!! #terriblespoiler)

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** Students will need to read the novel "We are all completely beside ourselves" by Karen Joy Fowler prior to the Intersession.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Dr. Leah Kind

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** lkind@imsa.edu

**Summary of Qualifications:** English Teacher for 18 years, 11 years as a member of the English Department at IMSA

## 15. Mathematics in Card Play

**Schedule:** 90 minutes / Three Days

**Description:** We will play Euchre, Spades and maybe Whist. All games are trick taking which include counting cards and calculating probabilities. They will require strategical and logical thinking. Students will be active in learning and playing games. We will discuss and employ strategies specific to these games but are common to any trick taking game. Students will learn about trump, finessing, leading, signaling to your partner, card counting, cross roughing and other ideas.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** No, no prerequisite knowledge is needed. We would ask that an even number of students be placed in this intersession so that we have ideal groups for our card games. If needed, we could take up to 30-32 students.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Evan Brummet

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** ebrummet@imsa.edu

**Summary of Qualifications:** Evan Brummet is an active card player who also helped to run a similar intersession last year. We would like to keep building momentum with our current student population so that more students are exposed to bridge and other trick-taking card games!

**Add'l Sponsor Name:** Marti Shirley

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** mshirley@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Marti Shirley is an active card player who also helped to run a similar intersession last year. We would like to keep building momentum with our current student population so that more students are exposed to bridge and other trick-taking card games!

**Add'l Sponsor Name:** Becky Matthew (class of '18)

**Relation to IMSA:** IMSA Alumni

## [16. 3D Modelling for Digital Fabrication: Parametric Design & Computational Geometry](#)

**Schedule:** 120 minutes / Three Days

**Description:** Technological processes are rapidly advancing the course of architecture, engineering, and product design. With digital fabrication methods such as 3D printing, we can now produce and analyze incredibly complex and precise real-world forms for a variety of unique applications. Computational design is the art and science of using code to generate virtually any object, structure, or environment imaginable.

The course will introduce students to computational design through mini-lectures, supplementary reading material, and practical workshop. We will discuss a variety of topics and case studies for inspiration. Reading will be provided digitally. The workshop will focus on teaching the basics of the Rhinoceros/Grasshopper 3D modelling environment and visual scripting platform, which contains C# and Python components. Students will be tasked with a design problem, thus creating a 3D model which they can build with a robotic process of their choice after the conclusion of the course (optional).

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Professional Development - Session provides explicit career-focused insights and applications, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** Basic knowledge of code (any language) is desirable, but not necessary.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Adelina Koleva

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** atkoleva@gmail.com

**Summary of Qualifications:** Earlier this year I graduated the Emergent Technologies & Design M.Sc./M.Arch. programme at the Architectural Association (AA) in London, where I worked as an assistant at the Digital Prototyping Lab. My dissertation work investigated the application of complex geometry for ecologically-adaptive and climate-resilient construction. Prior to the AA, I received a B.A. and B.Arch. from the Rice School of Architecture, where I served as an undergraduate teaching assistant in my final year. I was awarded the Ralph S. Herman Memorial Scholarship, Chelsea Architects Award, Roy Jones Fellowship, and Erin MacKenzie Peck Memorial Scholarship for excellence in research and design. I am also a dedicated practitioner of architecture, currently working toward NCARB accreditation. I have experience in commercial, residential, and cultural projects across a variety of scales. In 2017, I served on the board of directors for the American Institute of Architects (AIA) in the United Kingdom. Currently I work at Adjaye Associates and my interests lie in the application of advanced computational design and fabrication technologies within climate-conscious architectural practice.

## [17. Shakespeare and the Neuroscientific Self](#)

**Schedule:** 60 minutes / One Day

**Description:** This lecture comes from Dr. Madon's dissertation on contrasting definitions of "the self" in Shakespeare's dramas. Come prepared to wax philosophical about identity, the distinctions between the mind and the brain, and some beautiful and devastating moments of staged early modern drama.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** No (but I will pitch it to my Shakespeare elective students)

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 50+ Students (Webinar)

**Primary Sponsor Name:** Devon Madon

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** dmadon@imsa.edu

**Summary of Qualifications:** This interactive lecture comes from my dissertation and my ongoing personal research.

## 18. Theme Park Engineering & Design

**Schedule:** 60 minutes / Three Days

**Description:** In this session, students will be introduced to Theme Park Engineering and how what they learn in the classroom actually gets applied in Theme Parks! We'll go through the Interdisciplinary Nature of this unique Engineering Field and how one works with all sorts of different groups & teams to achieve the creative goals. After that introduction, students will walk through how we translate creative intent into technical execution. There may be some surprise visits from real Theme Park Engineers who will stop by and share their experiences. If you're interested in learning more about a creative, multi-disciplinary and technically innovative engineering field, you'll love this!

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 Students

**Primary Sponsor Name:** Anisha Vyas

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** anisha.vyas@universalorlando.com

**Summary of Qualifications:** I am a Senior Manager, Engineering & Safety for Universal Creative part of Universal Parks & Resorts and worked on many different attractions. As a note to the committee, I have received approval from Universal Creative to host this class however my material will be pre-reviewed by them & UPR as much of what we do is under NDA. I've also received approval to pull in 2-3 others in my division - I am unsure if students would want to hear a small "panel" on the last day, but if there's interest my goal would be to pull that together.

## 19. Fantastic adventures and how to run them virtually

**Schedule:** 120 minutes / Three Days

**Description:** Grab your animal companion and roll for initiative as we play the world's greatest role playing game virtually. ALL skill levels welcome as we experientially navigate the world of Dungeons and Dragons 5th edition online. No gold or experience required.

**Session Category:** Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** No

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Alec Mangan

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** alec.mangan@gmail.com

**Summary of Qualifications:** I have been playing dungeons and dragons for over a decade and used to play D&D with my IMSA friends while I was in school. I also ran a similar intersession last year and had a ton of fun.

**Add'l Sponsor Name:** Dr. Eric Hawker

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** ehawker@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Dr. Hawker has been playing D&D for longer than I have and is a current IMSA teacher.

**Add'l Sponsor Name:** Michael Hrcek

**Relation to IMSA:** Alumni IMSA Student



**Add'l Sponsor Email:** mymainwebmanmike@gmail.com

**Add'l Sponsor Summary of Qualifications:** Mike has been playing D&D with me for years and also helped run the D&D intersession last year.

## 20. New Documentaries on the Environment

**Schedule:** 120 minutes / Three Days

**Description:** In this brief intersession, we will kick back and watch two of the three best new documentaries on the environment, as recommended by Ecowatch for 2020. These three documentaries are Kiss the Ground, Public Trust: The Fight for America's Public Lands, and David Attenborough's A Life on Our Planet. The purpose is to keep up with new media around climate change and also to spend some time chatting about films with other film lovers.

**Session Category:** Socioemotional - Session supports student social and emotional well-being, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** No

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Sheila Wille

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** swille@imsa.edu

**Summary of Qualifications:** I have a PhD in Environmental and Imperial History

**Add'l Sponsor Name:** Nicholas Cross

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** ncross@imsa.edu

## 22. Creative Writing Workshop

**Schedule:** 60 minutes / Three Days

**Description:** Students will be able to write creatively (fiction and nonfiction) in an essay, novel, or other storytelling type format and have an opportunity for peer-review, along with a few guided lessons.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Mia Pidlaoan

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** mpidlaoan@imsa.edu

**Summary of Qualifications:** I'm an English major who graduated from NIU in 2019 with a certification in creative writing nonfiction. I also used to write scripts for Genius Inc. (a visual novel company) and I am currently editing a friend's fiction novel pro-bono.

### 23. A = M =F2 (Art + Music =Fine Arts Fun)

**Schedule:** 60 minutes / Three Days

**Description:** Students will have the opportunity to create a Fine Arts (Visual Arts or Music) Portfolio or Journal. They will learn to construct the physical binder of the materials as well as will develop a personal plan for the contents. On-going stress relief and fun is found within the creative process of drawing, painting, playing, performing and composing music, as well as through stream of consciousness thoughts, exploration and experimentation. The Journal will be representative of individual thoughts and culture as well as of personal Fine Arts' work. In addition, if fully developed, the Visual Arts or Music portfolios can be used to demonstrate Arts proficiency, during the College Admissions process.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Professional Development - Session provides explicit career-focused insights and applications, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** No prereqs, just an interest in the Fine Arts

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Joyce Symoniak and Mary Beth McCarthy

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** jsymoniak@imsa.edu, mmccarthy@imsa.edu

**Summary of Qualifications:** Advanced degrees in the Fine Arts

## [24. Let's Make a Pet Memoir!](#)

**Schedule:** 60 minutes / Three Days

**Description:** Whether you are snuggling with your pet right now or remembering all the comfort they have given you over the years, why not create a beautiful memoir of them and how much they have impacted your life? In this intersession, we will learn the basics of video editing in order to create a digital and everlasting pet memoir! We will learn to edit video, audio, and turn all of these memories into a piece of art that will be a keepsake for years to come.

**Session Category:** Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** They should have some photos/videos of their pets and access to some favorite songs in which they'd like to set their creation to.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Lara Brink

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** lbrink@imsa.edu

**Summary of Qualifications:** I'm the Choir Director at IMSA. We've been creating virtual choirs in this online environment and I have experience in video editing. Specifically in setting videos to music which is part of this intersession. I also had a dog named Dodger who was with me for almost 14 years before he passed away. He was incredibly special to me and I know so many students who have pets that have had the same impact on their lives. I think combining these two passions would make for a fun and creative intersession that is close to my heart and to the hearts of so many students. Especially during these times.

## [25. Insight into Causes: World Wars I, II and the Cold War](#)

**Schedule:** 60 minutes / Three Days

**Description:** These three presentations and discussions will delve into some of the specific and lesser considered causes for the three great conflicts of the 20th Century. What are the political, military and economics factors that bring conflict about? We will explore these issues and challenge what you think you already know.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** I will send them the PPTs that will be used for review and preparation, and ask them to bring specific questions for each day.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 26-50 students

**Primary Sponsor Name:** Lee W. Eysturlid

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** leysturl@imsa.edu

**Summary of Qualifications:** Been teaching this for 20 years.

## [26. Caring for History -- an Introduction to Emergency Medicine](#)

**Schedule:** 120 minutes / Three Days

**Description:** Physicians use knowledge of many kinds in order to improve the lives of their patients. Once trained, medical doctors cannot help but to put their diagnostic skills to use whenever medical topics arise, including when reading history. In this course, students will work with an emergency medicine physician to 'care' for patients throughout history, gaining both specific knowledge of medical science as well as an introduction to medical decision making.

**Session Category:** Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 50+ Students (Webinar)

**Primary Sponsor Name:** Scott Sundheim

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** scottsundheimcolorado@gmail.com

**Summary of Qualifications:** medical doctor, board certified in Emergency Medicine

## 27. On the Basis of Sex - Movie Discussion

**Schedule:** 60 minutes / One Day

**Description:** Students will watch the movie, RBG, and come together for a discussion. Students will gain a greater awareness of the life of Ruth Bader Ginsberg and her groundbreaking work on gender equality.

**Session Category:** Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** Students will be able to access the film on a link provided for this Intersessionne

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Brooke Schmidt

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** bschmidt@imsa.edu

**Summary of Qualifications:** IMSA faculty

**Add'l Sponsor Name:** Angie Ahrendt

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** aahrendt@imsa.edu

## 30. The Handmaid's Tale: Fireside Book Chat

**Schedule:** 60 minutes / Three Days

**Description:** Margaret Atwell's 1985 novel The Handmaid's Tale has achieved newfound popularity in the last several years, even inspiring the recent Hulu series of the same name. In this intersession, we will be diving into the dystopian world of Gilead, a patriarchal society in which the female characters have had their rights stripped away from them. We will explore the novel's themes of sexism, persecution, and female empowerment. Students will be expected to read the novel PRIOR to the first day of intersession, and we will spend our time together discussing the novel itself and how it still

resonates 35 years after it was published. Student participation is required, and because of the “book club” atmosphere of this intersession, it is requested that students have cameras on during our discussions.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives

**Prerequisite(s):** Students will need to read the Margaret Atwood novel "The Handmaid's Tale" prior to the first day of intersession.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** Can run with 5 or more students

**Primary Sponsor Name:** Erin Micklo

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** emicklo@imsa.edu

**Summary of Qualifications:** I'm English Faculty at IMSA and have taught this novel for a number of years in Gender Studies. Unfortunately, we did not get to read it in GS this fall due to the reduced number of class meetings.

**Add'l Sponsor Name:** Amy Keck

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** Akeck@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Amy has an interest and passion about gender-related issues.

## [31. Writers Without Margins "In Their Shoes": Unheard Stories of Reentry and Recovery, Addictions Prevention Program for Teens](#)

**Schedule:** 60 minutes / Two Days

**Description:** Day 1: Watch Award-Winning Film "In Their Shoes" [Trailer Here [www.InTheirShoesFilm.com](http://www.InTheirShoesFilm.com)], a 2019 documentary that profiles the lives of 4 felons, their addictions and crime histories and their re-entry and recovery stories utilizing a writer's workshop model started in Boston through Writers Without Margins. Day 2: Listen/Participate in Zoom Panel with the film's Producer Cheryl Buchanan, JD., and Cast Member Stephen C., regarding writing workshops being used for addiction recovery/incarceration programs nationally. Discuss mental health/addiction and homelessness/relapse prevention and writing as recovery initiatives. Day 2 or Day 3: Submit any form of creative writing/poetry based on response to film. This program is offered as part of Cayleigh O'Hare ('22)'s IMSAported program series.

Writers Without Margins (WWM), the fiscal sponsor of "In Their Shoes", is a nonprofit whose mission is dedicated to the fusion of art and advocacy, we bring literature beyond conventional spaces. Founded by Cheryl Buchanan and Stephen Kennedy Smith in 2015, WWM has since worked with 10 partner organizations in Greater Boston, including homeless shelters, community health centers, recovery homes, colleges and highschools, alternative youth agencies, mental health facilities, prison reentry programs, and branch libraries. Each year, WWM publishes a literary journal, holds a public contributor reading, and promotes its writers online. To date, the organization has published 115 first-time authors and worked with more than 1000 men, women, and youth in its free workshops. "In Their Shoes" is the first documentary that the nonprofit has sponsored.

**Session Category:** Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Service Learning - Session provides an opportunity for students to support a community or organization, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None. Interest in creative writing and/or poetry would add appeal, but is not necessary. Film features drugs and mature content believed to be appropriate for high school audiences, but is Not Rated (NR).

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 50+ Students (Webinar)

**Primary Sponsor Name:** Cheryl Buchanan, J.D. (Executive Director, Writers Without Margins)

**Relation to IMSA:** Aunt of Current IMSA student, Cayleigh O'Hare Class 2022

**Primary Sponsor Email:** Cheryl@writerswithoutmargins.org

**Summary of Qualifications:** Cheryl Buchanan, Producer, is a co-founder of Writers Without Margins, Inc. a nonprofit whose mission is dedicated to the fusion of art and advocacy. Previously, she practiced law for over a decade, in the field of media law, and also worked on behalf of more than 500 survivors of childhood sexual abuse and trauma. She has taught in law schools and undergraduate institutions and currently facilitates creative writing groups in homeless shelters, community health centers, prison reentry, addiction recovery homes and alternative youth educational programs. Cheryl is the recipient of several awards in poetry and has also written content for television.

**Add'l Sponsor Name:** Cathleen P. O'Hare, Ph.D.

**Relation to IMSA:** Current IMSA Parent

**Add'l Sponsor Email:** cpb\_phd@yahoo.com

**Add'l Sponsor Summary of Qualifications:** Licensed Clinical Psychologist with 20 years experience working with twice exceptional teens and gifted students. Sensitivity to teens being subject to potential for alcohol and drug exposure, particularly stimulants such as Adderall which can be highly a

**Add'l Sponsor Name:** Cayleigh O'Hare

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Email:** cohare@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Cayleigh has been leading monthly mental health sessions this year under her IMSAported program, and this would suit her ongoing initiative by covering addictions and support programs. This documentary film showcases a recovery program that has otherwise.

## [32. How to Write a Pop Song](#)

**Schedule:** 60 minutes / Three Days

**Description:** Normally Dr. Dong runs an Intersession on music composition that barely fits in the normal fifteen hours allotted. Fortunately, generic pop music is very straightforward musically, and in a few hours Dr. Dong can give you enough basic direction to getting you writing your own pop songs. Popular acclaim, fame, and fortune not guaranteed.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** Students should have basic music reading skills and be able to play an instrument (including voice).

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 Students

**Primary Sponsor Name:** Peter Dong

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** pdong@imsa.edu

**Summary of Qualifications:** Bachelor's degree in music and many years spent writing songs for various occasions

## [33. Disease Detectives: A Brief Introduction to Epidemiology](#)



**Schedule:** 90 minutes / Three Days

**Description:** Due to the COVID-19 pandemic, epidemiology has gone from a niche field to a dinner conversation topic in less than a year. But there is so much more to epidemiology than COVID-19. How can we control the spread of antimicrobial resistance? Where did an outbreak of foodborne illness originate? How will changing climate influence the spread of vector-borne disease? All these questions and more are investigated by epidemiologists (AKA disease detectives). Epidemiology is the study of incidence, distribution, causes, and control of diseases. A highly interdisciplinary field, it combines biology, public health, medicine, statistics, and more. In this intersession, you will take a deep dive into epidemiology: explore the history of infectious diseases, discover what epidemiologists do, learn how to apply key statistical concepts, and more!

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 11-50 students

**Primary Sponsor Name:** Nikki Mastrud

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** nikki.mastrud.01@gmail.com

**Summary of Qualifications:** I graduated from the University of Arizona in 2019 with a Bachelor of Science in Microbiology, with a minor in Public Health. As an undergraduate, I took several epidemiology classes, including a graduate level course with active participation in foodborne illness investigation. Since May 2020 (through present), I have worked as a Communicable Disease Investigator on the COVID-19 response. I have experience teaching, including at the middle school and undergraduate level.

## [34. Breaking the Gender Barrier at 1000 Miles per Hour](#)

**Schedule:** 120 minutes / One Day

**Description:** Female Navy fighter pilot Alex Dietrich, an IMSA alumnus (class of '97) and Lieutenant Commander in the United States Navy, joins Dr. Dave DeVol (IMSA chemistry faculty) in leading a discussion on changing the stereotypical perception of female roles in society. Alex was featured in the PBS documentary "Carrier", and currently is a Permanent Military Instructor at the United States Naval Academy, teaching Leadership & Ethics. Alex and Dave hope to engage students in a discussion on the changing roles of females in society. We plan to watch clips of the documentary "Carrier", and also discuss the ideas behind "Lean In", providing students with practical tools to take with them. Students will hopefully gain a new perspective on this important topic.

**Session Category:** Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Dave DeVol

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** ddevol@imsa.edu

**Summary of Qualifications:** I have been a teacher for 28 years, 15 of those years at IMSA. I have therefore had much experience with students and their career goals, and their perceptions of what might be a barrier(s) to those goals.

**Add'l Sponsor Name:** Alex Dietrich

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** adietric@usna.edu

**Add'l Sponsor Summary of Qualifications:** Alex is a Lieutenant Commander in the United States Navy, and a female fighter pilot who flies off of aircraft carriers. She is an Instructor at the United States Naval Academy, teaching Leadership & Ethics. Alex is an IMSA alumnus (class of '97), and has been the featured speaker at IMSA's Veteran's Day assembly twice (2008, 2017).

## [35. History of the English Language](#)

**Schedule:** 90 minutes / Three Days

**Description:** Today's English is kind of a disaster. Its grammar has some crazy rules, and the spelling often doesn't make sense. But when you look at English as the result of complex historical processes, order emerges from the chaos. We'll study how English became the way it is and place it in the context of world languages. In our three sessions, we'll 1) discuss ways to classify languages and why English is considered part of the Indo-European family; 2) identify some of the rules that shaped the older Germanic languages and compare English with its closest relatives; and 3) explain some non-intuitive spellings based on how English has evolved from its earliest written form to the present day.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Bev Thurber

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** bat23@cornell.edu

**Summary of Qualifications:** I taught courses on the history of the English language and Old English when I was a professor of humanities and natural sciences at Shimer College (2009–2017). Although my PhD is in engineering, I did substantial coursework in Germanic linguistics during my graduate career. I received an MPhil in Anglo-Saxon, Norse and Celtic from Cambridge University in 2002 and spent three semesters studying at the University of Heidelberg in Germany. My work there included courses in medieval German and Dutch.

My publications include a paper on Early Middle English function words (*Journal of Germanic Linguistics* 23 (1): 65–81) and reviews of eight books on Germanic linguistics. My interest in historical linguistics connects with my interest in early ice skating and informs my recent book *Skates Made of Bone: A History* (McFarland, 2020).

## [36. Improvisational Cooking](#)

**Schedule:** 120 minutes / Three Days

**Description:** Cooking can seem daunting to those unfamiliar with it, a scary world of imposing tools, unfamiliar ingredients, specialized techniques, and confusing recipes. Anyone can learn to make their food taste better, though, and in this intersession we'll take advantage of our socially distanced kitchens to explore some basics and cook our way to lunch together. Using lessons from a recent wave of cookbooks focused on ideas more than recipes, we'll try to conceive of cooking less as a constrained procedure than as a freeing way of thinking. Whether you're interested in making your ramen or macaroni more interesting with some sautéed or roasted vegetables, adding a new ingredient or technique to your toolbox, building the confidence to explore new dishes, sharing your cooking and cultural knowledge with others, or just feeling less hopeless in the kitchen, we encourage you to join us.

**Session Category:** Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Eric Rettberg & Nadia Pierrehumbert

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** erettberg@imsa.edu / npierrehumbert@imsa.edu

**Summary of Qualifications:** Extensive amateur home cooking knowledge, extensive amateur engagement with food writing, significant teaching experience

**Add'l Sponsor Name:** Gerald Paramo

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Email:** gparamo@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Cooking Club founder/president. Amateur home (and residence hall) cooking experience.

## [37. A Brief History of Epidemics](#)

**Schedule:** 60 minutes / Three Days

**Description:** This course briefly explores the history of epidemics, responses to them, and their influence on history. Centered on discussing historical readings about epidemics, it will trace the development of the idea of epidemics from its introduction in the Western medical tradition to its use in the United States today, with a focus on US history. The course is focused on exploring three questions from a historical perspective: "What is an epidemic?"; "How should we treat epidemics?"; and "Do epidemics have politics?"

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Sean Morey Smith

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** smith318@gmail.com

**Summary of Qualifications:** I hold a PhD in History, and the history of medicine is one of my main teaching and research fields. I taught a semester-length version of this course at Rice University in Summer 2020.

## 38. SARS-COV2 Pathogenesis

**Schedule:** 90 minutes / Three Days

**Description:** Has the pandemic peaked your interest in infection biology? If so, come to this intersession to learn more about the biology of SARS-COV2, diagnostic tests, and vaccines. In this intersession we will review some of the cutting edge science being done to protect our public health.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Crystal Randall

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** crandall@imsa.edu

**Summary of Qualifications:** I have a PhD in microbiology with a specialization in virology. I am a member of the American Society for Virology and American Society of Microbiology.

**Add'l Sponsor Name:** Sarah O'Leary-Driscoll

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** soleary@imsa.edu

## 39. An Hour of Fitness

**Schedule:** 60 minutes / Three Days

**Description:** Are you sick of sitting? Did you have a long but inactive break? Well come with yourself and some space to burn off some of those holiday cookies and treats, and start the new year right. You will just need athletic gear, space, and yourself. You can use equipment, but you are the only equipment needed.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** David Lundgren

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** dlundgren@imsa.edu

**Summary of Qualifications:** Wellness Faculty, ACE certified Personal Trainer, Current Group Fitness Instructor at Orangetheory Fitness in South Naperville

## [41. Difficult Conversations and Changing Power Dynamics: Where Do You Begin?](#)

**Schedule:** 60 minutes / Two Days

**Description:** In the workplace, difficult conversations are an almost daily occurrence and shifting power dynamics only make these conversations harder. Whether you are in the medical field speaking with a patient, in the legal field speaking to a partner, or in human resources speaking with an employee, it is natural to feel nervous when initiating or receiving a difficult conversation. In this session, Tyler Shah, paralegal with The Simon Law Firm, P.C. and IMSA Class of 2016, with guest speaker Amy Gunn, attorney with The Simon Law Firm, P.C., will explain the different power dynamics within the workplace, how to navigate these, and how to appropriately handle and guide difficult conversations to ensure all parties have a beneficial outcome.

**Session Category:** Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Tyler Shah

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** tshah@simonlawpc.com

**Summary of Qualifications:** Four years as a paralegal focusing in complex civil litigation with direct contact with clients, attorneys, judges, and experts in a professional setting.

## [42. Building the Dream: Tips for Starting a Business](#)

**Schedule:** 60 minutes / One Day

**Description:** Learn about how to discover resources to start a nonprofit or for-profit business with Kim Vrooman, Founder of Tapestry of Community Offerings 501(c)(3) and Westerfield Cottage LLC.

**Session Category:** Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** There will be a "pre" homework assignment to complete before the session.

**Student Resources Required:** None

**Sponsor Resources Required:** Nonene

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Kim Vrooman

**Relation to IMSA:** Current IMSA Parent

**Primary Sponsor Email:** kimvrooman@gmail.com

**Summary of Qualifications:** Founder of nonprofit and for-profit businesses

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [43. Join us for YoGo \(Yoga on the Go\)](#)

**Schedule:** 60 minutes / Three Days

**Description:** This session is meant to enhance student social/emotional skills and give them a way to de-stress for their mental health. At the end of this session, students will be able to do yoga for stress relief and increase their mindfulness.

**Session Category:** Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** Nonene

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Sowmya Anjur

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** sanjur@imsa.edu

**Summary of Qualifications:** I have done yoga and together with Mary, have taught yoga in our classes.

**Add'l Sponsor Name:** Mary Myers

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** mmyers@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Mary teaches Movement and Relaxation and Yoga and has been doing so for many years, she is certified in it as well

#### [44. Two Minute Trailers \(Creating Quality Media from a Distance\)](#)

**Schedule:** 120 minutes / Three Days

**Description:** Participants will embark on a 3 day learning experience that will teach us how to utilize the tools that we have readily available at our homes to produce quality media. Participants will learn how to take better pictures and video using our phone cameras. Participants will also learn how to select spaces to get better audio and lighting results. Learning will culminate in participants collaborating in groups to make 2-minute video trailers with supporting visuals.

**Session Category:** Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Bill McGrail

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** wmcgl@imsa.edu

**Summary of Qualifications:** IMSA ITMC Producer/Media Director with over 20 years experience in digital media production



**Add'l Sponsor Name:** Kevin Broy

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** kbroy@imsa.edu

**Add'l Sponsor Summary of Qualifications:** IMSA ITMC Associate, IMSA Student Productions Advisor, Media Wizard

**Add'l Sponsor Name:** Current IMSA Student Productions (ISP) students that need to be enrolled in this session & help facilitate it: Eugene Lim, Jessica Lyseng, Monica Narciso, Damien Santiago & Gabriella Velazquez

## [45. Biological Oceanography and the Global Carbon Cycle](#)

**Schedule:** 120 minutes / Three Days

**Description:** Algae in the surface ocean are responsible for 50% of global photosynthesis, but because they have short life spans most of the carbon dioxide that they consume will be released back into the surface ocean where it can re-enter the atmosphere. Long-term carbon dioxide sequestration requires transport of sinking carbon into the deep ocean through the biological carbon pump. The biological carbon pump transports as much carbon into the deep ocean as human's are producing every year by burning fossil fuels. During this session we will learn about the diverse and fascinating organisms that drive this natural feedback on the global carbon cycle. Morning sessions will focus on interactive lectures about marine ecology and biogeochemistry. Afternoon sessions will involve group projects working with oceanographic data to gain hands-on insight into oceanographic data, and to try to understand how the ocean's ability to absorb carbon dioxide will respond to climate change.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Michael Stukel

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** mstukel@fsu.edu

**Summary of Qualifications:** I am a tenured oceanography professor at Florida State University, where I teach biological oceanography, plankton ecology, environmental science, and biogeochemical modeling. I advise 5 Ph.D. students and have an active research program in marine ecology and biogeochemistry. I

have spent over a year at sea from the Southern Ocean to the tropical Pacific and spent half of a year living in Antarctica. I have published over 50 peer-reviewed manuscripts in the field.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [46. Problem Solving Through Puzzles](#)

**Schedule:** 90 minutes / Three Days

**Description:** Do you like trying to make sense of apparent complete gibberish: "read per sat range sails bet hone"? If so, this intersession is for you! We will spend our time solving puzzles. A puzzle can be anything from incomprehensible-looking text to a crossword to a logic puzzle such as a Sudoku to a crossword that is also a logic puzzle. Along the way, we will learn some problem solving techniques and see what puzzles can teach us about effective communication.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Daniel Gulotta

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** dgulotta@alum.mit.edu

**Summary of Qualifications:** I have been solving puzzle hunts regularly since 2002. I wrote and edited puzzles for Princeton's The Game 2011 and MIT Mystery Hunt 2013, and I am a member of the writing team for Canada/USA Mathcamp Puzzle Hunt 2021.

**Add'l Sponsor Name:** Jessica Lyseng

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Summary of Qualifications:**

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Summary of Qualifications:**

## [47. Exploring the COVID-19 Biology of Interaction](#)

**Schedule:** 90 minutes / Three Days

**Description:** The Sars-Cov-2 virus interacts through specific proteins with host cells. Through a series of case studies, students will learn about viral infection, treatments and work with bioinformatics tools to view protein-protein interactions that are important for infection with this virus. Students will also discuss ethical considerations regarding to viral treatment and prevention.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Keith A. Johnson

**Relation to IMSA:** Current IMSA Parent

**Primary Sponsor Email:** kajohnso@bradley.edu

**Summary of Qualifications:** I am a Biology faculty member at Bradley University in Peoria, Illinois. I have taught freshman biology and upper level genetics as well as a bioethics course while being at Bradley (over 18 years). I developed this case study in the spring and added to it in the fall of 2020. This has been used in several of my courses as well as having been used in several other colleges by colleagues.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 48. Shinrin-Yoku: “Forest-Bathing” in Your Local Area

**Schedule:** 90 minutes / Two Days

**Description:** Shinrin-Yoku is a term that emerged in Japan in the 1980s as an outdoor physiological and psychological exercise. Translated as “taking in the forest atmosphere” or “forest-bathing,” it is the practice of spending time immersed in nature for one’s physical and mental well-being. During the first scheduled session we will talk about how to participate in forest-bathing, where it can be done, and the science behind the physical and mental benefits it can provide. A handout will be distributed with suggestions to help guide the student into spending mindful, intentional time in nature. Then students will go on their own time outside to an area near them to engage in a session of forest-bathing. During the second scheduled session we will share and discuss our experiences. We will also discuss how the concept of “Thinking Globally, Acting Locally” pertains to public open space and people’s exposure to the natural world.

**Session Category:** Service Learning - Session provides an opportunity for students to support a community or organization, Socioemotional - Session supports student social and emotional well-being, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** John Nelson

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** jenelson@lcfpd.org

**Summary of Qualifications:** IMSA Alumnus, Class of 1994

B.S. Civil Engineering

B.S. Life Sciences

Fourteen years of experience working for the Lake County Forest Preserve District, currently working as Director of Operations and Infrastructure.

Boy Scouts of America - Eagle Scout; Current Cub Scout Den Leader

**Add'l Sponsor Name:** Rebecca Hegner

**Relation to IMSA:** Alumni IMSA Parent

**Add'l Sponsor Email:** rhegner@lcfpd.org

**Add'l Sponsor Summary of Qualifications:** IMSA Parent, Class of 2008 Alumna

B.A. Environmental Studies

Fourteen years of experience working for the Lake County Forest Preserve District varying positions all focusing on the protection of open space.

**Add'l Sponsor Name:** Monica Narciso

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [49. Using Text Analytics to Interpret and Compare Historical Documents](#)

**Schedule:** 120 minutes / Three Days

**Description:** Were Lincoln's speeches focused on different topics at the beginning of the American Civil War versus the end? How were MLK, Malcom X, and other civil rights leaders' speeches similar in themes? When did the female right to vote topic enter into mainstream documents? By exploring and using various text analytic techniques, including Natural Language Processing (NLP), sentiment analyses, and machine learning, this intersession will evaluate, interpret and rethink historical documents. The participants will select their own topics and documents to analyze and present findings in an interactive lab setting.

Day one will introduce text analytics topics and approaches and access text analytics software for use throughout the session.

Day two will be an interactive lab where example documents are evaluated and participants asked to select and begin evaluating documents for day 3 exploration.

Day three be an interactive lab where the participants will evaluate their selected documents and present their findings.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None are required, but basic mathematical or statistical concept knowledge may be beneficial. The topics will be explored from an introductory perspective, but provide the students an opportunity to use more advanced techniques if so desired.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** John VanderPloeg

**Relation to IMSA:** Alumni IMSA Parent

**Primary Sponsor Email:** vanderp@comcast.net

**Summary of Qualifications:** John VanderPloeg has over 28 years of professional experience in data science and analytics, including 20 years at Leo Burnett, where he was EVP, managing director of a data science team. In addition, he is very active in the American Statistical Association (20 year board member of the local chapter and past president) and the Digital Analytics Association. He has used NLP and other advanced text analytics approaches in his job function for a number of years and managed or help manage conferences on the topics including a recent ASA conference on recent advances in NLP.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [50. Game Theory: A Fun Introduction](#)

**Schedule:** 90 minutes / Two Days

**Description:** Game Theory is an approach to the study of strategic interaction that relies on the language of mathematics to help us be more precise in our discussions about the inherently chaotic social world around us. From international politics to economics, college applications to "what's for dinner", we all are game theorists. This will be a fun introduction to the topic.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Patrick Kearney

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** pkearney@imsa.edu

**Summary of Qualifications:** Graduate training and significant experience teaching game theory at the high school and University level.

## 52. TALENT Intersession

**Schedule:** 120 minutes / Three Days

**Description:** The TALENT Intersession teaches students the fundamental concepts of entrepreneurship, focusing on the Lean Startup Methodology. This includes: ideation, market research, pitching, and much more. Modules are taught through a mixture of lecture and activity-based learning; this interactive approach to learning both engages students, encourages deeper analysis and active virtual participation.

The methodology, used by entrepreneurs worldwide, is taught by current TALENT members, and equip students with the necessary mindset and skills to develop their own startup ideas. The TALENT Program is excited to continue our annual intersession educating students in entrepreneurship.

**Session Category:** Professional Development - Session provides explicit career-focused insights and applications, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** No. The TALENT Intersession teaches students regardless of their past experience.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Steve Goldblatt

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** sgoldblatt@imsa.edu

**Summary of Qualifications:** Entrepreneurship Program Manager

**Add'l Sponsor Name:** Abhi Vinnakota

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Email:** avinnakota@imsa.edu

**Add'l Sponsor Summary of Qualifications:** As co-senior curriculum leader of TALENT, Abhi Vinnakota co-leads the TALENT Curriculum Team, writes and revises original curriculum, and teaches students. In addition to his teaching experience on TALENT, Abhi is a LEAD (Leadership Education and Development) Facilitator.

**Add'l Sponsor Name:** Gabriella Velazquez

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Email:** jgao@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Jonathan Gao is co-senior curriculum leader of TALENT. He has much experience with teaching and management, including single-handedly developing and teaching Adobe Photoshop and co-organizing the completely student-led, 100+ participant Lunar New Year Cultural Show.

## [53. Psychology of Early Adversity & Trauma](#)

**Schedule:** 90 minutes / Three Days

**Description:** Students will learn about psychological processes impacted by early adversity, as well as risk and protective factors that may buffer against negative developmental outcomes for young children experiencing early adversity. Key topics to include physiological effects of trauma/stress reactivity, parenting and the intergenerational transmission of maltreatment, and research approaches/study design in the field of developmental psychopathology. The last day will also include time for a Q&A about careers in psychology more generally.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Hannah Swerbenski

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** hswerben@ur.rochester.edu

**Summary of Qualifications:** I am currently pursuing my PhD in Developmental Psychology at the University of Rochester, with a specialization in developmental psychopathology. I have published on this topic and also previously worked as a Research Coordinator on a study of Early Childhood Trauma at Tulane University.

**Add'l Sponsor Name:**



**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [54. Stay sharp like Buffet and Gates. Learn Bridge!](#)

**Schedule:** 90 minutes / Three Days

**Description:** Learn the game that Bill Gates and Warren Buffet have been playing together for decades, even while at home during this pandemic! All you need is a (virtual) deck of cards and group of four. Bridge is a partnership game, so it's great for making connections and building your own unique strategies.

Playing bridge is immensely stimulating intellectually. With each hand of this card game, you're strengthening your memory and strategy skills. Whether you're looking for competition or just something more relaxed, this game is a great option.

Fire up your future game nights by throwing bridge into the mix. You can be sure that something interesting will happen every time that you play.

**Session Category:** Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Sanjay Vimawala

**Relation to IMSA:** Alumni IMSA Parent

**Primary Sponsor Email:** svimawala@yahoo.com

**Summary of Qualifications:** Part of a bridge group that meets regularly in Oakbrook. Have been playing for several years both through this group, and also online.

**Add'l Sponsor Name:** Alisha Vimawala

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** alisha.vimawala@gmail.com

**Add'l Sponsor Summary of Qualifications:** Learned the game from my Dad!

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [55. Building the Impossible: Reading Particle Accelerator Manufacturing Drawings](#)

**Schedule:** 60 minutes / Two Days

**Description:** Manufacturing drawings (or "prints") are the primary method in industry for communicating production requirements. Interpreting a designer's intent and specifications requires methodical attention and a keen eye. Designing and creating advanced manufacturing prints is an artform in itself.

In the particle accelerator industry, precision is measured in microns and fractions of an angle. Understanding the tolerances that a project requires can mean the difference between a process that is straight-forward and one that is nearly impossible.

During the first day of this Intersession we'll cover the basic symbols and information found on manufacturing drawings, then review some simple drawings. On the second day we'll take a look at some advanced prints and discuss how the requirements affect manufacturability.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** No, but knowledge of a CAD/CAM system is a plus

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 50+ Students (Webinar)

**Primary Sponsor Name:** Sam Kaufman

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** samkaufman01@gmail.com

**Summary of Qualifications:** I work as an engineer at Meyer Tool and Mfg. in Oak Lawn, IL. Our specialty is designing and manufacturing pressure, vacuum and cryogenic systems for particle accelerators.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

[56. A million is not what it used to be!](#)

**Schedule:** 90 minutes / Two Days

**Description:** A million dollars is not what it used to be - but it's better than not having it!. Accumulating wealth is not just about earning a high income. It's more about HOW you manage what you earn, the "miracle of compounding" with savings, and the role that debt plays in helping achieve (or destroy!) your wealth. You'll learn basic financial concepts around spending, saving and planning for near and longer term financial goals. We discuss the stock market - bonds, stocks, mutual funds, etc. We introduce retirement account savings. We apply practical ways to spend and save money now, in college and beyond. We establish financial goals and examine ways to approach achieving them. You will form a deeper relationship with money by employing tools and methods learned here.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications, Socioemotional - Session supports student social and emotional well-being.

**Prerequisite(s):** Interest in learning how to attain and maintain financial health for life.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Darlene K Steffen, CPA/PFS, CFP

**Relation to IMSA:** Alumni IMSA Parent

**Primary Sponsor Email:** Dsteffen@lifeplanningsolutions.net

**Summary of Qualifications:** I am a financial planner, advisor and consultant owning a financial consulting practice Life Planning Solutions, since 2008 helping people from ages 20 something to over 80 years old on financial matters from budget management to investing, and financial and estate planning. This is a second career following a 30 year corporate career as a Finance head in a 2000 employee division of a major manufacturer. By helping clients early and later in life raise their financial acumen and adopt common sense practices to managing their money, I have seen their lives and relationships with money (and people) enriched.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 57. FIRST Tech Challenge

**Schedule:** 120 minutes / Three Days

**Description:** FIRST Tech Challenge (FTC) is an annual international competition where students apply STEM principles by building and programming a robot. IMSA's FTC team, TITANS 17576, partners with mentors to design, build, and program a robot for the competition. Intersession week is during the middle of the season, and the team is well on their way in designing and refining the robot. In the intersession, students will strategically analyze the competition to distill optimal design concepts. Utilizing these concepts, they will collaboratively design, draft, and prototype a robot to solve the season challenge. The work will be done virtually by using Computer Aided Design (CAD) and programming using Android Studio. In order to participate in the intersession, you must be a part of TITANS 17576.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** Students must be a member of the TITANS FTC team 17576 in order to enroll in this session.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Grant Bell

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** gbell@imsa.edu

**Summary of Qualifications:** Is a coach of FTC TITANS 17576

**Add'l Sponsor Name:** David Mahler

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** maherman95@gmail.com

**Add'l Sponsor Summary of Qualifications:** David Mahler is a coach of the FTC TITANS 17576

**Add'l Sponsor Name:** Edward Zhang

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Email:** ezhang@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Edward Zhang is a mechanical lead and throughout this season has led the team's mechanical design and engineering on the mechanical team. He will be able to facilitate and lead the students.

## 58. Dialoguing Anxiety: A Space for Conversation

**Schedule:** 90 minutes / Three Days

**Description:** This is a space for open, honest, and healing conversation about living with anxiety. A lot of us suffer from it in various forms; but in my time at IMSA, I barely knew what it was, or that it was such an ever-present part of my life. Since then, I have taken enormous strides in learning about and overcoming its crippling effects, whether they be social, school/work-related, or in relationships. I want to hold this space to offer IMSA students what I wish I had when I was in your shoes: a chance to realize I wasn't alone. Disclaimer: I am not a licensed mental health professional. This is not intended to be a therapy replacement. I simply foresee a (virtual) space where students come together, snacks in hand, and just...talk...learning the value of withholding judgement in an often high-strung environment. And I can chip in with my own experiences and insights into philosophy, psychology, sociology, meditation, and more.

**Session Category:** Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** No prerequisites, only a willingness to take the conversation with their peers seriously.

**Student Resources Required:** None

**Sponsor Resources Required:** It might be useful for a licensed IMSA counselor to know that this is happening, and maybe be ready for students to reach out to them. I foresee some emotionally heavy conversations taking place, as we discuss aspects of mental health that often go neglected

**Cost:** None

**Class Size:** 15-25 students

**Primary Sponsor Name:** Yugan Sakthi

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** yugansakthi@gmail.com

**Summary of Qualifications:** My primary qualification is that anxiety is something I have lived in serious ways, and through years of therapy, study, and self-growth, is something I have overcome in meaningful ways. More broadly, my B.A. thesis in Philosophy deals in part with the sociology and the lived experience of mental health, and it gives me a wide array of knowledge to draw from. Finally, I have been trained as a Sustained Dialogue moderator (<https://sustaineddialogue.org/>) and thus have specific qualifications to run dialogue sessions.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 60. Atomic-Scale Simulations

**Schedule:** 90 minutes / Three Days

**Description:** Simulating the behavior of individual atoms and electrons within molecules, materials, and other systems has enabled advancements across a variety of scientific and engineering disciplines. Such atomic-scale simulations are effectively microscopic experiments performed on a computer, bypassing laboratory challenges and providing detailed insight into physical and chemical processes. This Intersession will give students a taste of this exciting research area through an introductory overview of simulation techniques and hands-on projects involving molecular dynamics. Students will learn about the basic principles, capabilities, and limitations of atomic-scale simulations and work in small groups to apply this knowledge. In the first project, students will code a simple simulation of a noble gas in Python. Then, each group will use a professional simulation package to tackle a real-life problem. Finally, students will share their projects with each other and achieve a broad perspective on the applications of atomic-scale simulations.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Socioemotional - Session supports student social and emotional well-being, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** Students should have taken SI Physics and CSI or have similar experience.

**Student Resources Required:** None

**Sponsor Resources Required:** No, the sponsors/facilitators will not need any resources.

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Alina Kononov

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** kononov2@illinois.edu

**Summary of Qualifications:** The primary sponsor has a PhD in physics and is an active researcher in computational physics. She routinely performs, develops, and analyzes atomic-scale simulations for her work, and she has taught and mentored undergraduate students in this subject area.

**Add'l Sponsor Name:** Alexander Romanov

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** romanov3@illinois.edu

**Add'l Sponsor Summary of Qualifications:** The additional sponsor is an undergraduate physics major with the scientific knowledge and programming experience necessary to assist with the session.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [61. Supercharge Your Mind](#)

**Schedule:** 60 minutes / Three Days

**Description:** How often do you open your laptop and forget what you were going to do? This happens more often than not, since the average human attention span is now shorter than a goldfish's. Mindfulness is the state of being aware of what you're sensing and feeling in the present, and it encompasses a variety of areas, including attention, presence, and mental health. In our sessions, we will cover the origins of mindfulness, socioemotional and cultural implications, and how you can apply mindfulness techniques to your own life to be more aware, focused, and productive. We will accomplish this through discussions, guided practice, and reflection during the intersession. As alumni, we now see the advantages of practicing mindfulness, and we hope to share our insights with you to carry during this intersession and beyond.

**Session Category:** Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 26-50 students

**Primary Sponsor Name:** Vadini Agrawal

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** vadini@gatech.edu

**Summary of Qualifications:** I have been very interested in the mindfulness space for a while now. I personally have been practicing meditation and related behaviors for a few years now, and I spend a lot of time learning about the attention economy and how current technologies have affected our mental health as a society. I am really passionate about helping other people take back control of their mental space, and I believe that IMSA students especially could benefit from this information. I've also spent a

lot of time presenting as part of professional organizations on campus and would be able to facilitate discussion and present information effectively.

**Add'l Sponsor Name:** Nitya Talasila

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** ntalasila@gatech.edu

**Add'l Sponsor Summary of Qualifications:** Throughout my years after graduating IMSA, I've learned the importance of being mindful and aware of my own mental health. I am constantly curious about how mental health and related practices affect our daily lives and relationships, and I would love to facilitate this session. Everyday, I make it a point to be aware and practice several mindfulness exercises to improve my attentiveness and energy. Especially in a unique environment like IMSA, I believe students could benefit from the insights I've gained during my years in college. Professionally, I have practiced my presentation and teaching skills throughout college holding leadership positions in several project groups. With these experiences I believe I can teach this intersession with my co-facilitators successfully!

**Add'l Sponsor Name:** Deepshika Sudhakar

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** dsudha2@uic.edu

**Add'l Sponsor Summary of Qualifications:** I am passionate about empowering young students to make healthy decisions, especially regarding their mental health. I believe that mindfulness is a useful skill that all students can learn to improve attention, focus, productivity, and overall well being. As an undergraduate researcher in neuroscience and cognitive behavior, I hope to provide a neurological and socioemotional understanding of mindfulness such that students can learn the science, history, and skills of mindfulness. I also have three years of experience teaching Chicago Public High School students health-related topics, including health education, mental wellbeing, and health advocacy. I hope to use these experiences to conduct engaging workshops surrounding mindfulness for current IMSA students, alongside my wonderful co-facilitators!

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [62. Game Playing Artificial Intelligences](#)

**Schedule:** 120 minutes / Three Days

**Description:** Artificial Intelligence (AI) has been an area of fast and exciting developments and games have been one of the ways these rapidly advancing tools have been tested. From Chess to Go to StarCraft, games have been used to see if our current AI tools can perform certain types of tasks. In this intersession, students will learn about AI, a bit about its history with games, and an overview of some tools used to build AI. Students will then use these tools to develop algorithms to compete against each other in a simple game.



**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** Completed CSI or familiarity with python

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Albert Lu

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** aylu@andrew.cmu.edu

**Summary of Qualifications:** I am currently a CS major at Carnegie Mellon University pursuing a concentration in Machine Learning. Last summer I was an AI Intern at TalkMeUp developing voice models.

**Add'l Sponsor Name:** Dr. Peter Dong

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** pdong@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Teaches computational science as well as several previous amazing CS intersessions.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 63. Vets, Pets, and Modern Medicine

**Schedule:** 120 minutes / Three Days

**Description:** Did you know that veterinary medicine is more than just puppies and kittens? It's also food animal medicine, equine practice, zoo medicine, public health, research, and wildlife conservation. In this course we will explore careers in veterinary medicine, practice the small animal physical exam, delve into veterinary medical ethics, and practice your diagnostic radiology skills.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 12-15 students

**Primary Sponsor Name:** Dr. Tamara McArdle

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** gossman@gmail.com

**Summary of Qualifications:** I am a practicing veterinarian, board certified in canine & feline practice by the American Board of Veterinary Practitioners

**Add'l Sponsor Name:** Dr. Teresa Lehnhardt

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** teresalehnhardt@yahoo.com

**Add'l Sponsor Summary of Qualifications:** Dr. Lehnhardt is a practicing veterinarian and an emergency clinician at North Carolina State University

**Add'l Sponsor Name:** Dr. Jessica Amacher

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** jamacher@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Dr. Amacher is a member of IMSA's science faculty.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 64. COVID-19 from a Public Health Perspective

**Schedule:** 120 minutes / Three Days

**Description:** This class will dive into the Public Health perspective on COVID-19. Public Health is a broad discipline that encompasses epidemiology, biostatistics, environmental sciences and engineering, health behavior, health policy and management, maternal and child health, nutrition, and leadership. COVID-19 has shone a harsh light on our society: it has exposed the long-standing inequalities in our society, exemplified by the differential mortality rates we see for African Americans; it has shown the unpreparedness of institutions such as the CDC to provide leadership around the best preventative policies; and our failure as a country to unite around a mask policy. This course will examine COVID-19 through these lenses: equity, epidemiology, leadership, and community. We will draw on students' diverse perspective and utilize the framework public health provides to better understand this pandemic.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** Ideally IMSA-provided Zoom room (or something comparable). However I do have one I can utilize if needed.

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Samuel Elliot Krause (call me Elliot)

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** Elliot.krause6@gmail.com

**Summary of Qualifications:** Graduate student at the Gillings School of Public Health (<https://sph.unc.edu>) (#2 school of public health in the country). For my undergraduate studies I studied Biomedical Engineering and Political Science, two fields of study adjacent to public health. I've been working at the North Carolina Department of Health and Human Services for 8 months. Much of the content I will be teaching on will be drawn from introductory public health courses.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 65. Two Joes Build a Space Colony

**Schedule:** 90 minutes / Three Days

**Description:** You and your team are heading to space! You and your classmates will work in groups to establish a human settlement on Mars, Venus or another plausible location for human colonization in space. You will grapple with the issues that make space colonization so hostile to human life. You will imagine what your settlement and the daily life of its inhabitants would look like given the environmental conditions imposed by your location. Along the way, you will invent new technologies, ensure the mental and social well-being of your colonists, and propose solutions to the physical dangers for human life such as radiation exposure and extreme temperature. You will also determine how to provide the material needs required to support a human civilization at your distant locale. Don't let Elon Musk be the only one on Mars! Join two Joes as we head for the stars!

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Professional Development - Session provides explicit career-focused insights and applications, Socioemotional - Session supports student social and emotional well-being, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs

**Prerequisite(s):** Common knowledge about life off planet Earth; imagination; some interest in space exploration.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 26-50 students

**Primary Sponsor Name:** Joseph Marshall

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** jmarshall@imsa.edu

**Summary of Qualifications:** World Language Faculty, Science Fiction, Cultural Diversity

**Add'l Sponsor Name:** Joe Golab

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** jgolab@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Ph.D. Chemist, 25 years in the petrochemical industry, 15 years teaching chemistry.

## 66. Beyond the Bomb: The Peaceful Nuclear World

**Schedule:** 60 minutes / One Day

**Description:** What do you first think of when you hear the word 'nuclear?' Perhaps nuclear weapons, nuclear power, radiation, or even Chernobyl? While these are all important topics in their own rights, they merely represent the tip of the nuclear science iceberg. Have you heard of radiation-powered satellites, the Ford Nucleon, or nuclear-powered airplanes? Have you ever thought about how the world deals with nuclear waste? In this virtual lecture, we'll discuss a wide range of nuclear-related subjects, possibly including the operation of nuclear reactors, the chemistry of nuclear waste, the simulation of complex nuclear systems, and some of the craziest nuclear engineering projects.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** Students need to

have completed SI: Chemistry and SI:

Physics

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 50+ Students (Webinar)

**Primary Sponsor Name:** Ian Wilkinson

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** imwilkinson@mymail.mines.edu

**Summary of Qualifications:** Ian is a 3rd year nuclear engineering PhD student at the Colorado School of Mines (CSM). He holds a BS in chemistry and math from the College of William & Mary.

**Add'l Sponsor Name:** Jessica Jackson

**Relation to IMSA:**

**Add'l Sponsor Email:** jagjackson@mines.edu

**Add'l Sponsor Summary of Qualifications:** Dr. Jackson is a research assistant professor in the chemistry department at CSM, specializing in radiochemistry. She holds a PhD and a BS in chemistry from Washington State University.

**Add'l Sponsor Name:** Aaron Unger

**Relation to IMSA:**

**Add'l Sponsor Email:** aunger@mymail.mines.edu

**Add'l Sponsor Summary of Qualifications:** Aaron is a 3rd year nuclear engineering PhD student at CSM. He holds a BS in materials science from the University of Nevada - Reno.

**Add'l Sponsor Name:** Jacob Tellez

**Relation to IMSA:** Alumni

**Add'l Sponsor Email:** (jtellez@mymail.mines.edu)

**Add'l Sponsor Summary of Qualifications:** 2nd year nuclear engineering PhD student, holds a BS in nuclear engineering from UIUC

**Add'l Sponsor Name:** Nicole Hege

**Relation to IMSA:** Alumni

**Add'l Sponsor Email:** nicolehege@mymail.mines.edu

**Add'l Sponsor Summary of Qualifications:** 2nd year chemistry PhD student, holds a BS in chemistry from Eastern University

## 67. Continued Fractions

**Schedule:** 60 minutes / Three Days

**Description:** You might remember ordinary fractions with their numerators, denominators, and the strange addition rule which says that given any two fractions  $a/b$  and  $c/d$ , their sum is the fraction  $(ad + bc) / (bd)$ , where  $a, b, c, d$  are all integers (the counting numbers along with their negatives). Since the only operations involved in this rule are addition, multiplication, and division (the rational operations), any fraction can be thought of as a finite sequence of some combination of rational operations on integers. Unfortunately, we know that not all numbers can be expressed this way, and we cleverly call those outliers the Irrationals. However, if we extend our imagination and consider infinite (instead of finite) sequences of rational operations on integers in a particular way, it is possible to represent irrationals this way. Continued fractions are such an extension. Explore their rich and amusing properties in this brief (and hopefully entertaining) introduction!

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** Familiarity with calculus would be helpful, but all that's strictly needed is experience doing arithmetic.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Shiladitya Bhattacharyya

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** shilb10@gmail.com

**Summary of Qualifications:** I have a bachelor's degree in math and my job requires frequent mathematical research. Moreover, I found the theory of continued fractions to be exciting and unique, and felt inspired to share its discussion with others who might feel the same.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 68. Fingerprinting Fission: Nuclear Forensics & Its Applications

**Schedule:** 60 minutes / Two Days

**Description:** Have you ever wondered how we remotely identify an underground nuclear weapons test? Welcome to the world of nuclear forensics. The first day of this session will provide students with a deeper look at several important topics in nuclear science, building up to a discussion of nuclear forensics – the investigative process of identifying and sourcing nuclear material or debris [this lecture may include a brief discussion of nuclear reactors, depending on whether the reactor tour is possible]. The second day will involve either a live virtual tour of an operating nuclear reactor or a series of live virtual radiochemistry demonstrations and a tour of a university radiochemistry laboratory. [It is unclear at the time of submission whether the reactor tour is feasible during the dates of Intersession. The radiochemistry demonstrations and lab tour have been confirmed as feasible.]

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** Students need to have completed SI: Chemistry, SI: Physics, and Modern Physics

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Ian Wilkinson

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** imwilkinson@mymail.mines.edu

**Summary of Qualifications:** Ian is a 3rd year nuclear engineering PhD student at the Colorado School of Mines (CSM). He holds a BS in chemistry and math from the College of William & Mary.

**Add'l Sponsor Name:** Jessica Jackson

**Relation to IMSA:**

**Add'l Sponsor Email:** jagjackson@mines.edu

**Add'l Sponsor Summary of Qualifications:** Dr. Jackson is a research assistant professor in the chemistry department at CSM, specializing in radiochemistry. She holds a PhD and a BS in chemistry from Washington State University.



**Add'l Sponsor Name:** Aaron Unger

**Relation to IMSA:**

**Add'l Sponsor Email:** aunger@mymail.mines.edu

**Add'l Sponsor Summary of Qualifications:** Aaron is a 3rd year nuclear engineering PhD student at CSM. He holds a BS in materials science from the University of Nevada - Reno.

**Add'l Sponsor Name:** Jacob Tellez

**Relation to IMSA:** Alumni

**Add'l Sponsor Email:** (jtellez@mymail.mines.edu

**Add'l Sponsor Summary of Qualifications:** 2nd year nuclear engineering PhD student, holds a BS in nuclear engineering from UIUC

**Add'l Sponsor Name:** Nicole Hege

**Relation to IMSA:** Alumni

**Add'l Sponsor Email:** nicolehege@mymail.mines.edu

**Add'l Sponsor Summary of Qualifications:** 2nd year chemistry PhD student, holds a BS in chemistry from Eastern University

## 69. Introduction to Neural Networks with Python led by Epoch

**Schedule:** 90 minutes / Three Days

**Description:** This intersession will give students a beginner-friendly introduction to what neural networks are, how they work, and how to use them in practical projects. We will use the MNIST database of handwritten digits to show how different kinds of neural network architectures can be implemented to solve a problem. Each day, we will go over a different set of techniques and how they can be used. Students will leave with a better understanding of the theory behind neural networks and their implementation, and with a starting point for using neural networks on their own.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** Have either completed Computer Science Inquiry or an equivalent, or have an interest in learning about neural networks and machine learning.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 50+ Students (Webinar)

**Primary Sponsor Name:** Anthony Stuckey

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** astuckey@imsa.edu

**Summary of Qualifications:** Current computer science teacher at IMSA.

**Add'l Sponsor Name:** Ethan Haque

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Email:** ehaque@imsa.edu

**Add'l Sponsor Summary of Qualifications:** 8 years of programming experience including professional work at Fermi National Accelerator Laboratory, Metallion LLC, and freelance for various small businesses.

**Add'l Sponsor Name:** Dev Singh

**Relation to IMSA:** Current IMSA Student

**Add'l Sponsor Email:** dsingh@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Has professional software engineering and ML research experience. Contributor to several projects including the Mozilla Firefox project.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [70. Being Asian American: Identities and Solidarities](#)

**Schedule:** 60 minutes / Two Days

**Description:** What does it mean to be Asian American? Racial tensions have gained increasing public visibility in recent years, highlighted by the BlackLivesMatter movement, calls to Defund the Police, discussions around affirmative action, hate speech against East Asians because of Covid-19, and more. In these discussions, race is often simplified into a black and white binary. This session will explore racial identity by exploring significant events in Asian American history and looking at the ways that racial justice movements have been intertwined with Asian American communities.

Student discussion will be a key part of this course, and content will be adjusted based on the topics that students are specifically interested in. Topics may include anti-Blackness, immigration, mental health, the model minority myth, yellow peril, media/politics/business representation, social movements and political activism, intersectionality, and more.

**Session Category:** Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 2 - 25 Students

**Primary Sponsor Name:** Stanley Yuan

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** stanley.yuan25@gmail.com

**Summary of Qualifications:** Stanley has been an Asian American student activist, having helped establish the Asian American Studies program at Duke. He has also participated in racial diversity efforts at Microsoft, serving as a member of a D&I committee.

**Add'l Sponsor Name:** Annie Guo

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** aguo718@gmail.com

**Add'l Sponsor Summary of Qualifications:** Annie is a member of NAPAWF (National Asian Pacific American Women's Forum) and has taken multiple Asian American History classes at the University of Illinois at Urbana-Champaign. She is also a racial diversity recruitment lead and serves on the Asian Pa

**Add'l Sponsor Name:** Kevin Chen

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** kevin.kowen.chen@gmail.com

**Add'l Sponsor Summary of Qualifications:** Kevin received the Nakanishi Prize for his work with the Asian American community at Yale. He works in education and has organized with GAPIMNY: Empowering Queer & Trans Asian Pacific Islanders.

**Add'l Sponsor Name:** Julie Dowling

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** jdowlin@imsa.edu

## 71. Virtual Soccer Analysis

**Schedule:** 120 minutes / Three Days

**Description:** Do analytics provide game-changing insights or just numerical distractions? Find out in the Virtual Soccer Analytics intersession! Students will team up to play Haxball (haxball.com), the popular online 2D multiplayer soccer simulator, and then develop metrics from their gameplay data. You will learn to identify interesting questions about gameplay, analyze data using either spreadsheets or Python, and communicate the results. Perhaps your findings will even give your team an edge in the final tournament!

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 11-25 Students

**Primary Sponsor Name:** Vinesh Kannan

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** vingkan@gmail.com

**Summary of Qualifications:** I developed a data collection and analytics tool for Haxball. I have also done data science work for the Bureau of Labor Statistics and Google.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [72. Stonks - Practical Finance, Everyday Investing, & Career Options](#)

**Schedule:** 60 minutes / Three Days

**Description:** We will review finance from a practical lens; Day 1 will be dedicated to basic concepts: a high level theoretical framework of valuation, overview of leverage, and an overview of markets (public equity, private equity, commodities, real estate, and other); Day 2 will be devoted to practical examples of everyday investing as well as feature a short address from a current hedge fund manager; Day 3 will be devoted to some points around personal financial management and will feature an address from a venture capital investor and from a real estate investor. This will be a non-quantitative review of finance with an opportunity to get a flavor for what careers in finance entail. It will also teach crucial financial concepts critical to even those who have no professional interest in finance.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** Basic Math and an Interest in Finance

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Sai Parepally

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** Sai.parepally@gmail.com

**Summary of Qualifications:** I have 5 years of experience working on Wall Street

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

### [73. LaTeX Your Life!](#)

**Schedule:** 60 minutes / Three Days

**Description:** LaTeX is a typesetting system that is designed for the production of technical documents. In contrast to word processors (like MS Word or Google Docs), users write in a plain text markup language before "compiling" their code into an end product - similar to how one might build HTML code. Since being developed, it has become ubiquitous in many STEM-oriented fields; and many LaTeX codes are built-in to many equation editors - including the "MathQuill" feature of the Rich Content Editor in Canvas. Best of all, it's cross-platform (Windows, MacOS, Linux, and online) and free! In this session, we will learn the basics of LaTeX; and by the end of the week, participants will be able to typeset their own simple document.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, toward IMSA curriculum

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Patrick Davis, Lingyi Meng & Brian Trainor

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** pdavis@imsa.edu /lmeng@imsa.edu / btrainor@imsa.edu

**Summary of Qualifications:** I've been using LaTeX since I was a rising junior in my undergraduate program. During graduate school, it became my primary means of producing typed documents; and it continues to be to this day.

## 74. Creative Comic Studio

**Schedule:** 90 minutes / Three Days

**Description:** Comics have been a popular form of communication since the proliferation of newsprint during the late 19th century, and current comics have continued that trend in finding eager new readers in the 21st century. This intersession aims to introduce students to the world of digital comics and to instruct them in the production and publication of their own original work. Any experience level is welcome; however, students with any prior experience illustrating or creating comic projects are especially encouraged.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Mike Dean

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** mdean@imsa.edu

**Summary of Qualifications:** I am one of two English Faculty members that teach Graphic Novels: Image and Text. I have also published my own comics.

## 75. The Poisoner's Handbook - the Birth of Forensic Chemistry

**Schedule:** 60 minutes / Three Days

**Description:** In this intersession students will read the book or watch the documentary "The Poisoner's Handbook" and we will discuss the events that lead to the advent of forensic science in America, as well as advancements in forensic science during the 20th and 21st centuries.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Laura Kopff

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** lkopff@imsa.edu

**Summary of Qualifications:** PhD in chemistry

## [76. Drug Discovery SIR](#)

**Schedule:** 60 minutes / Three Days

**Description:** Our Drug Discovery research group's goal is to design unique compounds that have the capacity to combat diseases for a wide range of disorders. Drug discovery is the process through which potential new medicines are identified. It involves a wide range of scientific disciplines, including biology, chemistry and pharmacology. Our group has collaborations with the pharmaceutical industry and academics institutions.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications, Service Learning - Session provides an opportunity for students to support a community or organization, UN Sustainable Development Goals - Session relates to the UN SDGs and/or IMSA's commitment to the UN SDGs.

**Prerequisite(s):** Must be enrolled in the Drug Discovery SIR group for the 2020-2021 school year.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 26-50 Students

**Primary Sponsor Name:** John Thurmond

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** jthurmond@imsa.edu

**Summary of Qualifications:** PhD in Chemistry



## 77. The Art of Power: The Operas of Giacomo Puccini

**Schedule:** 60 minutes / Three Days

**Description:** Though nearly a century old, the operas of Italian composer Giacomo Puccini are still among the most frequently performed of the entire repertoire. Besides their glorious music, much of their appeal derives from their timeless treatments of tales of power: an opera singer is menaced by a renegade police chief in *Tosca* (1900), a young Japanese girl is exploited by an American soldier in *Madama Butterfly* (1904), and a tyrannical Chinese princess ruthlessly executes her would-be suitors in *Turandot* (1924), to name but a few examples. This course will explore some of Puccini's most enduring and affecting operas through a combination of guided viewings, lectures, and class discussions, as well as ponder their continued relevance. Additionally, students will be tasked with creating a short video précis that distills their reactions to a particular opera. No prior musical experience is assumed, and students of all backgrounds are encouraged to sign up!

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** Prior musical experience is preferred, but not required. Students are encouraged to watch the operas we will be discussing on their own and should plan to set aside approximately two hours a night for this. If you've ever been curious about opera but didn't know where to start, this is a great place to begin.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 students

**Primary Sponsor Name:** Daniel Collins

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** dcollins@imsa.edu

**Summary of Qualifications:** I am currently a second-year master's student at the Peabody Conservatory of the Johns Hopkins University, where I am pursuing degrees in Composition and Music Theory Pedagogy. I have taught numerous Intersession courses at IMSA over the past few years and have experience both designing and teaching undergraduate theory and musicology courses.

**Add'l Sponsor Name:** Michael Hancock

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** mhanc@imsa.edu

**Add'l Sponsor Summary of Qualifications:** As a current member of the IMSA English Faculty, and an IMSA alumnus himself, Dr. Hancock is more than qualified to sponsor this Intersession. Though not a musician himself, as a veteran educator and kindred analytical spirit, he is well-equipped to provide

## 78. What I Learned From Anime

**Schedule:** 90 minutes / Three Days

**Description:** Students will explore the basics of Japanese language and culture using various anime. We will also be exploring the difference between sub/ counter-culture that is proposed in the anime we will observe which is often times mistaken for the general culture of Japan. This dive, via the pop culture medium, is meant to present as a casual and fun opportunity to really explore how people come to perceive different cultures using one that is no longer studied at the academy.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives

**Prerequisite(s):** None; general interest is preferred.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Natasha White

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** nwhite1@imsa.edu

**Summary of Qualifications:** Study of Japanese culture and language at the college level. Previous experience with work and study in Japan which allowed for direct cultural experience. Experience with anime.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 79. Titan Robotics FRC: Designing and Building a Competitive Robot

**Schedule:** 120 minutes / Three Days

**Description:** The FIRST Robotics Competition (FRC) is an annual international competition where IMSA partners with mentors to design, build, and program a robot for the competition. Intersession week is the first week after the challenge is announced and an ideal time to design and begin building the robot. In the intersession, students will strategically analyze the competition to distill optimal design concepts. Utilizing these concepts, they will collaboratively design, draft, and prototype multiple robots and

components in the search for an optimal design. In order to participate in the build season, you must be a part of this full-day intersession.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** Must be a fully trained team member of Titan Robotics FRC by the time of the intersession

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 26-50 students

**Primary Sponsor Name:** Storm Robinson

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** nrobinson@imsa.edu

**Summary of Qualifications:** Storm Robinson is the leader of the org

**Add'l Sponsor Name:** Dane Christianson

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** dchristianson@imsa.edu

**Add'l Sponsor Summary of Qualifications:**

**Add'l Sponsor Name:** Grant Bell

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** gbell@imsa.edu

## [80. Design Your World with Dream Building!](#)

**Schedule:** 120 minutes / Three Days

**Description:** Do you have a Dream inside of You?

Many entrepreneurs, inventors, and people who have changed the world do!

If you have a Dream you want to see come to fruition, then this course is for YOU!

Perhaps you are not sure what your Dream is and you want help uncovering it?

This course is for YOU!

In this course, we will go through the 3 phases of Dream Building-  
Blueprinting, Bridging and Building.

We will go over proven strategies & practical tools for creating your Dream. We will also uncover real-world solutions on how to deal with the limiting beliefs that are guaranteed to come up as you pursue your Dream.

We will learn the 10 Steps to Dream Building- INCLUDING:

- Defining what you really want
- Testing your Dream
- Befriending your fear
- Turning Failure from a Stumbling Block into a Stepping Stone and MORE!

**Session Category:** Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** Nonene

**Cost:** None

**Class Size:** 50+ Students (Webinar)

**Primary Sponsor Name:** Bridget Grey

**Relation to IMSA:** Current IMSA Parent

**Primary Sponsor Email:** macigrey2011@gmail.com

**Summary of Qualifications:** Bridget Grey holds a Bachelor of Science in Clinical Laboratory Science from UIC and a Master of Business Administration from Olivet Nazarene University. Bridget has spent the last 19 years studying and applying the Principles of Transformation and Expansive Thinking. Bridget is a Certified Dream Builder Coach and Life Mastery Consultant.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## 82. Polski in three days!

**Schedule:** 60 minutes / Three Days

**Description:** This intersession will introduce students to language and culture of Poland. Participants will learn basics of Polish with an emphasis on speaking and communication. They will explore different aspects of Polish culture and Polish contributions to science, literature, modern society and entrepreneurship while learning “the hardest language to learn in the world.” Learn to love the consonants, diacritics and over-dots! "From zero to hero" in just three days!

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives

**Prerequisite(s):** None, except love of languages and appreciation of different cultures.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Agnieszka Michalak

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** amichal@imsa.edu

**Summary of Qualifications:** I am a native speaker of Polish and and a World Language educator.

## 83. Deep Learning for Computer Vision and Graphics

**Schedule:** 60 minutes / One Day

**Description:** Vision and graphics are tightly related fields -- roughly, they are about understanding and synthesizing imagery. In the past decade, both have been revolutionized by AI, or the “deep learning revolution”. We overview the underlying machinery at play: convolutional neural networks, which are flexible function approximators that can be “trained” on large-scale data, and generative adversarial networks, which are networks that train each other. Interestingly, these techniques are relatively simple, with much rooted in the linear algebra and vector calculus courses taught in introductory undergraduate courses (and some high schools!). We show its application to tasks such as recognizing objects, colorizing images, editing photorealistic imagery, and generating videos. Finally, we discuss potential concerns of pervasive synthetic imagery (so-called "deepfakes") and efforts to mitigate these.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines

**Prerequisite(s):** There is some application of linear algebra (MI 3 I believe) and chain rule (BC calculus I), so that would be helpful. But the talk should be accessible to all.

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 50+ Students (Webinar)

**Primary Sponsor Name:** Richard Zhang

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** rizhang@adobe.com

**Summary of Qualifications:** I obtained my PhD in EECS from UC Berkeley in 2018, my BS/MEng from Cornell in 2010, and most importantly, graduated IMSA c/o 2006. Currently, I am a Research Scientist at Adobe Research; my position is comparable to a junior faculty member in a top-20 university. I am active in the academic community: mentoring graduate students, publishing and presenting at conferences (cited ~4000 times according to Google Scholar), and serving as a reviewer and on conference committees. My webpage is here: <http://richzhang.github.io/>.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [84. Designing Digital Circuits with Minecraft](#)

**Schedule:** 90 minutes / Three Days

**Description:** Digital logic is integral to modern technology, defining the fundamental interactions between bits in modern computing. Yet, despite the complexity of our digital devices, circuits remain comprised of just a handful of building blocks, such as AND, OR, and XOR. In this session, we will give an introduction to logic gates and rudimentary boolean algebra. We'll go through fundamental logic analysis using tools such as truth tables and construct different digital circuits in Minecraft using redstone. Finally, students will be introduced to a simple computer architecture that utilizes these basic building blocks. By the end of this Intersession, students will have an understanding of the foundation of computer engineering and digital design.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 students

**Primary Sponsor Name:** Evan Sun

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** hello@evansun.com

**Summary of Qualifications:** Evan is in his final year of electrical engineering, having completed all the fundamental courses on digital logic and computer architecture.

**Add'l Sponsor Name:** Gunwati Agrawal

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** gunwati.rules@gmail.com

**Add'l Sponsor Summary of Qualifications:** Gunwati is a current student at Georgetown University majoring in physics.

**Add'l Sponsor Name:** Jimmy Ren & Kaushal Gumpula

**Relation to IMSA:** Alumni IMSA Student

**Add'l Sponsor Email:** jimmyren@seas.upenn.edu & kgumpula@uchicago.edu

**Add'l Sponsor Summary of Qualifications:** Jimmy and Kaushal are CS Majors at the University of Pennsylvania and University of Chicago respectively and have taken the required coursework in digital logic.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [85. Responsible AI in the Landscape of Tech for Good](#)

**Schedule:** 60 minutes / Two Days

**Description:** As technology advances, the ways that it can potentially be used "for good" increase. Ranging from use in medicine, climate, non-profits, politics, and more, technology has seemingly limitless potential. However, especially in the last few years, scrutiny of technology, artificial intelligence (AI), and big tech companies has increased based on privacy concerns, misinformation, monopoly. One

of the responses has been to build principles around how we can build our AI infrastructure to be responsible and ethical.

This session will cover both the broad tech for good landscape as well as specifically Responsible AI. Students are not required to have any prior knowledge of technology, computer science, or AI prior to this session. After this session, students should be able to describe different areas of tech for good and have an overview of Responsible AI.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Professional Development - Session provides explicit career-focused insights and applications

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 2 - 25 Students

**Primary Sponsor Name:** Stanley Yuan

**Relation to IMSA:** Alumni IMSA Student

**Primary Sponsor Email:** stanley.yuan25@gmail.com

**Summary of Qualifications:** I have been involved in various tech for good efforts at Microsoft, and using technology in politics through working as a data director on a federal congressional campaign. At Microsoft, I worked closely with the Responsible AI team to develop new products.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [86. A Mathematical Supported Launch](#)

**Schedule:** 60 minutes / Two Days

**Description:** Was your first semester in online learning math a little rough? Let's plan for an even stronger second semester! This session will give you the opportunity to work with math faculty to celebrate your wins and formulate specific adjustments to your study patterns to generate even more successes during the spring semester. We will also have some fun with math and review content areas



as demand warrants. This might include specific topics or problems that were left in question from the fall semester or other areas of interest to participants as they relate to the upcoming semester's topics.

**Session Category:** Academic Support - Session provides academic support toward IMSA curriculum

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 10 Students

**Primary Sponsor Name:** Janice Krouse

**Relation to IMSA:** Current IMSA Faculty or Staff

**Primary Sponsor Email:** krouse@imsa.edu

**Summary of Qualifications:** Mathematics Faculty

**Add'l Sponsor Name:** Tina Loos

**Relation to IMSA:** Current IMSA Faculty or Staff

**Add'l Sponsor Email:** cloos@imsa.edu

**Add'l Sponsor Summary of Qualifications:** Mathematics IPA

## [87. How Stories Are Told: Race, Gender and Culture in Media](#)

**Schedule:** 120 minutes / Three Days

**Description:** Much of what the general society learns about race, culture and gender happens through media. This interdisciplinary exploratory course will examine the socially constructed nature of race, gender, and cultural bias in the United States, and its representation through sitcoms, movies, news coverage, and social media. This course will involve readings, and viewing sitcoms, movies and news segments. Engagement in discussions and other activities will be based in the lens of diversity, sociology and media studies. Students will have the opportunity to work in groups to review materials and lead discussion. Additionally, students will have the opportunity to hear from guest speakers from other educational institutions and the entertainment industry.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines, Diversity, Equity, and Inclusion - Session promotes DEI values and perspectives, Socioemotional - Session supports student social and emotional well-being

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25 Students

**Primary Sponsor Name:** Timothy Staples

**Relation to IMSA:** Alumni IMSA Faculty or Staff

**Primary Sponsor Email:** tstaple@siue.edu

**Summary of Qualifications:** I have studied the intersections between media and issues of diversity and inclusion for 20 years. I previously taught this course for 3 years during intersession at the South Carolina Governor's School for Science and Mathematics. Currently, I teach a graduate level diversity related course in Educational Leadership at Southern Illinois University Edwardsville.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**

## [88. Introduction to Astronomy Research](#)

**Schedule:** Two Days / 90 Minutes

**Description:** Have you ever wondered how one does research in astronomy? Is it possible for high school students to engage in astronomical research? This intersession will introduce students to various astronomical topics, including exo-planets, pulsars, and other aspects of stellar evolution. We also will explore a few methods of how research is conducted in these fields. No previous knowledge is required and students do not need to pursue research in this realm. Yet, if one is interested in doing so, this intersession might be a useful introduction to the field.

**Session Category:** Academic - Session provides additional insight and inquiry into academic disciplines,

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 5-20 Students

**Primary Sponsor Name:** Matthew McCutcheon

**Relation to IMSA:** IMSA Faculty

**Primary Sponsor Email:** mmccutcheon@imsa.edu

**Summary of Qualifications:** Matthew McCutcheon teaches mathematics and has been an SIR sponsor. His interests in astronomy began as a physics major and continued in graduate school, where he earned a degree in History and Philosophy of Science, with Johannes Kepler as an area of concentration. Subsequently, he was involved in developing astronomical curriculum and engaging students in research, including searching for pulsars (PSC) with radio observational data from the Green Bank Telescope in West Virginia, engaging in collaborative work with Innovators Developing Accessible Tools in Astronomy (IDATA), and investigating ultra-blue objects in the Kepler Field (NITARP). The latter endeavor resulted in poster presentations at an American Astronomical Society Annual Conference.

## 89. Gender and the Digital Gap

**Schedule:** Two Days / 60 Minutes

**Description:** Digital technologies and online learning environments have been credited with many positive and negative changes in education, including democratizing social forces, inciting anxiety and depression, increasing access, disrupting concentration and attention and interfering with face-to-face interactions. Regardless of the positive or negative impacts, studies rarely account for differential access and use by gender, especially as gender intersects with race and class. In the first 60 minute session we will unpack the affordances and barriers to accessing and using digital technologies. Students will be asked to challenge their own bias and assumptions through asynchronous activities. During the second session, we will share out our discoveries and reflect on how this may change their own educational pathways. This session is facilitated by Tracy Miller, Northern Illinois University, Center for Innovative Teaching and Learning. Previous IMSA Program Director of Statewide Student Initiatives.

**Session Category:** Diversity, Equity and Inclusion; Digital Learning; Gender

**Prerequisite(s):** None

**Student Resources Required:** None

**Sponsor Resources Required:** None

**Cost:** None

**Class Size:** 25-35 Students

**Primary Sponsor Name:** Tracy Miller

**Relation to IMSA:**

**Primary Sponsor Email:** tracy.miller@niu.edu

**Summary of Qualifications:** I previously worked at IMSA from 2004-2012 at the Kids Institute and Professional Field Services. I now work at NIU in their Center for Innovative Teaching and Learning. I have a book chapter in the soon to be in print Handbook of Gender Equity in Higher Education (Editors Nancy Niemi and Marcus Weaver-Hightower). I'd love to introduce this to the IMSA students.

**Add'l Sponsor Name:**

**Relation to IMSA:**

**Add'l Sponsor Email:**

**Add'l Sponsor Summary of Qualifications:**