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Dear HP Students,

Greetings, I hope your fall semester is going well. Hard to believe, but it’s time to plan your HP curriculum for spring 2024. Phase I registration for fall runs from November 6 – December 15, 2023 and Phase II runs from January 4 - 12, 2024. The first day of the spring semester is Monday, January 8, 2024. Make sure to attend the HP Registration Rescue information session on November 2, 2023.

Please check out the HP class options listed in this guide and on the HP website. You’ll find great HP classes taught by dedicated faculty on a wide variety of engaging and timely topics. There is also an awesome feature in OSCAR that will allow you to search for Honors Program classes being offered. Select “Honors Program” from the Attribute Type menu and it will bring up the HP classes that are being offered (make sure to select at least one subject first—selecting all subjects will bring up every HP class).

Here are some IMPORTANT NOTES about some spring HP lab science classes:

1. We are offering HP sections of BIOS 1108, CHEM 1212K, PHYS 2211, and PHYS 2212 with affiliated Honors Program labs. **You must register for both the HP lecture and HP lab.**
   
   a. The lecture and labs for CHEM and PHYS are linked in OSCAR—you will ONLY be able to sign up for the HP lecture and linked HP lab.
   
   b. The lecture and lab for BIOS are not linked in OSCAR—you must select the correct HP lecture and lab class. **If you do not take both the HP section of the lecture AND lab for this class, you will not get credit for either of them!**

In addition, please consider your options to earn HP-authorized credit for these non-HP courses:

- **music ensembles**,  
- **research courses** (VIP, PURA, independent faculty-mentored research, usually with the number 2699 or 4699), and  
- **study abroad courses** (HP-authorized)

As always, please work with your GT Academic Advisor to choose options that bring you the benefits of HP-style learning and that work for your GT major degree.

If you ever have questions or concerns, don’t hesitate to contact me at amy.dunger@gatech.edu. Have a fantastic conclusion to your fall semester and good luck with spring registration.

Regards,

Dr. Amy D’Unger
APPH 1050 HP: The Science of Physical Activity and Health

Dr. Christie Stewart
2 credit hours
50 HP seats

Students will learn the importance of health, physical activity, nutrition, stress management, mindfulness, and chronic disease prevention through discussion of health/well-being concepts and current health research and trends. Students will form teams for a semester-long project relating to leadership and campus well-being.

The activity portion of the course will focus on a specific physical activity mode (e.g., Fitness 101, Weight Training, Yoga) to improve overall fitness.

Dr. Christie Stewart is an Academic Professional in the School of Biological Sciences. She received a Bachelor of Science in Movement Science from the University of Pittsburgh and a Master of Education in Clinical Exercise Physiology from the University of Georgia. Most recently, she received her Doctorate in Educational Leadership from Mercer University. Prior to her current position, Christie worked as Associate Director for Healthy Lifestyle Programs at the Campus Recreation Center, where she worked closely with the School of Applied Physiology to help create the activity sections for APPH 1050.

Her research interests include the culture of health/well-being on college campuses and health/well-being and academic success. Christie and her colleague, Lesley Baradel, developed the class Flourishing: Strategies for Well-Being and Resilience in response to the campus community's need for additional education and support for well-being and resilience.

Lecture: M/W, 9:30 AM
Curran Street Deck 210 (LLC West Commons Classroom, across the street from Eighth Street South apartments—enter under the blue awning)

CRN: 27793
BIOS 1108 HP: Organismal Biology
BIOS 1108L: Organismal Biology LAB

Dr. Onur Birol & Dr. Robbie Richards (lecture) and Dr. Colin Harrison (lab)
3 credit hours/1 credit hour
14 HP seats

Please note: You MUST register for the HP lecture and lab sections, or you will not get credit for either. They are not linked in OSCAR, so please select the correct sections.

In this course, you will learn how your biology is similar – and different – to the biology of all life on Earth. We will explore the evolutionary history of all life on Earth through the lenses of development and reproduction, signaling and communication, and physiology and organ systems. As we explore the diversity of life on Earth, you’ll be able to identify biological patterns and explain how you both are similar and different to the breadth of diversity of life on Earth. You will also develop scientific skills in analyzing and interpreting scientific data to test hypothesis and communicate scientifically. Finally, you will develop and practice skills in metacognition to identify your best learning strategies that you will be able to employ in your future courses and career. By the end of this course, you will be able to:

1. Identify and explain patterns in organismal biology in the context of evolutionary history, growth and development, cell signaling and communication, and organ systems and physiology (Course lecture content)
2. Explain and interpret biological experiments, and analyze and interpret biological data (Research Connections assignments)
3. Communicate effectively using appropriate scientific language in class settings (Research Connections and Scientist Spotlights assignments)
4. Appreciate commonalities and differences among people who practice science, and recognize that there are multiple pathways into science as a career (Scientist Spotlight assignments)

This course will foster your learning by using reflective practice, accentuate your critical thinking skills, and develop your confidence in soliciting guidance when problem-solving.

Dr. Colin Harrison is a Senior Academic Professional in the School of Biological Sciences. He earned his Ph.D. in Genetics and Molecular Biology at Emory University and B.S. in Genetics at the University of Wisconsin. He studies biology education research with a focus on laboratory learning, instructor language, and science identity. His research interests include STEM education, developmental biology, and genetics.

Lecture: M/W/F 8:25 AM
Location TBD

Lab: TH, 12:30 PM
Clough 483

CRN (lecture- HP): 34227
CRN (lab- HP): 34144
Dr. Deborah Santos
4 credit hours
12 HP seats
Please note: You MUST register for the HP lecture and lab sections or you will not get credit for either.
Prerequisites: CHEM 1211K or CHEM 1310

Welcome to Chemical Principles II! This course will help you develop facility with fundamental models of chemical reactivity, analysis, and structure. Broadly, the course covers chemical kinetics, chemical equilibrium and applications thereof, electrochemistry, and the chemistry of transition metal complexes. Through video lectures, active problem solving in class, and hands-on exploration in the laboratory, we hope you’ll develop the ability to see chemical principles in your future courses and careers.

Dr. Deborah Santos is a recent addition to the School of Chemistry and Biochemistry and will head up the first-year chemistry labs. She grew up in the Metro Atlanta area and has attended and taught in several schools and universities prior to coming to Tech. She received her PhD in Chemistry Education from Georgia State University this year and an MS in Organic Chemistry from the University of Georgia in 2015. She was a high school chemistry teacher prior to earning her PhD and has current research interests in how students learn to “do” science. Her PhD work focused on the psychological aspects of learning chemistry (mindset and motivation) and her MS work involved developing chemistries for attaching carbohydrates and proteins to polymer surfaces for biological applications.

Lecture: M/W/F, 8:25 AM
Scheller College of Business 300

Lab: TH, 12:30 PM
Clough 572

CRN (lecture- HP): 32383
CRN (lab- H04): 29747
CHEM 3700 HP: Alternative Energy

Dr. Thomas Orlando
3 credit hours
10 HP seats
**Prerequisites:** CHEM 1211K or CHEM 1310 and CHEM 1212K and PHYS 2211 and PHYS 2212

This course will give a general overview of the most popular and most promising alternative energy solutions which are currently being used or developed to help relieve the world dependence on fossil fuels. The course will also discuss and explore how and where the various alternative energy options can be most effectively employed within the current energy landscape. The basic scientific principles governing the current and future approaches in solar photo-voltaics, fuel cells, biomass conversion, nuclear energy, smart-grids, wind power, etc. will be presented. Though the course will focus on the basic principles and fundamental science underpinning the current advancements in energy technologies, there will also be an emphasis on understanding the economic, political, and general sustainability issues associated with the most popular alternative energy options. Due to the interdisciplinary nature of the topic, the course will involve multiple guest instructors from across the campus, and in-class discussions among the participating students from different majors will be a significant component of the learning experience.

**Dr. Thomas Orlando** is a Regent’s Professor in the School of Chemistry and Biochemistry at Georgia Tech. He received his PhD from the State University of New York-Stony Brook and had postdoctoral appointments at Associated Western Universities, the Solid State Sciences Division of Sandia National Labs, and the Institut fur Physikalische Chemie at Universität Wien. His research focuses on electron- and photon-stimulated interface and surface processes, environmental chemistry and planetary surface science, and biophysical chemistry.

**Lecture:** T/TH, 9:30 AM
Molecular Sciences and Engineering Building G021

**CRN:** 32318
COE 2001 HP: Statics

Dr. Jason Wang
2 credit hours
25 HP seats
Prerequisites: MATH 1552 and PHYS 2211

This course is an introduction to engineering, specifically engineering mechanics. It utilizes concepts from physics and applies them in an engineering framework, setting the foundation for future engineering analysis and design courses. The instructor will model various problem-solving approaches to help students learn to work independently and collaboratively as they analyze diverse problems common in engineering mechanics.

Through in-class discussions and problem-solving, students will learn to see the world around them from an engineering mechanics perspective.

Dr. Jason Wang is the Interim Senior Director of Institutional Research and Planning and Director of Data Management. He earned his Ph.D. in Bioengineering and his B.S. and M.S. in Mechanical Engineering from Georgia Tech. Jason's passion for teaching and learning has taken him from being an undergraduate student to a graduate TA to an instructor to working in the Center for Teaching and Learning. His position in IRP provides new opportunities to work on undergraduate education at a higher level while continuing to engage with Georgia Tech students in the classroom.

Lecture: T/TH, 3:30 PM
Curran Street Deck 210 (LLC West Commons Classroom, across the street from Eighth Street South apartments—enter under the blue awning)

CRN: 32141
COS 3801 HP: Special Topics: Introduction to Model Organisms

Dr. Eduardo Gigante
1 credit hour
5 HP seats

This introductory course will provide a general overview of model organism use in human health research. Leveraging my expertise in Developmental Biology and Neuroscience and through exposure to primary research articles, students will learn how model organisms are being used to solve today’s foremost human health problems. Each week, we will focus on a different model organism, ranging from the single-celled, flagellated green algae Chlamydomonas all the way to non-human primates. During this course, students will discover topics such as evolutionary biology, experimental genetics, gene editing, and developmental biology. Moreover, we will discuss the importance of research ethics when using model organisms, as well as the pros and cons of alternative models like organoids. Students will be responsible for engaging in classroom discussions and completing in-class assignments that test their critical thinking and problem-solving skills. Students will be given seminal review articles related to each species, for unrequired reading.

Dr. Eduardo Gigante is a postdoctoral researcher in the School of Biological Sciences at Georgia Tech. He earned a BS and MS from Binghamton University in New York. He then spent three years at the National Institute on Drug Abuse in Baltimore, Maryland studying neural pathways of food and drug addiction in rodents. He did his PhD work at Emory University, using a mouse model of embryonic development to study the intersection of primary cilia and neural tube patterning. His love of all things Evo-Devo compelled him to join the Stolfi lab in June 2021 where he researches neural stem cell populations in the basal chordate Ciona robusta.

Dr. Gigante’s teaching experience includes serving as a TA at Binghamton University, Emory University, and Cold Spring Harbor Labs. He has also been the research mentor for eight undergraduate students and rotation mentor for three graduate students.

Lecture: T, 12:30 PM
Clough 323

CRN: 32335
CS 1301 HP: Introduction to Computing (ONLINE, ASYNCHRONOUS)
CS 1301R HPR: Introduction to Computing Recitation (ONLINE, SYNCHRONOUS)

Dr. David Joyner
3 credit hours
50 HP seats
Please note: You must register for the lecture and recitation separately. Lecture is online and asynchronous. Recitation is online and synchronous.

The purpose of this online course is to give students an introduction to computer programming. Students will gain experience and practice with logical thinking and debugging. The focus in the course is on developing skills and experience in software development and use of software tools. No prior CS coursework is required. The HP section will be limited to 50 students and will include a recitation session led by a CS TA. On four occasions, Dr. Joyner will attend the recitation session. It is STRONGLY RECOMMENDED that you register for the recitation section.

Dr. David Joyner has a passion for leveraging new technologies to improve student learning. He focuses on online learning not through MOOCs, but through large online classrooms. He is interested in the unique opportunities these classes have for personalizing student learning and granting students greater ownership and autonomy over their education. He’s seen incredible things happen with online learning at the graduate level, and is excited to extend those opportunities to undergraduate students. Dr. Joyner completed his Ph.D. in Human-Centered Computing at Georgia Tech. He now works for the College of Computing as its Associate Director for Student Experience. Dr. Joyner also teaches in the OMSCS program, teaching CS6460: Educational Technology, CS6750: Human-Computer Interaction, and CSE6242: Data and Visual Analytics. He also runs an online research lab: lucylabs.gatech.edu.

Lecture: online, asynchronous
Recitation: TH, 5:00 PM
online, synchronous

CRN (online lecture- HP): 25893
CRN (online recitation- HPR): 27591
Kantwon Rogers
3 credit hours
35 HP seats
Please note: You must register for the lecture and recitation separately.

Foundations of computing with an introduction to design and analysis of algorithms and an introduction to design and construction of programs for engineering problem-solving.

Kantwon Rogers is a Computer Science PhD student advised by Dr. Ayanna Howard. He also earned a BS in Computer Engineering, an MS in Electrical and Computer Engineering, and a MS in Human-Computer Interaction from Georgia Tech.

Kantwon is a winner of the 2018 Institute-Wide Graduate Student Instructor Award and of the 2015 Institute-Wide Teaching Assistant Award. His research revolves around understanding how humans come to trust and be deceived by robots and artificial intelligent systems. He is a former member of the Georgia Tech Honors Program.

Lecture: M/W/F, 8:25 AM
College of Computing 16

Recitation: TH, 5:00 PM
College of Design East 207

CRN (online lecture- HP): 21314
CRN (online recitation- HP): 27637
What do "right" and "wrong" mean anyway? How is "ethical" different from "legal"? In this class, we'll learn about several philosophical approaches to ethics including utilitarianism, Kantianism, social contract theory, and virtue ethics. The goal is for students to be able to address ethical dilemmas with reasoned arguments, grounded in a combination of these ethical theories. Second, we'll learn about professional ethics. What special responsibilities do we have as computing professionals? What does the ACM Code of Ethics say, and how can we use it in our daily practice? Finally, we'll learn about computing and society. In what ways does computer technology impact society? We'll talk about a host of issues including privacy, intellectual property, and freedom of speech.

Dr. Amy Bruckman is Regents' Professor in the School of Interactive Computing, and does research on social computing. Her current research projects include studies of content moderation, how people get recruited to toxic groups online, and how to use collaborative computing to support service industry workers. She received her PhD from the MIT Media Lab in 1997. She teaches "Computing, Society and Professionalism," and a graduate class CS 6470 “Design of Online Communities.” She is a Fellow of the ACM.

Lecture:  
M/W, 3:30 PM  
Clough 423

CRN: 33676
EAS 2600 HP: Earth Processes  
EAS 2600 HPL: Earth Processes LAB

Dr. Ellery Ingall (lecture) and Dr. Erin Griffith (lab)  
4 credit hours  
14 HP seats  
Please note: You MUST register for the HP lecture and lab sections, or you will not get credit for either.

Through lectures, discussion, labs, and field experiences around Atlanta this course is aimed at providing you with an understanding of how the Earth works and how it affects you. As an inhabitant of Earth, you may be interested in learning about processes that shape the landscape, drive natural hazards, influence climate change, and produce natural resources. Knowledge of how the Earth works can also help you in your daily lives. You may need to evaluate potential geologic and climate hazards in your professional life or make informed decisions about the use and conservation of natural resources and how it may affect global policy. Finally, you may better appreciate features you will encounter when you hike through mountains, hit the beach, or visit a national park.

Dr. Ellery Ingall is a geochemist in the School of Earth and Atmospheric Sciences, who was trained at Yale University. His research investigates the chemistry of the earth, oceans and atmosphere. Many of his studies focus on key nutrient elements, phosphorus, nitrogen and iron which strongly impact the productivity of plankton in natural waters. An ongoing theme of his research is the development of new technologies such as synchrotron based spectroscopy and electrodialysis to better understand elemental cycling. Over the last two decades he has appreciated the opportunity to teach classes in Earth Processes and Thermodynamics to the great students at Georgia Tech. He also enjoys sharing his Geologic joy with Georgia middle and elementary school teachers and has distributed over 4500 rock, mineral, and fossil specimens as part of teacher workshops.

Dr. Erin Griffith, PE, will be responsible for developing the hands-on lab experience for this class. She received her undergraduate degree from Georgia Tech as an electrical engineer. Before returning to Tech for her PhD in geochemistry, she worked in industry in construction and building design. She uses that experience and her experience as a recent PhD graduate to infuse the labs with experiential learning, an understanding of recent geologic events, and a healthy dose of fun.

Lecture: T/TH, 8:00 AM  
Clough 144

Lab: W, 6:30 PM  
Kendeda 298

CRN (lecture- HP): 30579  
CRN (lab- HPL): 3420
EAS 3110 HP: Energy, Environment, and Society

Dr. Jairo Garcia
3 credit hours
20 HP seats

This interdisciplinary seminar-style course relies on guest speakers from across the Tech campus and beyond, encouraging lively discussion of both current events and past developments relevant to our nation's energy and climate future. The main student activity will be a semester-long "Carbon Reduction Challenge", in which student teams compete to reduce carbon footprints by the end of the semester.

Dr. Jairo Garcia is an expert in urban sustainability and climate change. Dr. Garcia is the CEO of Urban Climate Nexus, the North America Curator for United Nations Habitat, a Sustainable Development Goals Educator Fellow, and long-term collaborator and lecturer at Johns Hopkins University and The Georgia Institute of Technology. Dr. Garcia is the former Director of Climate Policy with the City of Atlanta and the lead author of Atlanta's Climate Action Plan. He received the 2017 Individual Climate Leadership Award by the EPA, and the 2021 Green Ring Award by the Climate Reality Project for this demonstrated an exceptional commitment to climate communications and climate action activism. His areas of research are in urban climate vulnerabilities with a focus on urban heat and food security.

Lecture: M/W, 3:30 PM
Molecular Sciences and Engineering G011

CRN: 31874
ENGL 1102 HP1: English Composition II

Dr. Renee Buesking
3 credit hours
18 HP seats

From the earliest hints of a potential Northwest Passage through the Arctic region to the voyages of Magellan and Cook, the polar regions of our planet have captured the imagination of scientists, engineers, poets, and the general public alike. Historically, the polar regions represented the last unknown territory on earth; more recently, the South Pole is home to research stations on the cutting edge of the latest technologies in astrophysics, meteorology, climate change, and more. This course will explore the history of polar interactions and use this lens as a way to examine the complex problems posed by this region for peoples past and present. Through an engagement with the history of Arctic and Antarctic exploration, students will focus especially on the impacts of technology on landscape and culture. This focus prompts students to better understand the ways in which their future decisions as innovators, engineers, and individuals working in the technology sector can impact delicate landscapes and change the scope of their field even from the most desolate locations on Earth. One key goal of this course is to introduce and encourage students to pursue undergraduate research projects, and to help them practice producing communication with a public audience in mind.

This course foregrounds communication as a process and introduces students to a variety of pre-writing, drafting, critique, and revision strategies to help them better respond to communication challenges in the future. Students in this course will collaborate with their instructor and their peers to identify and propose a solution to an existing problem consistent with our course themes.

Dr. Renee Buesking is a Marion L. Brittain Postdoctoral Fellow at Georgia Institute of Technology. She currently teaches ENGL1102. Outside of LMC, you can often find Renee in a used bookstore accidentally buying another copy of a book she already owns. She received her PhD in English from the University of Georgia in 2020.

Lecture: T/TH, 12:30 PM
Skiles 308

CRN: 23133
ENGL 1102 HP2: English Composition II

Dr. Misty Fuller
3 credit hours
18 HP seats

In this course, we will learn about the use of W-O-V-E-N (Written, Oral, Visual, Electronic, and Nonverbal) multimodal approaches to communication through the theme of horror. Course assignments will help us build Critical Thinking and Rhetorical skills, through analyzing and creating different modes of media.

To begin, we will briefly discuss the theories behind horror, then learn different ways of analyzing horror texts through written and multimedia artifacts, and you will have a chance to create your own horror story through written, audio, and visual means. The course culminates in constructing your own horror movie, based on the rhetorical approaches we learn in class, through emphasizing process and collaboration. Students will develop collaborative, analytic, and communication skills that transfer to other courses as well as future careers.

Dr. Misty Fuller earned her Ph.D. in English, with a minor in Communication Studies, from Louisiana State University last summer and her M.A. from the University of North Florida in 2015. She currently works as one of Georgia Tech’s Writing and Communication Program’s Assistant Directors. She’s taught Intro to Business Writing, Academic and Applied Writing for Pre-Nursing Students, Intensive Writing, and a number of first-year composition classes with various themes and goals. Her cat, Mr. Peg, is probably the love of her life.

Lecture: T/TH, 9:30 AM
Skiles 302

CRN: 25323
ENGL 1102 HP3: English Composition II

Dr. Zita Hüsing
3 credit hours
18 HP seats

ENGL 1102 “Interstellar Narratives: Multimodal Communication and Space Exploration” will help you to improve your written, oral, visual, electronic, and nonverbal (WOVEN) communication skills by engaging with various texts (ranging from television shows, films, comics, art and novels) of Science Fiction and non-fiction (including examples such as television shows like Star Trek, The Expanse, excerpts from movies like Interstellar, 2001: A Space Odyssey and Dune, comics like Descender, vol. 1 and excerpts from documentaries including National Geographic’s The Space Race).

You will be able to learn about the WOVEN elements by exploring the multimodal communication that these texts undertake while exploring the roles that Space exploration plays in fictional and non-fictional examples, including questions surrounding life beyond earth in Science Fiction, the history of space exploration, and current issues in space exploration including sustainability. You will inquire the ethics and social inquiries related to the exploration Space. Our course uses GT’s own active interest in the future of interdisciplinary space research to take up the questions of what the future of space exploration will look like, what part GT will play in that development, and, perhaps most interestingly, what part you as individuals and students will play in that work and development.

Additionally, this class asks you to engage with texts from different types of new media, including social media, websites, streaming services, and blogs to develop specific rhetorical tactics you can then use in all sorts of areas. You will be encouraged to engage critically with content produced with digital technologies. You will develop your ability to conduct research, to compose writing and to consider how new media presents and uses arguments and stances. Assignments include a short introductory video, a visual analysis, the creation of an infographic and a short podcast along with a multimodal reflection portfolio. This course focuses on the possibility of fictional and non-fictional texts to connect us as thinkers, writers, and communicators. You will learn to understand the multimodal aspects of these texts and the audiences that consume them.

Dr. Zita Hüsing is currently Assistant Director of Writing and Communication and Postdoctoral Marion L. Brittain Fellow at the Georgia Institute of Technology. Before that, she graduated with a PhD in English from Louisiana State University in 2022 with a concentration on 20th and 21st century American literature and a focus on Science Fiction. Originally born in France and raised in both France and Germany, she has lived and studied in a range of countries.

Lecture: M/W, 3:30 PM
Skiles 269

CRN: 34078
ENGL 1102 HP4: English Composition II

Dr. Christopher Michaels
3 credit hours
18 HP seats

In this class you will learn and practice concepts centered around a WOVEN approach to composition and rhetoric. WOVEN refers to the written, oral, visual, electronic, and nonverbal modes of communication that populate our media world and through which we express ourselves every day. Learning how to compose in these modes proficiently—which requires a rhetorical understanding of audience, context, genre, medium, and tone—will help you excel academically, professionally, and personally.

We will use the science-fiction concept of terraforming to explore WOVEN communication, interacting with and composing media about terraforming or that are themselves terraforms. Why terraforming? Terraforming means earth-shaping: the building and adapting of worlds, the alteration and creation of nature. In science fiction, it typically refers to the imagined refashioning of extraterrestrial planets to make them more like Earth and more hospitable to human life. But ecologists, techno-optimists, and others have also employed the term to discuss the transformation of nature here on Earth, often invoking terraforming as the cause and/or cure of the world’s current ecological crises. Our objective is to explore how disparate WOVEN texts are woven into the Earth, engaging with it as a medium itself, and how media constructs and reconstructs our world in both imaginary and material ways.

Dr. Chris Michaels is a Marion L. Brittain Postdoctoral Fellow in the School of Literature, Media, and Communication at Georgia Institute of Technology. He received his M.A. and Ph.D. in English at Florida State University, where he taught for nine years. His research interests include Modernist Studies, Ecocriticism, and Media Theory, all of which intersect in his current investigation of how the science-fiction concept of terraforming offers a unique way of understanding modernist and avant-garde aesthetics. He is currently writing a book tentatively called Terraforming Modernism.

Lecture: T/TH, 3:30 PM
Clough 131

CRN: 31758
A complex social web of identity, culture, politics, economics, history, and power shapes what foods we eat. Choices that seem so personal and individual – such as, what we should have for dinner – are shaped by a myriad of social factors, especially the food system that determines what food is available. We almost never think about the social complexity behind the food we eat, but we will in this course.

This course will begin by examining how food relates to our identity, values, and culture. Then, we will move beyond this individual level to look at the historical development of U.S. agriculture, which serves as the basis of our current food system. Next, we will explore the industrial food system in the U.S., and we will take a particularly close look at the meat industry. Finally, we will examine the global food system, and then the course will end by considering how the food system changes.

Dr. Bill Winders is a Professor in the School of History and Sociology. He received his PhD in sociology from Emory University in 2001 and specializes in the areas of political sociology, social movements, the world economy, inequality, and food and agriculture. His first book, The Politics of Food Supply: US Agricultural Policy in the World Economy (Yale University Press, 2009), shows how political coalitions and divisions between farmers in the South, Corn Belt, and Wheat Belt shaped the trajectory of US agricultural policy from the 1920s to the early 21st century. This book also highlights the influence of the world economy and the civil rights movement on agricultural policy. The Politics of Food Supply won the 2011 Book Award from the Political Economy of the World-System (PEWS) section of the American Sociological Association, an award given each year in recognition of a book that exemplifies outstanding scholarship in global or comparative-international sociology. His second book, Grains (Polity Press, 2017), examines the geopolitics of grains, focusing on maize, rice, and wheat. In Grains, Winders examines how the political and economic divisions between food grains and feed grains influence a variety of issues, including international trade, world hunger, biotechnology, and land rights.

Dr. Winders co-edited a book with Dr. Elizabeth Ransom (Penn State) titled, Global Meat: Social and Environmental Implications of the Expanding Meat Industry (MIT Press, 2019). The scholars who contributed to this edited volume examine the contours of the global meat industry in terms of production, consumption, and trade, as well as the implications for the environment, workers, animals, farmers and small holders, and even the economy. Global Meat is part of the "Food, Health, and the Environment" Series at MIT Press and was named a Choice “Outstanding Academic Title” for 2020 and “Community College Top 75” for July 2020.
HTS 3071 HP: Sociology of Crime

Dr. Amy D’Unger
3 credit hours
25 HP seats
Please note: Counts toward social sciences general education requirements.

This course focuses on the important theories and substantive issues in the study of crime, with an emphasis on sociological perspectives. We will be examining such subjects as: how crime and criminals are perceived; methodological and theoretical approaches for studying crime; characteristics of offenders; and societal reactions to crime. The course provides a broad historical understanding of crime, with a focus on modern America.

Dr. Amy D’Unger (PhD, Duke University, 1999) is a sociologist with interests in the areas of race, class, and gender; inequality; social policy; social control and eugenics; and crime. Her previous research has looked at the impact of neighborhood social disorganization, peer networks, family structures, and school ties on delinquency and crime over the life course. She is currently researching the role of eugenic (involuntary) sterilization in the South as a tool of informal social control, particularly during the Civil Rights Movement. Dr. D’Unger has published in such journals as the American Journal of Sociology, the Journal of Quantitative Criminology, and the Encyclopedia of Crime and Justice on topics such as criminal careers, gender and offending, and feminist criminological theory.

Dr. D’Unger has been recognized for excellence in academic advising by both Georgia Tech and the National Academic Advising Association, and has won teaching awards from both the Ivan Allen College of Liberal Arts and Georgia Tech. She is the past chair of the Division on Women and Crime of the American Society of Criminology. Dr. D’Unger currently serves as the Interim Director and Associate Director of the Georgia Tech Honors Program.

Lecture: T/TH, 9:30 AM
Curran Street Deck 210 (LLC West Commons Classroom, across the street from Eighth Street South apartments—enter under the blue awning)

CRN: 33519
IAC 2002 HP: Science, Engineering, and Religion

Dr. John Cressler
3 credit hours
3 HP seats

Please note: BY PERMIT ONLY. Class open only to students who previously submitted their applications for a permit to Dr. Cressler. If selected, you will hear from Dr. Cressler with further instructions.

Dividing lines exist within the rigorous, truth-seeking, intellectually demanding academic setting that defines Georgia Tech. I invite you to consider two examples. 1) Walls often separate science and engineering, on the one side, from religion and spirituality, on the other side. It is commonly assumed, for instance, that serious scientists and engineers cannot, by definition, be people of faith; and vice versa. Such matters are rarely, if ever, topics of conversation in classes. 2) Walls often separate the various religious traditions and world views that are represented in Georgia Tech’s exceptionally diverse student body. For example, Christians often know very little about the beliefs and practices of Muslims, Jews about Buddhists, Taoists about Sikhs, Hindus about secular humanists. Meaningful dialogue between different religious traditions and worldviews on campus is uncommon, or perhaps only comes in response to some tragic event. Again, such matters are rarely, if ever, topics of conversation in classes. With Georgia Tech’s strategic goal of graduating outstanding global citizens, it is my view that the educational experience Georgia Tech provides could be further enhanced by ensuring religious literacy and engaging meaningful dialogue across the boundaries of science, engineering and religion, particularly within the context of interfaith diversity. After all, we live in an ever-flattening global community. This course is intended to help break down these barriers to meaningful dialogue in a creative way. The course will gather together a diverse set of students who are serious about their spiritual lives, and yet who are also studying hard to be Georgia Tech’s next cadre of world-class graduates.

Together, we will explore a variety of topics related to the intersection of science, engineering, and religion. No prior background is assumed. We will break open these topics by engaging in open and constructive dialogue.

Dr. John D. Cressler is Regents Professor, Schlumberger Chair Professor in the School of Electrical and Computer Engineering, and the Ken Byers Teaching Fellow in Science and Religion. The basic thrust of Cressler’s research is to develop novel micro/nanoelectronic devices, circuits and systems for next-generation applications within the global electronics infrastructure. In addition to his academic duties, Cressler writes historical fiction, love stories set in medieval Muslim Spain that celebrate the era of convivencia (coexistence), a unique period when Muslims, Jews, and Christians lived together in harmony. He is deeply interested in the on-going dialogue between science and religion, and teaches the popular IAC 2002, “Science, Engineering and Religion: an Interfaith Dialogue," each spring, open to all GT students. Cressler was awarded the 2010 Class of 1940 W. Howard Ector Outstanding Teacher Award (Georgia Tech’s top teaching award), and the 2013 Class of 1934 Distinguished Professor Award (the highest honor Georgia Tech bestows on its faculty). Visit him at: http://users.ece.gatech.edu/~cressler (research) and http://phndcressler.com (books).

Lecture: T/TH, 5:00 PM
Clough 323

CRN: 30604
INTA 3242 HP: Soccer and Global Politics

Dr. Kirk Bowman
3 credit hours
5 HP seats
Please note: Counts toward Award of HP Distinction in the Global Engagement Pathway and social sciences general education requirements.

Soccer is the undisputed global game and is an excellent lens to understand and explain our world. Soccer is also a powerful actor in forging identity, influencing norms, shaping migration, challenging colonization, contributing to economies, and much more. The beautiful game is a powerful tool to transform youth and marginalized communities including refugees, immigrants, the homeless, amputees, and others. This course examines the relationship between soccer and global politics around the world, with some emphasis on Latin America.

Dr. Kirk Bowman is Professor and Regents’ Entrepreneur in the Sam Nunn School of International Affairs. He is the author of four books, most recently Reimagining Global Philanthropy (Columbia University Press, 2021). His current research examines the intersection of global soccer and society. He directs a Vertically Integrated Project (VIP) on Soccer, Community, Innovation & Politics (SCIP) that will host and direct the inaugural edition of Soccer Con with the Atlanta Conference on Soccer & Innovation in March 2023. He is co-founder and director of the international NGO Rise Up & Care.

Lecture: T/TH, 9:30 AM
Habersham 136

CRN: 34204
LMC 2600 HP: Introduction to Performance Studies

Dr. Andrew Salyer
3 credit hours
15 HP seats
Please note: Counts toward humanities general education requirements.

One of the projects of Performance Studies has been to develop a general theory of performance by considering what the many things we may call performance have in common. This iteration of LMC 2600 will follow this path by identifying fundamental characteristics of performance and performing.

Readings will introduce the work of a wide range of historic and contemporary performance, the evolution of aesthetics and theory associated with the history of performance studies, and the impact that performance/performance studies exerts in contemporary culture. You will begin to understand and interpret performance and discover the possibilities of thinking/making through performance theory.

A more thorough interrogation of the visual world around us makes us more aware of how information is being articulated and received by our senses and can teach us how to produce this information ourselves. There is no neutral space of communication, and each conscious and unconscious choice creates an experience that informs us more about ourselves, those who have created it, and the world-building we share together. We learn not only by thinking and making, but also by seeing what is possible, what can be built upon or changed, and where others have challenged, reinforced, and experimented with performance and visual culture in our everyday lives. Our course texts will therefore also include artists and performers as models for creative responses and critical reflections.

Dr. J. Andrew Salyer is Visiting Lecturer in Georgia Tech’s Writing and Communication Program and holds degrees from the University of Wisconsin-Madison (PhD in Art Theory and Practice, 2019; MFA 2012) and Herron School of Art/Indiana University (BFA in Fine Art, 2004).

Lecture: M/W, 12:30 PM
Skiles 371

CRN: 34246
LMC 3112 HP: Evolution and the Industrial Age

Dr. Carol Senf
3 credit hours
15 HP seats
Please note: Counts toward humanities general education requirements.

This class focuses on the rise of industrialism and colonialism in the nineteenth century and connects later nineteenth-century scientific and technological concepts and discoveries, particularly theories of evolution, to the fiction and poetry of the long nineteenth century. Students will read from the works of Charles Darwin and his contemporaries and analyze the representation of science and technology in European short stories, novels, poetry, and scientific prose. Discussion will focus especially on how science and social values overlap, particularly in narrative representations of ethnicity, gender, and class.

Because of the special exhibit in the library on the Fulton Bag and Cotton Mill, this semester’s class will spend more time in the GT Archives than usual. The class will explore the strikes that took place at the Fulton Bag and Cotton Mill and the connection between labor unrest in the early nineteenth century and labor unrest today. Finally, because the neighborhood surrounding the old mill is the largest remaining mill village in the American South, we will figure out how to integrate at least one field trip into the class.

Dr. Carol Senf (PhD University of Buffalo, 1979) is a Professor in the School of Literature, Media, and Communication. Best known for her study of Bram Stoker (including Science and Social Science in Bram Stoker’s Fiction, Dracula: Between Tradition and Modernism, and Bram Stoker), she has also published articles on Charles Dickens, George Eliot, Thomas Hardy, and all three Brontës as well as articles and book chapters on popular culture and film. She is currently in between research projects but believes that the time in which we live today demands that both women and men respond with courage and conviction.

Lecture: T/TH, 2:00 PM
Skiles 370

CRN: 33802
MATH 1552 HP: Integral Calculus
MATH 1552 HP1: Integral Calculus STUDIO

Klara Grodzinsky
4 credit hours
19 HP seats
Please note: You MUST register for the HP lecture and studio sections or you will not get credit for either.
Prerequisites: MATH 1550 or MATH 1551

Math 1552, Integral Calculus, explores the meaning of the definite integral, various techniques of integration, and infinite series, including an introduction to Taylor and MacLaurin Series. Students will understand integration both geometrically and computationally. The idea of convergence will be applied to integrals and infinite series. Students will learn to analyze and apply various methods of integration and tests for convergence, construct Taylor series, and use Taylor polynomials as a form of numerical approximation. Students will also learn the proper usage of mathematical notation as related to the above topics.

Klara Grodzinsky received her M.S. degree in Applied Mathematics from Georgia Tech in 1996. She has been employed at Georgia Tech since September 1997, serving as an instructor until she was promoted to Academic Professional in January 2017 and Senior Academic Professional in July 2021. In 2000, she co-created a training program for graduate and undergraduate teaching assistants, which earned the Board of Regents Teaching Excellence Award in 2006 and has been used as a model for other campus departments. Since 2008, she has served as the TA Coordinator for the School of Mathematics. She earned the Center for Teaching and Learning Undergraduate Educator Award in 2011, the School of Mathematics Fulmer Teaching Prize in 2023, and won the institute-wide Class of 1934/1940 Course Survey Teaching Excellence Award seven times. In addition to directing the TA program, Ms. Grodzinsky has served as the course coordinator for MATH 1552 since 2015 and has taught a wide variety of 1000-level mathematics courses.

Lecture: M/W/F, 11:00 AM
College of Computing 16

Studio: T/TH, 8:25 AM
Skiles 168

CRN (lecture- HP): 33586
CRN (studio- HP1): 33587
MATH 1553 HP: Introduction to Linear Algebra
MATH 1553 HP1: Introduction to Linear Algebra STUDIO

Dr. Christopher Jankowski
2 credit hours
18 HP seats
Please note: You MUST register for the HP lecture and studio sections or you will not get credit for either.
Prerequisites: SAT Math score of 600 or ACT Math score of 26 or MATH 1113 or MATH 1551

Linear Algebra is very conceptual compared to most mathematics courses that students have previously taken. By the end of this course, it is expected that students will be able to do the following.

A) Solve systems of linear questions.
B) Solve eigenvalue problems.
C) Analyze mathematical statements and expressions (for example, to assess whether a particular statement is accurate, or to describe solutions of systems in terms of existence and uniqueness).
D) Write logical progressions of precise mathematical statements to justify and communicate your reasoning.
E) Apply linear algebra concepts to model, solve, and analyze real-world situations.
F) Solve systems of linear questions.
G) Solve eigenvalue problems.
H) Analyze mathematical statements and expressions (for example, to assess whether a particular statement is accurate, or to describe solutions of systems in terms of existence and uniqueness).
I) Write logical progressions of precise mathematical statements to justify and communicate your reasoning.
J) Apply linear algebra concepts to model, solve, and analyze real-world situations.

Dr. Christopher Jankowski is a Senior Academic Professional in the School of Mathematics, where he serves as the Director of Graduate Advising and Assessment (DGAA) and Director of Postdoctoral Teaching Effectiveness. He earned his Ph.D. in Mathematics from the University of Pennsylvania. His main research interest lies in constructing and classifying $E_0$-semigroups (up to cocycle conjugacy) using the theory of CP-flows and boundary weight maps.

Lecture: M/W, 8:25 AM
Howey Physics L4

Studio: F, 8:25 AM
Clough 144

CRN (lecture- HP): 32290
CRN (studio- HP1): 32291
MATH 2551 HP: Multivariable Calculus
MATH 2551 HP1: Multivariable Calculus STUDIO

Dr. Doron Lubinsky
4 credit hours
20 HP seats
Please note: You MUST register for the HP lecture and studio sections or you will not get credit for either.
Prerequisites: MATH 1552 and MATH 1553, 1554, or 1564

Multivariable calculus is a comprehensive introduction to all aspects of calculus in two and three variables. Students will learn how to differentiate and integrate such functions, how to find their maxima and minima, and how to use Lagrange multipliers when there is a constraint. All the classical theorems are covered - Fubini's theorem on integration in several variables, Green's Theorem, Stokes' Theorem and Gauss' Divergence Theorem. The geometry of surfaces in space is discussed, as are physical applications such as centers of mass, circulation, flow, and flux.

Dr. Doron Lubinsky has been at Georgia Tech for 21 years. His research areas include orthogonal polynomials, approximation theory, and random matrices.

Lecture: T/TH, 8:00 AM
Howey Physics L1

Studio: M/W, 9:30 AM
Skiles 168

CRN (lecture- HP): 32292
CRN (studio- HP1): 32299
MGT 4193 HP: Servant Leader Value Systems

Dr. Robert Thomas
3 credit hours
15 HP seats
Please note: Counts toward Award of HP Distinction in the Service Pathway. This course is taught in Tech Square. Restricted to sophomores, juniors, and seniors only.

The philosophy of Robert K. Greenleaf outlined in his essays on servant leadership can be beneficial to students as they embark upon their career and future leadership roles. The concept of servant leadership is often misunderstood and discounted as a viable leadership model for the corporate world. However, Greenleaf emphasized the critical nature of institutions and described himself as a student of organizations. Servant leadership is defined as a philosophy of life and leadership dedicated to the growth of others and committed to building values-driven institutions that contribute to just, caring, and sustainable societies. Greenleaf placed emphasis on the role of values, personal introspection, and the ability of the servant leader to understand the environment in which they operate. He was also concerned with the methods used to achieve objectives.

Dr. Robert Thomas is Professor of the Practice in the Scheller College of Business. He joined Georgia Tech in January 2006 to develop curriculum and create programming for the Institute for Leadership and Entrepreneurship, an interdisciplinary unit that enhances leadership and entrepreneurship for socially responsible and sustainable value creation. He teaches courses in servant leadership, social entrepreneurship and entrepreneurial finance. Prior to joining Georgia Tech, he served in senior leadership positions in industry, investment banking, financial services and academia. He has extensive experiences working with universities, foundations and non-governmental organizations in Central and Eastern Europe and has served as a member of the board of directors of numerous nonprofits and as Chair of the Board of the Greenleaf Center for Servant Leadership.

Lecture: T/TH, 2:00 PM
Scheller 201

CRN: 34101
ML 2500 HP: Introduction to Cross-Cultural Studies: Think Globally, Act Locally (ONLINE, SYNCHRONOUS)

Dr. Kelly Comfort
3 credit hours
12 HP seats
Please note: Counts toward Award of HP Distinction in the Global Engagement Pathway and humanities general education requirements.

ML 2500 aims to promote cross-cultural understanding through the comparative analysis of significant works of literature, photography, and film from around the globe as viewed through the lens of the United Nations’ Sustainable Development Goals. The course will use Comfort’s edited textbook, *A Global Humanities Approach to the United Nations’ Sustainable Development Goals: Understanding, Planet, People, and Prosperity*, to examine five documentary films, two photographic collections, two novels, and one short story. The photographers, authors, and directors examined in the course hail from Argentina, Belgium, Benin, Brazil, Costa Rica, China, France, Germany, India, Japan, and the United States, while their works take us to many of these homelands and to additional nations such as Australia, Ecuador, Greenland, Haiti, Peru, Rwanda, and Senegal.

ML 2500 has two main objectives. First, it strives to train students with a disciplinary background in the humanities to understand, apply, and evaluate the UN SDGs and the concept of sustainable development. Second, it aims to teach students with a disciplinary background outside of the humanities to understand, analyze, and evaluate global humanities texts and their specific contributions—artistic, cultural, linguistic, etc.—to understanding and attaining a sustainable world. Upon completion of this course, students will be able to:

- Understand and evaluate the UN SDGs and ESD;
- Analyze and apply the UN SDGs to selected works of the global humanities;
- Evaluate works of the global humanities in terms of their contributions to promoting sustainability in terms of planet, people, prosperity, and partnerships;
- Create new global humanities texts to support the UN SDGs and/or design new applications of global humanities texts to the UN SDGs.

The ML 2500 course intentionally sets out to break down disciplinary boundaries and to combine humanistic, artistic, ethical, social, cultural, political, scientific, technological, environmental, and economic discourses.

Dr. Kelly Comfort received her PhD in Comparative Literature with a designated emphasis in Critical Theory from the University of California, Davis. She joined the Georgia Tech faculty in 2005. A specialist in Latin American literature and transatlantic modernisms, Dr. Comfort’s research agenda focuses primarily on the intersections between Latin American modernismo and contemporaneous turn-of-the-century literary movements in Europe such as aestheticism and decadence. She is the author of *Cien años de identidad: Introducción a la literatura latinoamericana del siglo XX*, a textbook and anthology.

Lecture: W/F, 9:30 AM
ONLINE, SYNCHRONOUS

CRN: 33659
Music Ensembles (1 credit hour)

MUSI 3018, 3019, 3121, 3131, 3231, 3241, 3251, 3261, 3311, 3321, 3411, 3511, 3531, 3541, 3551, 3611

The HP is expanding its partnership with the School of Music and will now grant up to 3 HP credits for ensemble classes.

Why take an ensemble class for HP credit?

- Music ensembles are active-learning classes—“hands-on” and “voice-on”—a great fit for our curious, creative, and highly motivated HP students.

- Making music is a universal and uplifting human experience—a great fit for our times and all times.

- Non-music majors/minors earn humanities credits for ensemble classes, and each class may be repeated for humanities credit. Here is additional information.
PHIL 3050 HP: Political Philosophy

Dr. Michael Hoffman
3 credit hours
7 HP seats
Please note: Counts toward humanities general education requirements.

Given the threats posed by increasing polarization, gridlock in decision making, and the growth of autocratic tendencies in the United States, this class focuses on the question of how democracy can be improved by revisiting contributions to the philosophy of democracy. Based on a reading for each class meeting, we will discuss various theories of democracies, including deliberative and more radical approaches; their challenges; and principles on which democratic decision making should be based.

Dr. Michael Hoffmann is a Professor for Philosophy in the School of Public Policy at Georgia Tech. He is the Director of the Reflect! Lab and Co-Director of ETHICx, the Ethics, Technology, and Human Interaction Center. His current research focuses on the development of the Reflect! platform. Until recently, Hoffmann was the PI on the NSF project “Fostering self-correcting reasoning with reflection systems.” This project is motivated by research that indicates that students hardly ever substantially revise the products of their reasoning, even if they are explicitly instructed to do so. The Reflect! platform will “orchestrate” collaboration within small teams of students, between teams and an instructor, and within a class. Working on a “wicked problem” such as the ethical challenges of facial recognition technologies, students are time and again confronted with new points of view so that they experience the limitations of their own perspective and the need for self-correction.

Dr. Hoffmann directs the VIP Digital Deliberation and the project Digital Deliberation and Social Justice in the Digital Age. Both are supported by a grant from the Digital Integrative Liberal Arts Center (DILAC). In a previous project, Hoffmann developed the interactive and web-based argument visualization tool “AGORA” (see http://agora.gatech.edu). This project was supported by a grant from the U.S. Department of Education.

Lecture: M/W, 3:30 PM
Skiles 169

CRN: 31928
PHIL 4110 HP: Theories of Knowledge

Dr. Andrew Buskell
3 credit hours
10 HP seats
Please note: Counts toward humanities general education requirements.

We have all become increasingly aware of claims about misinformation. Whatever we take misinformation to be, one natural reaction to it is the idea that we should just become epistemically self-sufficient: only believing and endorsing claims that we can double-check on our own. While this is tempting, it seems implausible. Our reliance on others’ expertise and testimony seems inescapable. But is it possible to trust the testimony of others without falling prey to misinformation? What would be required for us to create a environment where such trust could be taken for granted—and would we want to live in that environment?

Dr. Andrew Buskell is a Visiting Assistant Professor in Georgia Tech’s School of Public Policy. Previously he was a Leverhulme Early Career Researcher at the Department of History and Philosophy of Science, University of Cambridge, and earlier, a post-doctoral researcher at the London School of Economics and Political Science. He has held fellowships or visiting positions at the Australian National University, the University of Stockholm, LMU Munich, and the University of Pittsburgh.

His research analyses how scientists and policymakers use the concept of culture. One strand of this work interrogates the role of culture in human cognitive evolution. This research has most recently focused on capacities for “cumulative culture”—and argues that breaking this capacity down into constituent elements underscores the continuity of human cognition with non-human animals, as well as the distinctive evolutionary roles of such elements in human evolution.

A second strand looks at how the varied understandings of the culture concept can generate risk in scientific and policy work. Though philosophers have long highlighted the importance of epistemic, and particularly, inductive risk in science and policy—this developing work points to the importance of ontological decision-making, the distinctive harms it can engender, and the nature of the risk involved.

Lecture: M/W, 2:00 PM
Clough 325

CRN: 33611
PHYS 2211 HP: Introduction to Physics I  
PHYS 2211 HPL: Introduction to Physics I LAB

Dr. Emily Alicea-Muñoz 4 credit hours  
30 HP seats  
Please note: You MUST register for the HP lecture and lab sections, or you will not get credit for either.  
Prerequisite: MATH 1552

The M&I version of PHYS 2211 emphasizes the atomic nature of matter and integrates traditional mechanics with thermal physics. There is a strong emphasis on the Momentum Principle, the Energy Principle (the first law of thermodynamics), and the Angular Momentum Principle. The main goal of this course is to have students engage in a process central to science: the attempt to model a broad range of physical phenomena using a small set of powerful fundamental principles. To aid in this goal students will develop computational models that predict the motion of interacting objects. These models will be made using the Visual Python programming language. The course also emphasizes the atomic structure of matter, especially the ball and spring model of solids, and photon emission and absorption in quantized systems.

Topics include:
- The different types of matter and interactions found in nature
- Using the momentum principle to predict future motion
- An atomic model of solids
- The momentum principle in moving reference frames
- Energy conservation including relativistic energy
- Energy in macroscopic systems including thermal energy
- Multi-particle systems and the center of mass
- Collisions including relativistic particle collisions
- Angular momentum and quantized angular momentum
- Energy quantization and photon emission and absorption

Dr. Emily Alicea-Muñoz is a native of Puerto Rico. She has a BS in Physics from the University of Puerto Rico at Mayagüez, an MS in Astronomy & Astrophysics from Penn State, and a PhD in Physics with a doctoral minor in Higher Education from Georgia Tech. Before coming to Georgia Tech, she worked at NASA Goddard Space Flight Center where she studied cosmological black hole mergers. Dr. Alicea’s research focuses on the professional development of physics graduate teaching assistants (GTAs). She is also interested in holistic assessments of teaching effectiveness, the development of expert-like problem-solving skills in introductory physics students, introductory astronomy education, and methods of informal education/outreach.

Lecture:  
M/W, 12:30 PM  
Howey Physics L1

Lab:  
M, 3:30 PM  
Clough 362

CRN (lecture- HP): 32161  
CRN (lab- HPL): 32165
PHYS 2212 HP: Introduction to Physics II
PHYS 2212 HPL: Introduction to Physics II LAB

Dr. Andrew Zangwill (lecture) and Dr. Ed Greco (lab)
4 credit hours
30 HP seats

Please note: You MUST register for the HP lecture and lab sections, or you will not get credit for either.

Prerequisite: PHYS 2211

The M&I version of 2212 deals with electric and magnetic interactions, which are central to the structure of matter, to chemical and biological phenomena, and to the design and operation of most modern technology. The main goal of this course is to have you engage in a process central to science: the attempt to model a broad range of physical phenomena using a small set of powerful fundamental principles.

The specific focus is an introduction to field theory, in terms of the classical theory of electricity and magnetism. To aid in this goal you will develop computational models to visualize these fields and the interaction of charged particles. These models will be made using the Visual Python programming language (run in your browser at www.glowscript.org). The course also emphasizes the atomic structure of matter, especially the role of electrons and protons in matter.

Topics include:
- Matter and electric field, polarization of atomic matter
- Electric fields of distributed charges, setting up physical integrals, numerical integration
- Electric potential and energy for fields
- Magnetic field, atomic model of ferromagnetism
- A microscopic view of electric circuits, surface charge model
- Capacitors, inductors, resistors, and batteries
- Magnetic force, including motional emf
- Patterns of field in space (Gauss's and Ampere's laws)
- Faraday's law and non-coulomb electric field
- Electromagnetic radiation, including its production by accelerated charges and re-radiation

Dr. Ed Greco is a native Floridian who moved to Atlanta in 2000 with his high school sweetheart and earned his Ph.D. in physics from Georgia Tech on low Reynolds number flow in 2008. Since joining the faculty at Tech, Ed has been active in the development of new curriculum for undergraduate students. When not in the classroom, he coordinates the outreach activities for the school of physics and serves as radio show co-host “Fat Daddy Sorghum” on WREK’s Inside the Black Box where he enjoys sharing his passion for science with the Atlanta community. Photography, Chess, Conchology, foraging for wild edibles, winemaking, and exploring Appalachia on a motorcycle are just a few of his varied pastimes. Mostly, however, he enjoys spending quality times with his loving family.

Lecture: T/TH, 9:30 AM
Howey Physics L4

Lab: T, 3:30 PM
Clough 383

CRN (lecture- HP): 34094
CRN (lab- HPL): 34095
PUBP 3350 HP: Energy Policy

Dr. Daniel Matisoff
3 credit hours
15 HP seats
Please note: Counts toward social sciences general education requirements.

Why do oil prices rise and fall? Will we ever "run out" of oil? Can we solve climate change without hurting American industry? What are the promises and pitfalls of renewable energy? Under what economic and policy conditions can renewable energy be competitive? Can America achieve energy independence? What does energy independence mean? How will carbon regulation impact American energy production? Why should we incentivize renewable energy production and how can we best design those incentives and regulations?

This course cuts through myths that are pervasive in the media, public opinion, and in statements by politicians. It will give you a theoretical basis from which to assess energy policy options, and an understanding of how global energy markets work, as well as an overview of domestic and international energy policy. The course seeks to build group project skills and students will produce a policy analysis of policy options related to an energy policy problem.

Through this course you will gain the tools to assess and analyze the market characteristics, policies, and regulations that impact the supply, demand, and impacts of energy consumption in the U.S. and abroad. This course will provide an overview of applied energy economics, energy regulation, basics of U.S. and global energy production / consumption, and policy options for promoting a sustainable energy future.

Dr. Daniel Matisoff teaches and conducts research in the areas of public policy, energy policy, and corporate sustainability. His research focuses on the effectiveness and efficiency of comparative approaches to addressing environmental problems and the adoption and diffusion of energy technologies and policies. He currently is a fellow with the Brook Byers Institute for Sustainability, and is affiliated with the Strategic Energy Institute and Center for Urban Innovation. He has participated in over $4 million of sponsored research through the National Science Foundation, the European Union Center for Excellence, the German Academic Exchange Service, the Georgia Department of Transportation, and the National Electric Energy Testing Research and Applications Center. His recent research has resulted in publications in the Review of Environmental Economics and Policy, Environmental and Resource Economics, Energy Economics, Environmental Science and Technology, Energy Policy, and Business Strategy and the Environment, among other outlets. His current research interests include: evaluating the effectiveness of voluntary eco-labeling programs; the effectiveness of incentives for solar electricity; the adoption of smart grid technologies and policies; and the impact of large-scale solar adoption on consumer rates and bills.

Lecture: T/TH, 9:30 AM
Clough 127

CRN: 32311
SPAN 4160 HP: U.S. Spanish- Languages and Cultures

Dr. Osvaldo Cleger
3 credit hours
10 HP seats

Please note: Course is taught in Spanish. Counts toward Award of HP Distinction in the Global Engagement Pathway and humanities general education requirements.

Prerequisites: SPAN 2002 or AB/IB equivalent

Spanish 4160 is a course designed to help students develop their research and methodological skills through the study of the cultural and literary production of Latina/o immigrants in the United States. Throughout the semester, students will become familiar with different migratory process by individuals from the Latin American region, as well as the cultures these groups have established in the U.S. These processes will be studied in their historical dimensions and through their various cultural manifestations, such as journalistic articles and chronicles, poems, songs, memoirs, novels, television shows, documentaries, paintings, graphic arts, plays and performance art projects. All works, artifacts and other objects of study are cultural productions created by Latina/o migrants living in the U.S. The theoretical framework studied in class will include notions such as “cultural assimilation”, “cultural resistance”, “Hyphenated Americanism,” ”biculturalism” and “Latin American identity.”

During the first part of the course, we will focus on acquiring the theoretical arsenal needed to better understand the phenomenon of Latina/o immigration to the United States in its different historical, social, and cultural trends. During the second half, each student will choose a topic they wish to research and will work on preparing a 7–10-page final essay. The research topic must be related to the issues studied in class and must receive the approval of the instructor. Research can be conducted using both qualitative and quantitative data. More traditional book work or artifact analysis, such as the study of a memoir, a novel or a selection of songs or poems is also possible.

Dr. Osvaldo Cleger is a new media theorist specializing in digital culture, e-literature, media and emerging technologies in the Hispanic world, with a primary focus on countries such as Spain, Argentina, Colombia, Mexico, Ecuador and Cuba. He earned his MA from NMSU and his Ph.D. in Hispanic Literature and Cultural Studies from University of Arizona. His research interests include visual culture, film, photography, hypertext theory and fiction, blogging, digital poetry, procedural rhetoric, simulation theory and video games.

Lecture: M/W, 12:30 PM
Skiles 317

CRN: 33660
Award of HP Distinction in a Pathway

HP Pathways

HP students may choose to concentrate their HP studies in one or more of three HP Pathways: Research, Service, or Global Engagement. These three Pathways:

(1) Transcend traditional disciplinary boundaries,
(2) Cannot be pursued in an existing major, minor, or certificate program,
(3) Capture fields of passionate interest by many HP students, and
(4) Advance the Georgia Tech motto, “Progress and Service,” and the Goals and Objectives of Georgia Tech’s Strategic Plan.

Award of HP Distinction in a Pathway

HP students who complete the Requirements for Award of HP Distinction in a Pathway will receive recognition of the award at graduation, on their HP Certificate and on their HP Stole, and may note this recognition on their resumé as follows:

(1) Honors Program Award of Distinction in Global Engagement
(2) Honors Program Award of Distinction in Research
(3) Honors Program Award of Distinction in Service

For complete information on the HP Distinction in a Pathway options, visit https://honorsprogram.gatech.edu/academics/hp-pathways.
Contact Information

Dr. Amy D’Unger, HP Interim Director & Associate Director
amy.dunger@gatech.edu
404.385.7533
Eighth Street West 007

- Curriculum and classes
- Transfer credit or study abroad approval
- Academic advising
- Degree audits
- Website or Canvas

Ms. Lauren Evans, HP Senior Program & Operations Manager
lauren.evans@gatech.edu
404.894.4946
Eighth Street West 008

- HP programming
- HP equipment and supplies
- Honors Leadership Council (HLC)
- HP Student Assistants (HP Help Desk, Guides for the HP Annual Retreat for Entering Students, or HP Communications Assistant)

Ms. Amara Anderson, HP Coordinator
aanderson75@gatech.edu
404.894.5709
Eighth Street West 009

- HP events
- HP finances (e.g., reimbursements)