

# UVA Advance

Summer College Experience for Talented High School Students

## Course Catalog



2024

# UVA Advance Course Placement

Students in UVA Advance enroll in two undergraduate classes, for a total of six credits.

The first class is selected from one of the four Core classes and is comprised solely of students in the UVA Advance program. Core classes meet daily, Monday-Friday, from 2-4:15.

The second class is selected from the Elective offerings, which consist of suitable 1000- and 2000-level undergraduate classes which fit the program schedule. Students will enroll alongside other undergraduates in these classes. Elective classes meet daily, Monday-Friday, from 10:30-12:45 (with the exception of Independent Lab Research).

With rare exception (e.g. foreign language classes) there are no prerequisites for any courses open to UVA Advance students, though course faculty may desire students to have mastered certain levels of math or science, if applicable.

UVA Advance students do not directly enroll in classes. In mid-late spring, admitted students will rank their top choices for both Core and Elective classes via a survey, after which they will be notified by program staff of their final course placements.

Every effort is made to place students in one of their top two choices for each class, though this cannot be guaranteed.

Please note that the courses in this catalog, particularly the Elective offerings, are tentative and subject to change.

Students who do not complete the Course Selection Survey will be enrolled in courses based on available space.

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CORE  
CLASSES

# AAS 2760

## Empowered Women of Africa

This course will examine the captivating lives and inspiring stories of empowered women from across eastern and southern African regions. We examine the role that African feminist ideologies have played in shaping and enriching the narratives of African women, both in the pre- and post-colonial eras. Some of the questions we discuss are: How do these women navigate the intricate web of gender constraints, and even violence, in order to initiate change in their communities? How do they challenge deep-rooted traditions to contribute to political and civic engagement?

This course, through an analysis of texts, films, short stories, and interactions with African women, will give students a better understanding of how cultures, institutions, national and political trends, continue to define and shape the lives of African women.



Anne Jebet Rotich has taught Kiswahili and African cultures and literature for more than two decades at the university level in the US and in Kenya. Anne's research interests range across the field of African Studies, Education in Africa and in the US, Social Studies and Global Education. Her published work examines a broad spectrum of issues including the analysis of African literary works and the teaching about Africa in the US.

**Instructor: Anne Rotich**  
*Assistant Professor of African-American and African Studies*



# EVSC 2050

## Introduction to Oceanography

This course analyzes the principles that govern the world's oceans and their integration into an understanding of the major marine environments. Topics include marine pollution, global climate, and marine policy.



Stephen Macko has taught at UVa since 1989. He holds a B.S. in chemistry from Carnegie-Mellon University, an M.S. in marine chemistry from the University of Maine, and a Ph.D. in chemistry from the University of Texas. He has authored hundreds of refereed research papers and books, and he was elected a Fellow of the Geochemical Society and European Association of Geochemistry. He has been featured on Discovery and National Geographic television programs, as well as in a number of public and commercial radio and television interviews.

**Instructor: Stephen Macko**  
*Professor of Environmental  
Sciences*



# GSVS 2150: Global Sustainability

The search for new social, spatial, and technological systems that do not require undue and increasing amounts of finite resources is known as sustainability. Over the past 50 years, Earth's human population has doubled to 7.8 billion people and is projected by the UN to increase to 9.8 billion by 2050 and nearly 11 billion by 2100. Multiplied by a growing per-capita rate of consumption, the resulting effect is an accelerated depletion of natural resources, worldwide water and energy shortages, pressure on global food supplies, loss of biodiversity, increasing global health challenges, rapid urbanization, and social upheaval. These issues threaten human well-being and the Earth's ecosystems.

This integrated and interdisciplinary course prepares students to understand, innovate, and lead efforts to confront these issues. It provides foundational knowledge on the multifaceted aspects of both problems and solutions, and challenges participants to deepen their understanding of sustainability issues from the local to global scale.



Spencer Phillips is an ecological economist with more than 30 years' experience focused on the intersection of economic development and environmental stewardship. His passion is for helping people and institutions realize – that is, to understand and to attain – the benefits of environmental improvement. He achieves this through research into the value of ecosystem services, especially as impacted by climate change, land and resource waste management, and efforts to reduce air, water, and solid waste pollution, and by communicating these values to stakeholders and decisionmakers at all levels of government.

**Instructor: Spencer Philips**  
*Assistant Professor of Global Studies*





# HIST 2559:

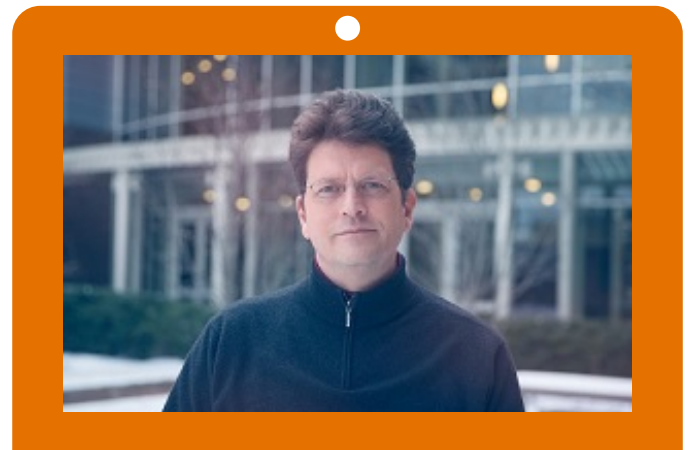
## Genocide

One of the defining features of the twentieth century was the repeated use of genocide and other forms of one-sided mass violence by states against internal and external populations. In this course, we will explore these phenomena from theoretical and historical perspectives, with particular attention to the Armenian genocide, the Holocaust, the mass atrocities carried out by maximalist Communist regimes (e.g., Stalin's USSR, Mao's China, and Pol Pot's Cambodia), and the "ethnic cleansings" and genocides of the post-Cold War era (e.g., in the former Yugoslavia and Rwanda). While the experience of victims will be of central concern, we will also examine the experience and motivations of perpetrators, the explicit and implicit goals of regimes that resort to one-sided mass violence, and the response -- or lack of response -- by members of the international community.



Jeffrey Rossman earned his Ph.D. from the University of California, Berkeley. His areas of expertise include Russia/USSR, Modern Europe, Communism, and Genocide. Professor Rossman is the recipient of numerous academic awards, including a Collaborative Research Fellowship from the American Council of Learned Societies on reframing the history of Soviet mass violence in the 1930s and 1940s.

**Instructor: Jeffrey Rossman**  
*Associate Professor of History*







**ELECTIVES**

# **AAS 2224: Black Femininities and Masculinities in US Media**

This course will address the role the media has played in creating images and understandings of “Blackness” in the United States, particularly where it converges with popular ideologies about gender. We will explore how different media, including feature films, popular television, documentaries, popular fiction, television, and print news media create categories of race and gender in different ways for (different) Americans - each medium encapsulating its own markers of legitimacy and expertise - each negotiating its own ideas of authorship and audience. We will concentrate on the particular ways various media produce, display, and disseminate information; in particular, we will be analyzing cultural texts, the cultural environment in which they have been produced, and the audience reception of those texts. Finally, we will ask what responsibilities those who create and circulate information have - and whether or not the consuming/viewing public shares in any sort of responsibility. This class will enable students to cultivate theoretical tools and critical perspectives to analyze and question the influence of the popular media that saturate our lives.

## **ARTH 1500: Art and War**

This course examines the theme of warfare in the visual arts through time and across the globe. We will be looking at works commissioned by governments, individuals, and some created by those, literally, in the trenches. Historical/political context, iconography, style, and geography are intensely examined as they relate to themes such as propaganda, resistance, and narrative. Central to this course is the question of how one depicts intangibles of horror, the sublime, heroism, etc. Students will be expected to apply these themes to objects outside of those covered in the course, thoroughly researching, reporting, and responding to inquiries presented by the instructor and the rest of the class. Ideas and problems will be discussed daily in a seminar environment.

# ASTR 1220: Introduction to Stars, Galaxies, and the Universe



I was put in both a challenging and helpful environment with rigorous classes and practical mentorship, helping me address and overcome my classes' academic challenges.  
-- UVA Advance Student



This course is an excellent first course in astronomy.

A study of stars, star formation, and evolution primarily for non-science majors. Topics include light, atoms, and modern observing technologies; origin of the chemical elements; supernovae, pulsars, neutron stars, and black holes; structure and evolution of our galaxy; nature of other galaxies; active galaxies and quasars; expanding universe, cosmology, the big bang, and the early universe.

## DANC 1400: How Dance Matters

This course is an introduction to dance in the context of performance on stage, on screen, and in public space. Through viewings, discussions, and practical dance experiences, students will deepen their understanding of how dances are created and how dance shapes and is shaped by the world around it. Students will engage with a wide range of styles, historical periods, and creative approaches to consider how dance matters.

## DRAM 2070: Public Speaking

The purpose of this course is to put principles of speech into practice; students will learn to communicate effectively primarily through practical experience. Students will (1) learn the basic principles of speech preparation and delivery, including invention of topics and arguments, organization, and style; (2) apply these principles to your speech preparation and delivery; and (3) develop and use listening skills in the analysis of speeches.

# **ECON 2010: Principles of Economics: Microeconomics**

This course studies demand and supply, consumer behavior, the theory of business enterprise, the operation of competitive and monopolistic markets, and the forces determining income distribution. A full introduction to economic principles warrants completion of both ECON 2010 and 2020. Students planning to take both semesters of economic principles are advised to take ECON 2010 first

## **ETP 2500: Write Climate: Art & Community**

Work hands-on to create art examining our need to address the changing climate through waste reduction. Write Climate courses use art as a tool to communicate about climate change, engage with community, and encourage action. Students will research specific climate science history, policy, and solutions; examine sustainability resources and UVA's 30x30 goals; explore the role artists play in reflecting anthropogenic concepts; and create individual and collective visual work for public exhibition.



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Exposure to college life was really useful for helping me contextualize what college will actually be like... it makes me excited for what the future holds!  
-- UVA Advance Student

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# **FREN 2020: Intermediate French II**

## **(Department Placement Test required prior to enrollment)**

FREN 1010, 1020, 1050, 2010, 2020 and 2320 focus on the learning and acquisition of the French language with the goal of developing communicative competence and cross-cultural understanding in relation to the Francophone world. The elementary and intermediate-level courses incorporate a balanced emphasis on vocabulary and grammar, oral skills, listening and reading strategies, and process writing. Use of authentic texts (video, audio, and print), including literary and cultural readings, short films, television, music, and Internet media, provide the basis for development of linguistic skills, communicative competence, and cultural awareness. The sequence is designed around an interactive, communicative approach, with a focus on communication in meaningful contexts. Class is conducted entirely in French. *Students who express interest in FREN 2020 will be contacted regarding next steps for taking the placement test.*

Final decisions about placement in French language courses in the sequence FREN 1010-2320 are the responsibility of the Director of the Language Program.

Students who test into FREN 2020 typically have 2-4 years of French language study at the high school level. In addition to the required placement test, students are *strongly encouraged* to discuss this class with a high school counselor or foreign language teacher prior to enrolling, as it may disrupt the scheduled program of language study at the high school level.

# **MATH 1210: Applied Calculus I**

A first calculus course for business/biology/social-science students. Topics include limits and continuity/differentiation and integration of algebraic and elementary transcendental functions/applications to related-rates and optimization problems as well as to curve sketching and exponential growth. At most one of MATH 1190, MATH 1210, and MATH 1310 may be taken for credit.

Note: This is a challenging, fast-paced math class. It is *strongly recommended* that students have prior exposure to calculus.

Students are also *highly encouraged* to discuss this class with a high school counselor or advanced math teacher prior to enrolling, as it may disrupt the scheduled program of study at the high school level.

# PHYS 1130: Physics of Sports

A study of the physics concepts behind the motion of spinning and curving projectiles in worldwide sports such as soccer, tennis, basketball, baseball, football, etc. and rolling and sliding balls/disks along a flat surface. Basic explanations include utilizing kinematics, gravity, friction, air flow, and Newton's Laws. Learn about hang time, topspin, dimples, drag crisis, sideways forces, least energy launch angle, jumping, and crouching.

Note: Students should have successfully completed Algebra I and Physics I (or higher) at the high-school level.

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**Frankly, all of the UVA Advance students in my class were talented, hardworking, and very interested in the subject matter.**

**--- UVA Advance Elective Class  
Professor**

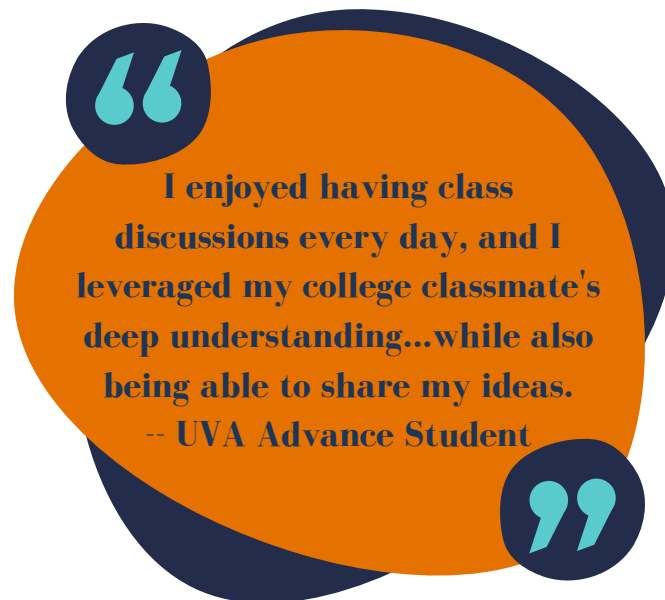
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# PLCP 2600: Rise and Fall of the Soviet Union

This course is about Russia and the Soviet Union. It is designed to explore some of this country's major political themes of the twentieth century through an understanding of Russia's history, culture and politics.

# RELG 1040: Introduction to Asian Religions

Hinduism, Buddhism, Confucianism, and Daoism have shaped and continue to shape art, culture, philosophy, politics, and daily life in Asia and across the globe. This course offers an introduction to the history, beliefs, and practices of these four traditions, as well as an opportunity for students to reflect critically on their own views about ultimate reality, the self, and what it means to live a meaningful life.



## SLAV 2360: Dracula

An introduction to Slavic folklore with special emphasis on origins and subsequent manifestations of vampirism. Western perceptions, misperceptions and adaptations of Slavic culture are explored and explicated. The approach is interdisciplinary: folklore, history, literature, religion, film, disease and a variety of other topics.



# INST 1500: Independent Lab Research

Students interested in independent projects in a STEM field may opt to perform independent research in a lab overseen by a professor and graduate student(s).

In previous summers, we have facilitated placements in labs related to computer science, biomedical sciences, chemical engineering, and mechanical engineering. Admitted UVA Advance students interested in this option share their research interests with us, and we seek to place them in a relevant lab - under the guidance of a faculty member and graduate students. Students are expected to spend four+ hours per day (M-F) working in the lab or on independent project work. Students earn three credits for the research experience.

**Lab placement is not guaranteed.**

Note: Letter grades are not assigned for the undergraduate research option; students are enrolled in the affiliated course on a Credit/No Credit basis. Many institutions require letter grades to be assigned for outside credits to transfer in, making these credits less likely to apply to undergraduate degrees outside UVA.





**WORKSHOPS**

# Undergraduate Success Workshops

This 0-credit course is required of all UVA Advance participants. Workshops meet every Tuesday and Thursday from 4:30-5:30 pm and are designed to help students prepare for the challenges and opportunities facing undergraduates, at UVA and elsewhere.

## **Topics include:**

Study Skills

Library Research

Undergraduate Admissions

Education Abroad

Mental Health and Wellness

Student Safety and Bystander Awareness

Although this course does not receive credit, it does receive a pass/fail grade and is reflected on student transcripts. Student success is determined based on attendance, participation, and short written reflections.



**QUESTIONS?**

**CONTACT US:**

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**SUMMER.VIRGINIA.EDU/UVA-  
ADVANCE**



UVASummerSession\_



UVA Summer & Special  
Academic Programs