

# Examples of Honors Options

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This document includes examples that are meant to guide you when writing your honors option. As seen in these examples, you should provide a description of the course, explain how the content of the option extends the course, and conclude with a statement of deliverables.

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## [Example: COMM-357 Communication, Gender, and Media](#)

### **Project Title (will be “Honors Option” on your transcript if left blank)**

Analysis of Gender Representation in Video Games

### **Course Description (from SIS)**

This course examines the relationship between gender and media communication with specific attention to how gender affects choices in mass media and social media practices. Students explore how gender, sexual orientation, sexuality and social roles, affect media coverage, portrayals, production and reception. They consider issues of authorship, spectatorship (audience), and the ways in which various media content (film, television, print journalism, advertising, social media) enables, facilitates, and challenges these social constructions in society. The course covers communication theories and scholarship as it applies to gender and media, methods of media analysis, and topics of current interest.

### **Overview**

Video games play an important role in gender socialization, especially for youth and young adults, who spent a significant amount of their free time playing and interacting with other like-minded individuals in digital spaces. Gaming norms are founded on masculine behavior and gaming discourse that often emphasizes heterosexist norms and male traits such as blowing things up, killing and domination. Visual representations of characters and avatars often present males as hyper-masculine while females are highly sexualized, normalizing male aggression and reinforcing stereotypes about females being valued for their physical appearance and submissiveness.

In this Honors option, I will apply the theoretical concepts related to gender studies and media studies to analyze video games developed at RIT. Working with the course instructor, I will first conduct a

thorough review of the existing research on gender representations on video games, then develop a codebook to analyze video games developed by students, alumni, and faculty at RIT. The goal of the project is to understand how these games represent gender visually and in the game storylines. As a new media and design major, the research findings will help me identify how academic video games address gender-based stereotypes.

### **Deliverables**

The course instructor will supervise my study design, literature review, and analysis of the video games. The completed research paper will be shared with the New Media Design faculty and students.

## Example: ENG-450 Free and Open-Source Culture

### **Project Title (will be “Honors Option” on your transcript if left blank)**

Malware in the Open Source Setting

### **Course Description**

This course charts the development of the free culture movement by examining the changing relationship between authorship and cultural production based on a variety of factors: law, culture, commerce and technology. In particular, the course examines the rise of the concept of the individual author during the last three centuries. Using a variety of historical and theoretical readings, students will learn how law and commerce have come to shape the prevailing cultural norms surrounding authorship, and will also examine lesser-known models of collaborative and distributed authoring practices. This background will inform a study of the rapid social transformations wrought by media technologies in the last two centuries, culminating with the challenges and opportunities brought forth by digital media, mobile communications and networked computing. Students will learn about the role of software in highlighting changing authorship practices, facilitating new business and economic models and providing a foundation for conceiving of open source, open access, participatory, peer-to-peer and Free (as in speech, not beer) cultures.

### **Overview**

Free and Open-Source Software (FOSS) is software that allows the user to use, read, edit, and redistribute the software's source code. The concept of FOSS was popularized in the 1980s by Richard M. Stallman, a professor at Massachusetts Institute of Technology. Many organizations and projects use different definitions of Free Software, or use the ambiguous term, “Open Source,” which creates inconsistency and interferes with the productivity in FOSS and Open-Source communities. Additionally, FOSS is shrouded in controversy because of infighting and politically motivated licensing practices. Despite these obstacles, many FOSS communities are vibrant and thriving. Notable FOSS projects include the Linux kernel, many BSD and Linux operating systems, the MySQL database and the Apache web server. The FOSS community is relevant today because of libre and privacy activists, passionate software developers, and a growing need for information transparency.

In this Honors option, I will use the course readings to inform and enrich my understanding of FOSS malware tactics, development, communities, and implementation. The articles will highlight the importance of FOSS in malware and cybersecurity, including things like documentation and collaboration. In addition, some articles will examine the social workings and economic development behind successful FOSS malware projects and communities.

My goal is to provide future students, faculty, and other interested parties with quality FOSS malware analysis, which will be used to improve the development and understanding of FOSS at Rochester Institute of Technology. The development of this project will enhance my understanding of malware, FOSS, and the social and economic traits of FOSS malware projects. I will learn about the historical and social context of FOSS issues, and highlight their relevance in my research. This independent research project will help me become a better software developer, help future students interested in FOSS malware, and assist the faculty interested in studying FOSS malware.

### **Deliverables**

I will write articles focused on open-source malware and open-source cybersecurity, based on the course readings. The finished articles will be submitted to Wired Magazine, Cyber Defense Magazine, The Linux Journal, The Hacker News, and opensource.com. Near the end of the semester, I will create a presentation on the trends in open-source malware that I will present it to the class and to RITSEC.

## [Example: ENVS-250 Applications of Geographic Information Systems](#)

### **Project Title (will be “Honors Option” on your transcript if left blank)**

Examining the Aflaj System through GIS

### **Course Description**

Applications of GIS is a general education elective that counts towards the science elective requirement for my major. I chose this course because I hold a strong interest in environmental science and mapping which is not directly related to my major, computer science. This class enables students to use digital maps to present multiple layers of information simultaneously in an effective and easy to understand manner. Additionally, it introduces various applications of spatial analysis across different disciplines through geographic information systems.

### **Overview**

Water is an indispensable natural resource that sustains life on Earth; yet it is not always readily available in all parts of the world, especially deserts. Moreover, as global warming has become more prominent in recent years, and continues to affect Earth’s natural water cycle, water availability is an issue that requires serious attention.

In this Honors option, I will explore Aflaj, the traditional irrigation system of Oman. It is a world heritage site that has survived several centuries and is still in active use. I plan to examine its management and the water resources it utilizes. I will also address possible environmental concerns it faces, including growing population, decreasing rainfall, and depletion of the water table. With the help of the course professor I will learn to use GIS software including ArcGIS Pro/Online to develop a geodatabase, digitize 2-D maps and carry out analyses to achieve the aforementioned goals.

### **Deliverables**

Under the guidance of the course instructor I will put together my research in the form of interactive digital maps using Esri’s StoryMaps, which I will present in a classroom.

## Example: MEDS-250 Human Anatomy and Physiology I

### **Project Title (will be “Honors Option” on your transcript if left blank)**

Effects of Race-Based Pseudoscience on Modern Healthcare Delivery

### **Course Description**

Anatomy and Physiology I is a lecture and laboratory course focusing on the structure and function of body systems, including the nervous, endocrine, integumentary, muscular and skeletal systems. It is a requirement for the pre-professional phase of RIT’s Physician Assistant program. Laboratory experiences include anatomical dissections, histological study and examination, and physiological experiments. The course description on SIS reads as follows:

This course is an integrated approach to the structure and function of the nervous, endocrine, integumentary, muscular and skeletal systems. Laboratory exercises include histological examination, actual and simulated anatomical dissections, and physiology experiments with human subjects.

### **Overview**

The consequences of systemic racism in the United States are ubiquitous, seen particularly in the quality of healthcare available to people of color and the treatment of minorities in medical research. Historically, medical bias has been a source of discrimination and injustice, supported through questionable anatomical evidence. From pain tolerance to kidney function, racially disparate perceptions of anatomy lead to inequitable treatment offerings in modern healthcare, causing disproportionate loss of life in minority groups to this day.

In this Honors option, I plan to use the basic anatomical understandings learned in this course as a foundation for further literary review of research into racial bias in healthcare. With the help of the course instructor, I will critically examine and evaluate the past anatomical research that permits misunderstandings of anatomy based on race to persist and affect the healthcare offered to persons of color. Investigation into the ways in which minority trust of the healthcare system, healthcare professionals, and medical research is affected by their mistreatment in the system will also be relevant to include. This task will involve extensive reading of published research and journal articles on the topics of race inclusion in medical research, as well as potential interviewing health professionals or students in health professions who have involvement in activism towards eliminating racial bias in research and healthcare. The development of such a research project will extend my understanding of anatomy beyond the purely scientific or biological domain. This complex study of anatomy is enriched by a historical and cultural context that will enhance critical awareness of my own biases, helping me to recognize and address prejudice in order to serve all communities equitably as a better educated and socially-aware physician assistant.

### **Deliverables**

The course instructor will advise my literature review, and I will compile the information I find into a report on racial bias in research and medicine that will be made available to interested readers in the College of Health Sciences and Technology to raise awareness on the topic. In addition to a written report, an oral presentation will be delivered to laboratory classmates and other interested parties.

The course instructor will determine that I have met the requirements for this Honors option in a satisfactory display of quality research and analysis, ensuring exceptional representation of Honors-level coursework.

## Example: MATH-241 Linear Algebra

### **Project Title (will be “Honors Option” on your transcript if left blank)**

Introduction to Electrical Impedance Tomography

### **Course Description (from SIS)**

This course is an introduction to the basic concepts of linear algebra, and techniques of matrix manipulation. Topics include linear transformations, Gaussian elimination, matrix arithmetic, determinants, vector spaces, linear independence, basis, null space, row space, and column space of a matrix, eigenvalues, eigenvectors, change of basis, similarity and diagonalization. Various applications are studied throughout the course.

### **Overview**

Cancer researchers have found that tumors tend to conduct electricity much better than healthy tissue, and it is hoped that this fact can be exploited to devise a new means of detection: locate tumors by locating regions of high conductivity (low resistivity). As a practical matter, since our intention is to avoid dissecting the patient, this requires us to reconstruct the conductivity of a body's interior based solely upon knowledge at its boundary, and that is the goal of electrical impedance tomography (EIT).

In this honors option, I will extend the standard course in linear algebra by investigating its application to electrical impedance tomography. Under the direction of the course instructor, I will familiarize myself with the physical laws that govern voltage and current in biological tissue, and the systems of linear equations that result from them in inhomogeneous (location-dependent), anisotropic (direction-dependent) situations. This will involve directed reading, and the completion of exercises in which I see how the ideas and techniques of linear algebra help us to accomplish the goal of EIT. In the end, I hope to have a thorough understanding of the problem and the associated linear algebra.

### **Deliverables**

The course instructor will help me learn the basics of LaTeX (a mark-up language used for mathematical writing), and I will use what I learn to write a report that summarizes the application of linear algebraic ideas to the problem of EIT. I will also deliver an oral presentation of my findings at the Honors Creativity and Research Symposium. The instructor will coach me toward a high-quality outcome, and will assess whether my work demonstrates the substance and quality expected of honors students.

## Example: PSYC-222 Biopsychology

### **Project Title (will be “Honors Option” on your transcript if left blank)**

Biological Risk Factors for a Predisposition to Zoom Dysmorphia

### **Course Description**

This course provides an introduction to the field of behavioral neuroscience (the study of neurobiological basis of cognition and behavior). Topics include neuroanatomy and physiology, localization of function, brain injury, research methods in behavioral neuroscience, and biological basis of language, memory, emotion, conscious states, and sexual behavior, with an evolutionary perspective.

### **Overview**

Given the recent switch to online learning, many students are now using Zoom and other face-to-face platforms as a substitute to classroom education. Psychologists have noticed an increase in self-esteem issues, body dysmorphia, and reports of an uptick in people seeking plastic surgery. This phenomenon has been tentatively termed “Zoom Dysmorphia,” and there is a conjecture that this emerging condition has to do with the increase in frequency of seeing oneself on a computer screen.

In this Honors option, I will seek to answer the question of whether or not there is a biological basis, through family history of mental illness, that increases the likelihood of people being affected by Zoom Dysmorphia. I will begin by researching the literature on this topic and related disorders in which social media impacts is linked to body dysmorphia. I will then complete required online training, which will further my understanding of human research ethics. Next, I will create a survey for students to take in an attempt to answer my research question. Once data has been collected, I will then analyze it and write a report of my findings. This project will enrich my understanding of biopsychology because it will give me hands-on experience in psychological research as well as expand my knowledge on biological bases for mental illnesses, which will be crucial in my career path in mental healthcare.

### **Deliverables**

The course instructor will advise my literature review prior to the beginning of my project and assist in setting up a quality survey that I will be able to use to answer my research question. Once the data-gathering is complete, I will write a paper describing the methods, data, and results. Finally, I will present the information to my Biopsychology class or to the instructor’s faculty lab group.