



HEP-203: HONORS STUDIES: SCIENCE

Effective Term

Fall 2024

BOT Approval Date

12/14/2023

Discipline

HEP - Honors Enrichment Program

Course Number

203

Course Title

Honors Studies: Science

Short Title

Honors Studies: Science

Credit Status (CB 04)

D - Credit - Degree applicable

Units**Lecture Units**

3.00

Total Units

3.00

Hours**Lecture Contact Hours**

48-54

Out of Class Hours Lecture

96-108

Total Contact Hours

48 - 54

Total Out of Class Hours

96 - 108

Total Student Learning Hours

144 - 162

Distance Education

Yes

Distance Education**Distance Education Type**

Both Fully Online and Hybrid Online

Fully Online Delivery Requirements:

- a. Students must be notified via the college schedule of classes and the syllabus for the class if proctored tests are required for this course
- b. Any planned face-to-face meetings, such as an orientation or study session, must be optional

c. The MSJC curriculum committee requires the use of accessible, asynchronous discussion as a component of every fully online course

Are you using publisher content?

No

Regular Substantive Interaction

Instructor-to-student, student-to-student, and student-to-content contact shall be distributed in a manner that will ensure regular substantive interaction (RSI) is maintained not only weekly but also for the duration of the course. Instructor interactions should be equivalent in time, quality and consistency to the engagement students would receive in a face-to-face course—for example, through announcements, discussion participation, personalized feedback, video messages, or other instructional communications. Instructors are expected to be responsive to student inquiries within a 24-72 hour time frame excluding holidays. RSI will be maintained through a variety of methods:

- Orientation - Students must be oriented to the online and face-to-face portions at the start of the course.
- Announcements - Announcements using the course management system must be posted at least weekly to keep students current on course events, due dates, materials, etc.
- Discussion Forums - Content-related discussion forums within the designated CMS will include appropriate instructor participation and will be initiated and maintained, with timely feedback provided. Instructors are required to monitor the discussions and related activities to provide guidance and direction. Open-ended discussion boards may be used to further learning and interaction.
- MSJC Communication – Instructor will use MSJC-administered communication tools (such as email or the designated CMS communication tools) to regularly communicate with and provide ease of access to students.
- Timely Feedback - Timely feedback on student work will be provided by the instructor, which may include comments and/or rubrics, within the Grades area of the designated CMS.
- Scheduled Meetings – Hybrid and synchronous courses will meet at regularly scheduled times.

ADA Compliance - All course interactions and content must be designed with accessibility in mind and meet ADA requirements.

Additional Regular Substantive Interaction

- Discussion Boards - Course and technical issues are addressed in a separate discussion board. It is recommended that faculty will respond within 48 hours, except for holidays and weekends.
- Email Communication - E-mail communication may be used to reinforce announcement and discussion board communication. It is recommended that faculty will respond within 48 hours, except for holidays and weekends.

Catalog Description

This Honors course is a weekly symposium on the selected multi-disciplinary topic in which students and faculty from a variety of disciplines participate. The course requires synthesis of information, critical analysis of research, and creative responses to the issues presented.

Requisites

Prerequisite(s)

Prerequisite(s) (must be taken before)

ENGL-C1000 (with a grade of C or better).

Other Enrollment Criteria

Other Enrollment Criteria

Membership in the Honors Enrichment Program is required.

Codes

TOP Code (CB 03)

1901.00 - Physical Sciences, General

CIP Code

30.1501 - Science, Technology and Society.

Repeatability Code

No

Grading Option

Letter grade OR P/NP

Learning Objectives

Learning Objectives

Learning Objective

1. Analyze data presented with regard to logic, credibility and relationship to other information.
2. Synthesize multiple perspectives to create an understanding of the history, current ramifications and future implications of the issue presented as the course topic.
3. Demonstrate critical listening skills by articulating the concepts presented and interpreting their relevance within a global perspective.
4. Appraise contemporary research in a variety of fields related to the course topic.
5. Formulate original conclusions with regards to the impact on past, present and/or future societies.
6. Produce an extensive project (minimum of 10 pages) based on student's own original research as it relates to one of the multiple perspectives of the course topic.
7. Create several short written assignments related to the theme and topics presented in the course.
8. Contribute to a class community of scholarship through the active participation in class discussions as consistent with a seminar course.

Learning Outcome Information

Course Learning Outcomes

Learning Outcome

1. Honors students will produce a research focused project that contributes to the academic body of knowledge in an innovative or novel manner.
2. Student demonstrates an awareness of a diversity of perspectives on the seminar and/or the research topic.
3. Student can effectively communicate an original perspective or position related to the seminar topic or their research and discoveries in an oral or visual medium accessible to a wide range of audience.
4. In seminars that incorporate service learning, students will spend the requisite number of hours volunteering and produce a reflection piece that clearly demonstrates the significance of the experience and incorporates an awareness of the context of the topic.
- 5- Student engages with the faculty and fellow students in a community of scholars.

Program Learning Outcomes

Learning Outcome

1. Membership (enrollment and retention) of the Honors Program accurately reflects the demographic diversity of the college and community. This includes ethnicity, gender, sexual orientation, age, socioeconomic status, first generation, geographic distribution, and veteran populations.
2. Honors courses will incorporate academically rigorous research as part of the honors experience. This will be reflected in honors course outlines of record including research as a central component, and through the participation of faculty at conferences, presentations, performances and publications and membership in professional organizations.
3. Honors Students and Faculty serve as leaders within and outside of the college. This includes SI, Tutoring, Mentors, SGA, PTK, committee service and chairs, Senate, community involvement, and participation in regional and national organizations (including Honors).
4. Honors students participate in activities on and off campus that enrich their college experience, including service learning and community volunteerism. Honors faculty participate in professional development activities that enrich the Honors Program and their students.
5. Honors students and faculty will engage in positive transgressive behavior that encourages innovative research and willingness to take risks with scholarship.
6. The Honors Program will promote holistic well-being of the students and faculty. This includes support of the health centers, the offering of counseling, support services information, and personal enrichment workshops and through the individual and personal interactions and mentoring within the program.

Institutional Learning Outcomes

Communication: The student will effectively express and exchange ideas through listening, speaking, reading, writing, visual works, and other modes of interpersonal expression.

Critical Thinking: The student will analyze problems, gather and synthesize relevant information, evaluate ideas, information, and evaluate alternative points of view to create, innovate and implement effective solutions.

Cultural Awareness and Humility: The student will demonstrate knowledge of and sensitivity toward individuals of diverse ethnicity, age, gender, sexual orientation, and religious affiliations, as well as toward those individuals with diverse abilities and socio-economic classes to respectfully interact with individuals of diverse perspectives, beliefs and values while being mindful of the limitation of their own cultural frameworks.

Information and Technology Literacy: The student will access, interpret, evaluate, and apply relevant information sources and digital media effectively, and in an ethical and legal manner.

Scientific Awareness: The student will apply the scientific method of inquiry to assess potential solutions for real-life challenges by employing science-based knowledge and methodologies in daily life.

Social Awareness: The student will recognize and analyze the interconnectedness of global, national, and local concerns, analyzing cultural, political, social, and environmental issues from multiple perspectives and appreciate similarities and differences among cultures.

Content

Course Lecture Content

1. Definition of terms vital to discussion of the issue.
2. Presentation of appropriate research methodology, including the development of a research topic, the identification of appropriate sources and the production of original research.
3. Historical perspective, as relevant, explored.
4. Global perspective, as relevant, explored.
5. Specific examples, analysis and/or application from a variety of different disciplines. Although the focus of this course will be on topics related to the Sciences, in order to truly have a multi-disciplinary experience the course that may include perspectives from a variety of academic areas including:

Social Sciences

Natural Sciences

Physical Sciences

Humanities

Mathematics

Career and Technical Education

One example of implementation: Topic: The Legacy of Charles Darwin

1. Introduction of the Course.
2. Discussion of what constitutes innovative research and the identification of appropriate sources.
 - A. Scientific Method and Scientific Research
3. Origins of an Idea. - Biographical Sketch of Darwin. - Historical developments leading up to Darwin. - Overview of Natural Selection.
4. Historical and Current responses to Natural Selection and Evolution.
5. Modern Genetic Applications of Evolution.- Modern studies of DNA- Study of Evolutionary Development
6. Analysis of the role of Natural Selection on human society and disease.- How humans can act as a natural environment for pathogens.- How human culture responds to epidemics, and the effect of social institutions of affecting health issues as a result of racialization rather than genetics.
7. Analysis of the role of Darwin's ideas in Psychology.- How human brain and behavior have evolved- How researchers understand the role of biology in behavior
8. Literary Analysis of the novel "Oryx and Crake" informed by Natural Selection and Evolution.- Analysis of evolutionary themes (implicit or explicit) in the novel Oryx and Crake.
9. Historical Analysis of the role of Evolution and Natural Selection in Eugenics and the Third Reich.- The role that Darwinian ideas played in the development of Eugenics.- How American immigration and sterilization policies affected the development of the Third Reich's ideas about race hygiene.
10. Analysis of the role of the teaching of evolution on American politics.- What law cases have affected the teaching of evolution in the classroom- how the theoretical perspectives of various members of judiciary will contribute to the various rulings.
11. Analysis of the role of sexual selection in evolution.
12. Analysis of Darwin's impact on modern philosophy.
13. Application of natural selection on food resources.
14. Critical analysis of the text "Monkey Girl" as a reflection of the Scopes and Dover trials.
15. Use of Natural Selection and Evolution towards analysis of Film.

Methods of Instruction

Method

Discussion

Integration

Students and faculty will engage in discussions concerning the theme of the course and the topic of the presented lecture. Students will be expected to approach the material in the discussion from a variety of perspectives and recall information presented in earlier lectures to enhance the discussion. For example there could be a discussion and critique surrounding the misapplication of Darwinian and Evolutionary perspectives within the Eugenics Movement.

DE Adaptations for MOI

Student discussion will be achieved using threaded discussions with other students and the instructor within the CMS, or by participating in synchronous discussions using accessible video conferencing platforms.

Method

Lecture

Integration

Faculty will lecture from the perspective of their own disciplinary background on a variety of topics related to the course theme. The lectures will provide students a baseline knowledge for discussions on the topic and theme.

DE Adaptations for MOI

Lecture can be communicated through the CMS in a variety of formats including accessible PowerPoint presentations and accessible video lectures. Websites and accessible online videos can be incorporated as part of these lectures. Lectures can be delivered synchronously through accessible video conferencing platforms.

Method

Film/video Viewing and Discussion

Integration

Accessible films and other media can be used to augment the faculty lectures by presenting additional perspectives on the subject and also as a springboard for additional discussion topics.

DE Adaptations for MOI

Accessible films and online videos can be incorporated as part of the CMS with discussions also facilitated through the CMS.

Method

Papers and Reports

Integration

Students will work on an extensive research project over the course of the semester that will investigate the chosen course topic from one or more academic perspectives. Through this research students will gain skills related to reading primary sources, synthesizing information and creating effective arguments.

DE Adaptations for MOI

Students will be expected to complete papers that involve applying their research to the chosen course topic. Accessible project instructions will be provided through the CMS, and students can submit their completed projects into the Assignment Pages within the CMS.

Method

Reading

Integration

Students will be expected to read assigned texts, articles and novels and be prepared for classroom discussion. In addition, students may be expected to summarize and analyze the readings in short written response papers.

DE Adaptations for MOI

All reading assignments can be delivered either through material provided in the CMS or through the assigned texts.

Methods of Evaluation**Method**

Class Participation

Integration

Students will be evaluated based on the number and quality of in-class participation. Class participation will be used to evaluate the student's ability to demonstrate critical listening skills, appraise contemporary research, and analyze presented data.

DE Adaptations for MOE

Class participation will be evaluated on the frequency, relevance and appropriateness of student responses in in-class discussion regarding lecture and discussion material. Students will obtain instructor feedback through participation assignments in the CMS, along with putting feedback in the comments section of those assignments. Class participation can also be assessed through the quantity and quality of participation in appropriate and accessible video conferencing software (including participation in a "chat" function).

Method

Papers

Integration

The smaller response papers will be evaluated on the basis on accuracy of content, appropriate number and kinds of sources, proper use of an approved citation style, clarity of writing, and proper use of grammar and spelling.

DE Adaptations for MOE

Papers will be submitted via the CMS and instructor feedback will be given within the CMS using rubric with written feedback options.

Method

Oral Presentation

Integration

Students will present their research project as an oral or poster presentation and will be evaluated based on the accuracy of content, ability to argue the identified position, originality of ideas and application of critical thinking, clarity of speech and language, and appropriate use of visual aids. Presentations will be used to evaluate the student's ability to synthesize multiple perspectives and formulate original conclusions.

DE Adaptations for MOE

Presentations can be submitted via the CMS or delivered within a appropriate and accessible video-conferencing software and instructor feedback will be given within the CMS using rubric and written feedback options.

Method

Research Projects

Integration

The major research paper will be evaluated on the basis on accuracy of content, ability to argue the identified position, originality of ideas and application of critical thinking, appropriate number and kinds of sources, proper use of an approved citation style, clarity of

writing, proper use of grammar and spelling. The research project will comprise a minimum of 50% of the student's final grade. The research project will be used to evaluate the student's ability to synthesize multiple perspectives, appraise contemporary research and formulate original conclusions. Additionally the research project will be used to evaluate the student's ability to produce an extensive projects based on original research. For example a student might look at the degree to which ones genetic identity relates to their other facets of identity (population, racial, ethnic, gender, sex, etc...)

DE Adaptations for MOE

Research projects will be submitted via the CMS and instructor feedback will be given within the CMS using rubric and written feedback options.

Assignments

Assignment Type

Writing

In-class and/or outside of class

Outside of class

Formative or Summative

Summative

Assignment

Compose a 10-12 page paper on their research topic. The topic must be approved by the instructor and relate to the themes addressed in the course. The paper will include an argumentative thesis statement and evidence to support the thesis that is drawn from a minimum of ten academic sources that are appropriately cited in MLA, APA, or Chicago formatting. The paper should be clearly organized and demonstrate effective sentence structure, word choice, an appropriate tone, and proper grammar, spelling, and punctuation. The research paper should not be a mere narration or description of the topic but rather present a position that is well-supported by evidence from source materials. Innovative, original research is strongly encouraged.

Example topics for students to research might include:

The implication of the Neandertal and Denisovan genome on modern humans;

Comparison of genetics versus environmental effects on health;

The effectiveness of proper scientific and evolutionary models on popular culture-based science such as novels or television shows.

How assignment will be adapted in online format

This assignment can be completed in the same exact manner in the online format, accessed through the assignment page in the CMS and submitted via the CMS. Feedback will be provided via comments in the CMS. Feedback will be provided within 1-2 weeks of submission of the paper.

Assignment Type

Writing

In-class and/or outside of class

Outside of class

Formative or Summative

Formative

Assignment

As part of the scaffolding of the final research paper, students will be expected to write a brief (1-2 pages) proposal of the research paper topic. The proposal should clearly demonstrate that the student has done some preliminary examination to determine the viability and relevance of the chosen topic. In addition, the proposal should also contain a working thesis that will help guide the research efforts of the student.

How assignment will be adapted in online format

This assignment can be completed in the same exact manner in the online format, with the student accessing the prompt through the assignment page in the CMS and submitting the completed paper via the CMS. Feedback can be given via comments in the CMS, synchronous meetings using accessible videoconferencing software or via email. Feedback will be provided within a week of submission.

Assignment Type

Reading

In-class and/or outside of class

Outside of class

Formative or Summative

Formative

Assignment

Read the first three chapters of *Evolution Talk: The Who, What, Why and How behind the Oldest Story Ever Told*. Be prepared to summarize the chapters, share your personal reflections about the reading, and discuss the relevance of these ideas to your own major at our next class meeting.

How assignment will be adapted in online format

This assignment can be adapted for the online format by using the Discussion Boards in the CMS to assign the readings, pose the discussion prompt and facilitate the discussion. Students would then be expected to respond to several of their classmates and either respond to the key point identified in the first student's post or attempt an answer to questions posed by their peers. Instructors will provide feedback within a week, either in the Discussion Board itself or as comments to the students in the grading function of the CMS.

Assignment Type

Other

In-class and/or outside of class

In-class

Formative or Summative

Summative

Assignment

Present a 10-12 minute oral presentation to the class. The oral presentation will be based on the their chosen topic for their final research paper. Since the research paper will be approximately 10 pages long, one of the purposes of the oral presentation will be to distill some of the key ideas from the project and develop them into a coherent presentation. This practice mimics one of the standard ways that researchers and academics share information.

How assignment will be adapted in online format

This assignment can be adapted for the online format by either having students submit their presentations synchronously via an accessible videoconferencing software to their classmates, or by recording themselves and uploading their presentations to either a Discussion Board (so that their class peers can see and respond to their presentations) or to an assignment page (if the presentation is only for the instructor). Feedback can be given through the CMS, either directly in the discussion board or through comments in the assignment, and will be expected to be given within a week of the submission.

Course Materials**Textbooks**

Coste, Rick (2022). *Evolution Talk: The Who, What, Why, and How behind the Oldest Story Ever Told*. Prometheus. 978-1633888340

Atwood, M. (2003). *Oryx and Crake* Anchor Books. ISBN: 978-0-385-72167-7

Edward Humes (2007). *Monkey Girl: Evolution, Education, Religion, and the Battle For America's Soul* Harper Perennial. ISBN: 978-0-06-088549-6

Darwin, C. and M. Ridley (1996). *The Darwin Reader* W.W. Norton and Company. ISBN: 978-0393969672

Browne, J. (2008). *Darwin's Origin of Species: Books that Changed the World* Grove Press. ISBN: 978-0802143464

Costa, James T. (2017). *Darwin's Backyard: How Small Experiments Led to a Big Theory* W.W. Norton and Co.. ISBN: 978-0393239898

Other Resources

Texts to be determined by seminar faculty and topic. Articles and multimedia will be placed on reserve by seminar faculty upon determination of topic for that semester and will be drawn from current holdings, interlibrary loan or personal collections. These texts are meant to be used as examples only. Obviously each seminar topic will have a completely different set of readings.

Class Size Information

Class Size

20

Class Size Category

O - Other

Diversity and Inclusion

Explain how diversity and inclusion(e.g., gender, culture/race, sexuality, etc.) is infused into the course.

Obviously as the topic of the class changes, the specific examples of how diversity and inclusion will be addressed will change. The themes of gender, sex, sexuality, race, ethnicity, culture will always be central to the discussion regardless of the specific topic. In the selected example topic of "The Legacy of Charles Darwin" instructors would be able to speak on a number of those themes, such as an historian looking at the role of Social Darwinism and the Eugenics Movement impacting the 2016 presidential election. As part of the teaching of the class, students will read articles and watch movies about different cultural, ethnic, gender and sex identity groups. Care will be taken to also incorporate more studies and research written by individuals who are typically underrepresented in the academic literature.

Describe how assignments, instruction, evaluation, course content, and interactions are contextualized for diverse learners promoting an equitable course.

Again, as described above, the specific course content will change depending on the selected topic for the semester. Of course, care will be taken to include content from many different cultures, ethnicities, and identity groups from around the world allowing all students an opportunity to see examples of societies to whom they may relate, strengthening their connection to the material. The assignments include both formative and summative assignments to help student scaffold their work and work towards being able to complete the more extensive research project and presentation. In addition, the assignments allow for significant student input (on selecting the specific topic related to the overall class theme to study) so as to allow for greater ownership over the research the student will complete. The use of different types of instruction and interactions (Lecture, film, small and large group discussions, student to student interaction, and student to self interaction) will help to allow different styles of learners an opportunity to interact with the material in ways that are meaningful to them.

Interactions

Explain how the course will incorporate student-to-student interaction.

Students will engage in student-to-student interaction through the use of small group and large group discussion, for example a class discussion looking at how the relevant backgrounds of different figures involved in the development of evolutionary theory may have affected how their ideas were accepted by the broader scientific and general communities. These discussions can take place either in person or through the use of breakout rooms in synchronous online classes. Additionally the use of the CMS Discussion Boards will also facilitate student-to-student interaction.

Explain how the course will incorporate instructor-to-student interaction.

Instructor-to-student interaction will be achieved through the use of lecture, either in person, mediated via accessible video-conference software (if synchronous online) or through the use of online lectures (Video, audio or text lectures). Additionally, the presence of the instructor in large group discussions either face to face or through the use of the CMS Discussion boards will incorporate instructor-to-student interaction. Students will also be encouraged to connect with visiting presenters after their presentations in the event that the visiting presenter's presentation was relevant to the student's research. Instructor-to-student interaction will also be achieved through the syllabus and the CMS by describing the structure of the class and sharing of background information about the instructor. Feedback on assignments and exams will also incorporate instructor-to-student interaction.

Explain how the course will incorporate student-to-content interaction.

Student-to-content interaction will be achieved through the assigned readings and assignments. Students will also interact with the content through the oral presentation assignment. Any in-class or online activities and written assignments will also allow the student to interact with the content.

Explain how the course will incorporate student-to-self interaction (metacognitive).

Student-to-self interaction will be achieved through the use of in-class and online discussions (for both face to face and synchronous online classes) where students will be expected to write their thoughts first before sharing them in both small group and large group

discussions. Writing assignments such as journals will also help students with their metacognition. For instance students may be asked to consider how the concepts of evolution are incorporated into their own majors.

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