HIST133H : Honors History of Science

General Information

Author:	• Michelle Stonis
Course Code (CB01) :	HIST133H
Course Title (CB02) :	Honors History of Science
Department:	HIST
Proposal Start:	Fall 2024
TOP Code (CB03) :	(2205.00) History
CIP Code:	(54.0101) History, General.
SAM Code (CB09) :	Non-Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000600888
Curriculum Committee Approval Date:	06/12/2024
Board of Trustees Approval Date:	07/16/2024
Last Cyclical Review Date:	09/01/2018
Course Description and Course Note:	HIST 133H is a history of the notable scientific ideas and discoveries in Western civilization. It is a seminar, colloquial style discussion that examines the forces in history that led to the development of the major scientific revolutions and thinkers that have shaped modern industrialized humanity and culture. Some of the thinkers and scientists studied include the philosophy of science, the scientific method, science and pseudoscience, how science interacts with other cultural elements, ancient science, magic and renaissance science, the Copernican Revolution, the Newtonian Revolution, the Darwinian Revolution, Pasteur and the medical revolution, and the Einstein Revolution. The course enhances students' understanding of the present by a better understanding of the past. The honors course is enhanced in one or more of the following ways: 1. Students have an increased responsibility for leading class discussions and facilitating group activities inside and outside the classroom. 2. Writing assignments are focused on critical thinking, the interpretation of primary sources, and the application of historical concepts.
Justification:	Mandatory Revision
Academic Career:	• Credit
Mode of Delivery:	
Author:	
Course Family:	

Academic Senate Discipline

Primary Discipline:	• History
Alternate Discipline:	No value
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

General Education and C-ID

General Education Status (CB25)

Not Applicable

Transferability

Transferable to both UC and CSU

Transferability Status

Approved

IGETC Area	Area	Status	Approval Date	Comparable Course
3B-Humanities	Humanities Courses	Approved	08/31/2020	No Comparable Course defined.
4-Social Sciences	Social Sciences	Approved	08/28/2023	

CSU GE-Breadth Area	Area	Status	Approval Date	Comparable Course
C2-Humanities	Humanities: (Literature, Philosophy, Languages Other than English)	Approved	09/03/2019	No Comparable Course defined.
D-Social Sciences	Social Sciences	Approved	09/03/2019	

Units and Hours

Summary

Minimum Credit Units (CB07)	3
Maximum Credit Units (CB06)	3
Total Course In-Class (Contact) Hours	54
Total Course Out-of-Class Hours	108
Total Student Learning Hours	162

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Funding Agency Category (CB23)

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	3	6
Laboratory Hours	0	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	54
Laboratory	0
Studio	0
Total	54
Course Out-of-Class Hours	
Lecture	108
Laboratory	0
Studio	0
Total	108

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Advisory

ENGL101 - Introduction to College Reading and Composition

Objectives

- Read, analyze, and evaluate a variety of primarily non-fiction readings for content, context, and rhetorical merit with consideration of tone, audience, and purpose.
- Apply a variety of rhetorical strategies in writing unified, well-organized essays directed by a well-reasoned thesis statement with persuasive support.
- Develop varied and flexible strategies for generating, drafting, and revising essays.
- Analyze stylistic choices in their own writing and the writing of others.
- Write timed, in-class essays exhibiting acceptable college-level control of mechanics, organization, development, and coherence.
- Integrate the ideas of others through paraphrasing, summarizing, and quoting without plagiarism.
- Find, evaluate, analyze, and interpret primary and secondary sources, incorporating them into written essays using appropriate documentation format.
- Proofread and edit essays for presentation so they exhibit no disruptive errors in English grammar, usage, or punctuation.

OR

Advisory

ESL151 - Reading And Composition V

Objectives

- Read and critically analyze various academic readings.
- Summarize readings.
- Organize fully-developed essays in both expository and argumentative modes.
- Compose a 500 to 550-word essay that summarizes and cites appropriately a reading passage; includes a clear thesis statement; uses evidence to support the thesis; and shows clear organization into an introduction, body, and conclusion.
- Revise writing to eliminate errors in syntax, and grammatical constructions;
- Employ basic library research techniques.
- Compose one research paper (1,000 words) or two short research papers (500-700 words each) with citations.

Entry Standards

Entry Standards

Course Limitations

Cross Listed or Equivalent Course

HIST133 History of Science

Specifications

Methods of Instruction

Methods of Instruction	Lecture
Methods of Instruction	Discussion
Methods of Instruction	Multimedia
Methods of Instruction	Collaborative Learning
Methods of Instruction	Presentations

Out of Class Assignments

- Essays evaluating major shifts in the field using primary sources (e.g., read letters between Galileo and the Duchess and explain how they exemplify the values of the Scientific Revolution)
- Read a book dealing with a scientific controversy and write a research paper on one aspect of this controversy (e.g., read Merchants of Doubt and evaluate shifts in methods of research and how science is used in the media).

Methods of Evaluation	Rationale
Exam/Quiz/Test	Midterm examination
Project/Portfolio	Research project with historical primary sources (e.g., read congressional hearings for the atomic bomb and debate the evidence)
Exam/Quiz/Test	Final examination

Textbook Rationale

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
Kuhn, Thomas S.	The Structure of the Scientific Revolution	University of Chicago Press	2012	9780226458120
Cormack, Leslie	A History of Science in Society	Toronto University Press	2017	978-1442634992

Other Instructional Materials (i.e. OER, handouts)

No Value

Materials Fee

No value

Learning Outcomes and Objectives

Course Objectives

Summarize various scientific philosophies and approaches.

Explain key events from the history of science.

Illustrate major shifts in the fields of math, physics, biology, and chemistry.

SLOs

Evaluate how scientific skills developed over time. Expected Outcome Performance: 70.0

ILOs Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.
ILOs General Education	recall, analyze, and synthesize theories and real-world issues and topics related to social, political, and/or economic institutions

Debate controversial issues using historical texts. Expected Outcome Performance: 70.0

ILOs Core ILOs	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
ILOs General Education	recall, analyze, and synthesize theories and real-world issues and topics related to social, political, and/or economic institutions

Evaluate and discuss the interaction of science and culture. Expected Outcome Performance: 70.0

ILOs Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.
	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
SOC S Social Sciences	Developed a broad and critical understanding of the complex interconnections between the human and environmental forces in their world
ILOs General Education	recall, analyze, and synthesize theories and real-world issues and topics related to social, political, and/or economic institutions

Additional SLO Information

Does this proposal include revisions that might improve student attainment of course learning outcomes?

No

Is this proposal submitted in response to learning outcomes assessment data?

No

If yes was selected in either of the above questions for learning outcomes, explain and attach evidence of discussions about learning outcomes.

No Value

SLO Evidence

No Value

Course Content

Lecture Content

Introduction/History of Science (4 hours)

- Science and pseudoscience
- Relationships between science and cultural traditions
- The world of prescience myth and science

Science in the Ancient World: Mesopotamia, Sumeria, Greece (10 hours)

- Hellenic and Hellenistic science
- Islamic science
- Indian science: Hindu math

Roman Science/Technology and the Rise of Islamic Science (1 hour)

- Medieval science

The Copernican Revolution (3 hours)

The Newtonian Revolution and Synthesis (3 hours)

The Scientific Revolution (3 hours)

The Geological Revolution and the Discovery of the Earth (2 Hours)

The Darwinian Revolution and Evolution Deep Time (2 Hours)

- Darwin and the Victorian world
- Natural Selection and the development of the genetic world of science

Pasteur and the Medical Revolution (3 Hours)

- Development of medical science in America

Faraday, Maxwell, and the Discovery of Electromagnetism (2 Hours)

New Directions in Math: Cantor, Peano, Russel (3 Hours)

The Einstein Revolution: Relativity in the Context of Fin de Siecle Europe (7 Hours)

Quantum Mechanics (3 Hours)

The Big Bang (4 Hours)

Unresolved Issues in Cosmology, Physics, Life Science (4 Hours)

Total Hours: 54

Additional Information

Is this course proposed for GCC Major or General Education Graduation requirement? If yes, indicate which requirement in the two areas provided below.

Yes

GCC Major Requirements

No Value

GCC General Education Graduation Requirements

Social Sciences

Repeatability

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Resources

Did you contact your departmental library liaison?

No

If yes, who is your departmental library liason?

No Value

Did you contact the DEIA liaison?

No

Were there any DEIA changes made to this outline?

No

If yes, in what areas were these changes made:

No Value

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value