#  UNDERGRADUATE CURRICULUM COMMITTEE (UCC)PROPOSAL FORMhttp://www.ric.edu/webcommunications/images/SealWithText_Small_Black.png

## Cover page scroll over blue text to see further important [instructions](#23ckvvd): please read.

**N.B. DO NOT USE HIGHLIGHT, PLEASE DELETE THE WORDS THAT DO NOT APPLY TO YOUR PROPOSAL**

**ALL numbers in section (A) need to be completed, including the impact ones.**

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| A.1. [Course or program](#gjdgxs) | **HIST 108 – History of science and medicine** |  |
| A.2. [Proposal type](#2et92p0) | **Course: creation** |
| A.3. [Originator](#3dy6vkm) | **April Kiser** | [Home department](#1t3h5sf) | **History** |
| A.4. [Context and Rationale](#4d34og8)  | The creation of HIST 108 responds to Feinstein School’s request for a history general education course in the history of science and medicine that serves the science education students. This topic will also attract students in the School of Nursing, health and science majors. The course offers the opportunity to acquire familiarity with the critical thinking skills present in history while gaining a greater appreciation of the historical roots of their professional fields of study. The topic fits with the History department’s development of courses focused on compelling topics that encourage engaged encounters with the sources and skills utilized in the study of the past. In addition, for the Education students, this course meets the 2020 National Science Teachers Association/Association of Science Teacher Educators standard 1a: “Use and apply the major concepts, principles, theories, laws, and interrelationships of their fields of licensure and supporting fields. Explain the nature of science and the cultural norms and values inherent to the current and historical development of scientific knowledge.” |
| A.5. [Student impact](#2s8eyo1) | HIST 108’s topic of science and medicine will appeal to the interests and needs of many RIC students, and increase the amount of options available to students who are completing their history general education requirement. Students of science education in Feinstein School will benefit from a history general education course that connects to their interests as well as to their needs to contextualize science in history. Students with majors in the sciences, health sciences and nursing will also have the opportunity to learn about historical subjects and practices through examples they are professionally pursuing and often passionate about, helping them to connect to a different discipline—history—in a way that is personally meaningful and compelling. Similarly, it will expose history and other non-science majors to the study of science and ideally stir their interest in further investigation of science and medicine. |
| A.6. [Impact on other programs](#ihv636)  | HIST 108 will have a positive impact because students will have another history general education option. This option will attract students interested in science and health fields, important and vibrant fields of study at RIC. |
| A.7. [Resource impact](#32hioqz) | [*Faculty PT & FT*](#1hmsyys):  | **No impact.** |
| [*Library*:](#41mghml) | **Makes use of the strong history of science collection we already have** |
| [*Technology*](#2grqrue) | **No impact.** |
| [*Facilities*](#vx1227): | **No impact.** |
| A.8. [Semester effective](#26in1rg) | **Fall 2019** | A.9. [Rationale if sooner than next Fall](#26in1rg) |  |
| A.10. INSTRUCTIONS FOR CATALOG COPY: This single file copy must include ALL relevant pages from the college catalog, and show how the catalog will be revised. (1) Go to the “Forms and Information” page on the UCC website. Scroll down until you see the Word files for the current catalog. (2) Download ALL catalog sections relevant for this proposal, including course descriptions and/or other affected programs. (3) Place ALL relevant catalog copy into a single file. Put page breaks between sections and delete any catalog pages not relevant for this proposal. (4) Using the track changes function, revise the catalog pages to demonstrate what the information should look like in next year’s catalog. (5) Check the revised catalog pages against the proposal form, especially making sure that program totals are correct if adding/deleting course credits. If new copy, indicate where it should go in the catalog. If making related proposals a single catalog copy that includes all is acceptable. Send as a separate file along with this form. |

B. [NEW OR REVISED COURSES](#3fwokq0)  **DO NOT USE HIGHLIGHT. DELETE THIS WHOLE PAGE IF THE PROPOSAL DOES NOT INCLUDE A NEW OR REVISED COURSE.**

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|  | Old ([for revisions only](#1v1yuxt))Only include information that is being revised, otherwise leave blank (delete provided examples that do not apply) | NewExamples are provided for guidance, delete the ones that do not apply |
| B.1. [Course prefix and number](#lnxbz9)  |  | **HIST 108** |
| B.2. Cross listing number if any |  |  |
| B.3. [Course title](#35nkun2)  |  | **History of Science and Medicine** |
| B.4. [Course description](#1ksv4uv)  |  | Students examine the ideas and practices that define science and medicine and their relationships with society and culture, using examples from a variety of historical contexts |
| B.5. [Prerequisite(s)](#44sinio) |  | **None** |
| B.6. [Offered](#4f1mdlm) |  | **Annually** |
| B.7. [Contact hours](#z337ya)  |  | **4** |
| B.8. [Credit hours](#3j2qqm3) |  | **4** |
| B.9. [Justify differences if any](#1y810tw) |  |
| B.10. [Grading system](#19c6y18)  |  | **Letter grade**  |
| B.11. [Instructional methods](#4i7ojhp) |  | **Lecture | Small group | Hybrid** |
| B.12.[Categories](#2xcytpi) |  | **Required for major | Free elective | Required for Certification** |
| B.13. Is this an Honors course? |  | **NO** |
| B.14. [General Education](#1ci93xb)N.B. Connections must include at least 50% Standard Classroom instruction. |  | **YES** **category: History** |
| B.15. [How will student performance be evaluated?](#3whwml4) |  | **Attendance | Class participation | Exams | Presentations | Papers |** **Class Work | Quizzes |Projects**  |
| B.16. [Redundancy statement](#2bn6wsx) |  |  |
| B. 17. Other changes, if any |  |

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| B.18**.** [**Course learning outcomes**](#qsh70q)**: List each one in a separate row** | [**Professional Org.Standard(s)**](#3as4poj)**, if relevant** | [**How will each outcome be measured**](#1pxezwc)**?** |
| Use and apply the major concepts, principles, theories, laws, and interrelationships of their fields of licensure and supporting fields. Explain the nature of science and the cultural norms and values inherent to the current and historical development of scientific knowledge.” | NSTA/ASTE 1a | Classroom Assignments: informal written analysis of primary documents completed individually and in groups. Reacting to the Past Formal Paper: written assignment based on historical sources that may take multiple forms, persuasive pieces meant to complement classroom interactions. Paper examining defining elements of scientific and thought and practice, and primary document journal of informal writing that stimulates thinking and making connections between readings.  |
| Learn the practices, ideas and values that define modern science and develop the skills to identify what differentiates science from other endeavors |  | Reflections on connections between society, science and medicine; consider the ways science and medicine shape actions in society and environment; Using examples drawn from different historical and geographical contexts facilitate comparisons of cultural, social, political and economic interactions with science and medicine across time and place in class discussion and writing |
| learn major questions, themes, and practices of modern science |  | Papers and exams |
| learn the social and cultural contexts of modern science in order to better appreciate the role of science in our world today |  | Discussion papers and exams |
| learn how historians analyze an array of sources—written and visual—to understand and interpret events and peoples of the past |  | Paper that will require students to persuade classmates using multiple sources of evidence and prepare to counter critics and deal with other perspectives  |
| Practice analyzing historical documents—written and visual—to better appreciatehistorians’ practices, the complexities of interpreting historical events, and the power of history in shaping our understanding of the world today |  | Exercises to practice interpretation of content, purpose, authors’ intentions and perspectives, cultural values; students will compare and contrast with those from other times and places as well as their own.Practice interpreting primary documents, including analysis of ideas, perspectives, purposes, cultural assumptions  |
| Cultivate abilities to communicate and argue persuasively in classroom discussions and written papers. Students will produce writing that is organized, supported by evidence, demonstrates correct usage of grammar and terminology, and is appropriate to the academic context. (Written Communication) and Students will learn to speak in a clearly expressed, purposeful, and carefully organized way that engages and connects with theiraudience. (Oral Communication)  |  | Role playing activities put students in the shoes of historical figures and transport them to different historical contexts encouraging them to consider ethical issues from multiple perspectives |

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| B.19. [**Topical outline**](#2p2csry)**: Do NOT insert whole syllabus, we just need a two-tier outline** |
| **Topics**Knowledge in the Ancient and Medieval West * Defining Science (history of the term “science”; knowledge and practice in the past
* Human bodies, nature & the Cosmos in the Classical Tradition
* Henry, Chapter 1 “Setting the Scene: Natural Philosophy in Ancient Greece”; Chapter 2 “Plato and Aristotle”; Chapter 3 “From the Roman Empire to the Empire of Islam” (pp. 1-37)
* Primary Source Selections: Hippocrates, *On the Sacred Disease* Selections; Pliny *Natural History* Selections

Medieval knowledge, Christianity, Islam and the roots of modern science * Henry, Chapter 3 “From the Roman Empire to the Empire of Islam”; Chapter 4 “The Western Middle Ages” (pp. 26-50)
* Toby Huff, *The Rise of Early Modern Science: Islam, China and the West* (Cambridge UP, 1993) selections
* Primary Sources: Avicenna selections; Averroes selections

Renaissance curiosity, monsters, marvels and the revival of magic in the roots of Modern Science * Henry, Chapter 5 “The Renaissance” (pp. 51-61)
* William Eamon*, The Professor of Secrets: Mystery, Magic and Alchemy in Renaissance Italy* (National Geographic, 2010) selections
* Lorraine Daston and Katherine Park, “Unnatural Conceptions: The Study of Monsters in Sixteenth and Seventeenth-Century France and England” (JSTOR)
* Primary Sources: Giambattista della Porta, *Natural Magick* selections; Pare, *On Monsters and Marvels*, selections

The human body and medicine in the Renaissance * Henry, Chapter 10 “Practice and Theory in Renaissance Medicine: William Harvey and the Circulation of the Blood” (pp. 122-128)
* Harvey, *On the Motion of the Heart and Blood*, selections; Vesalius, *Fabric of the Human Body*, selections

The Renaissance man: Leonardo da Vinci and the intersections of science and art * Martin Kemp, *Leonardo* (Oxford UP, 2011) selections
* Leonardo Notebooks, selections

What was the Scientific Revolution?* Henry, Chapter 7 “New Methods of Science” (pp. 76-96)

The Copernican Revolution* Henry, Chapter 6 “Nicholas Copernicus and a New World”; Chapter 8 “Bringing Mathematics and Natural Philosophy Together: Johannes Kepler” (pp. 62-75 & 97-107)
* Primary Source: Copernicus, *The Revolutions of the Heavenly Bodies*, selections

The Case of Galileo: personality, promotion, religion and the wew science * Henry, Chapter 9 “Mathematics and Mechanics: Galileo Galilei” (pp. 108-121)
* William Shea & Mariano Artigas, *Galileo in Rome: The Rise and Fall of a Troublesome Genius* (Oxford UP, 2004), selections
* Primary Source: Galileo’s *Letter to the Granduchess Christina*, selections

Nature and machines: Descartes’ view of nature, God, mind and body* Henry, Chapter 11 “The Spirit of the System: René Descartes and the Mechanical Philosophy” (pp.129-139)
* Descartes, *Discourse on Method*, selections

The Scientific Revolution and European discovery & exploration of the world: The Ancients vs. The Moderns * Anthony Grafton, *New Worlds; Ancient Texts: The Power of Tradition and the Shock of Discovery* (Belknap, 1995), selections
* Primary Source: Francis Bacon, *New Atlantis*, selections

Experimental philosophies and Scientific Societies * Henry, Chapter 12 “The Royal Society and Experimental Philosophy” (pp. 140-147)
* Primary Source: Thomas Sprat, *History of the Royal Society*, selections

Isaac Newton: The Enlightenment champion of reason or magician? * Henry, Chapter 13 “Experiment, Mathematics, and Magic: Isaac Newton”; Chapter 14 “Newtonian Enlightenment”; Chapter 15 “The Chemical Revolution: Priestly, Lavoisier; John Dalton and Beyond” (pp. 148-184)

The controversy of male midwifery Understanding the natural world: change and design in nature* Henry, Chapter 16 “Newtonian Optimism: Natural Theology and Natural Order”; Chapter 17 “The Making of Geology: From James Hutton to Charles Lyell”; Chapter 18 “The History of Plants and Animals: Successive Emergence of Evolution” (pp. 185-212)

Enlightenment, industrialization and nature * Andrew Cunningham and Nicholas Jardine, *Romanticism and the Sciences* (Cambridge, 1990)
* Alexander von Humboldt, selections

*The Vestiges of Natural History of Creation*: The controversy of evolution before Charles Darwin * Henry, Chapter 19 “Religion and Progress in Victorian Britain: Robert Chambers versus Hugh Miller” (pp. 222-230)
* James A. Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Publication of the Vestiges of the Natural History of Creation* (University of Chicago, 2003), selections
* *Vestiges*, Selections

Charles Darwin: the man, methods, and his vision of nature * Henry, Chapter 20 “Bringing it All Together? Charles Darwin’s Evolution” (pp. 231-240)
* Janet Browne, *Charles Darwin: A Biography, volume 2- The Power of Place* (Princeton University Press, 2003), selections
* Primary Source: Charles Darwin, *Voyages*, selections; Darwin, *Descent of Man* Selections

Society, culture and views of nature after Darwin* Henry, Chapter 21 “Darwinian Aftermaths: Religion, Social Science, Biology” (pp. 241-260)
* Constance Areson Clark, “Evolution for John Doe: Pictures, the Public, and the Scopes Trial Debate” in *The Journal of American History*, Vol. 87, No. 4. (Mar., 2001), pp. 1275-1303. (JSTOR)
* Primary Sources: select cartoons and images of Darwin

Contagion: John Snow, Cholera, and the urban life in 19th-Century London* Sandra Hempel, *The Strange Case of the Broad Street Pump: John Snow and the Mystery of Cholera* (University of California Press, 2007) selections
* Primary Sources: Snow’s maps, competing theories of disease <http://www.ph.ucla.edu/epi/snow.html>

Science, race, eugenics, genetics * Stephen Jay Gould, “American Polygeny and Craniometry before Darwin,” in The Mismeasure of Man (Norton, 1996)
* Eugenics, TBA
* Primary Sources

New visions of the body: X-Ray Technology * Bettyanne H. Kevles, *Naked to the Bone: Medical Imaging in the 20th Century* (Basic Books, 1998) selections
* Rebecca Herzig*, “In the Name of Science: Suffering, Sacrifice, and the Formation of American Roentgenology”* (JSTOR)

Medicine and pain * Stephanie J. Snow, *Blessed Days of Anaesthesia: How Anaesthetics Changed the World* (Oxford UP, 2009), selections

The age of the atom * Henry, Chapter 22 “Beyond Newton: Energy and Thermodynamics”; Chapter 23 “ Newton Deposed: Einstein and Relativity Theory”; Chapter 24 “Mathematics Instead of a World Picture: From Atomism to Quantum Theory” (pp. 261-294)
* David Lindley*, Uncertainty: Einstein, Heisenberg, Bohr and the Struggle for the Soul of Science* (Anchor, 2008) selections

The bomb: enthusiasm and anxiety in the age of modern science Climate change: intersections between science, politics, and consumption The Genome & genetics |

## D. Signatures

* Changes that affect General Education in any way MUST be approved by ALL Deans and COGE Chair.
* Changes that directly impact more than one department/program MUST have the signatures of all relevant department chairs, program directors, and relevant dean (e.g. when creating/revising a program using courses from other departments/programs). Check UCC manual 4.2 for further guidelines on whether the signatures need to be approval or acknowledgement.
* Proposals that do not have appropriate approval signatures will not be considered.
* Type in name of person signing and their position/affiliation.
* Send electronic files of this proposal and accompanying catalog copy to curriculum@ric.edu and a printed or electronic signature copy of this form to the current Chair of UCC. Check UCC website for due dates.

##### D.1. Approvals: required from programs/departments/deans who originate the proposal. may include multiple departments, e.g., for joint/interdisciplinary prposals.

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| Name | Position/affiliation | [Signature](#_3tbugp1) | Date |
| David Espinosa | Chair of History |  |  |
| Earl Simson | Dean of Arts and Sciences |  |  |

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| Gerri August or Julie Horwitz | Co-Interim Deans of FSEHD |  |  |

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| Jeffrey Mello | Dean of School of Business |  |  |
| Debra Servello | Dean of School of Nursing |  |  |
| Jayashree Nimmagadda | Dean of School of Social Work |  |  |
| Jim Magyar | Chair of COGE |  |  |

##### D.2. [Acknowledgements](#147n2zr): REQUIRED from OTHER PROGRAMS/DEPARTMENTS IMPACTED BY THE PROPOSAL. SIGNATURE DOES NOT INDICATE APPROVAL, ONLY AWARENESS THAT THE PROPOSAL IS BEING SUBMITTED. CONCERNS SHOULD BE BROUGHT TO THE UCC COMMITTEE MEETING FOR DISCUSSION

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| Name | Position/affiliation | [Signature](#3o7alnk) | Date |
| Lesley Bogad | Chair of Educational Studies |  |  |