SCIENCE & TECHNOLOGY STUDIES

College of Letters & Science

Colin Milburn, Ph.D., Department Chair; term ends June 30, 2022.

Department Office

1246 Social Sciences and Humanities Building; Science & Technology Studies (http://sts.ucdavis.edu); Faculty (http://sts.ucdavis.edu/directory-of-people/sts-faculty/)

Advising

Staff advisors are located in Young Hall; stsadvising@ucdavis.edu. For more information on how to make an appointment or join Drop-In Advising hours, please see Yellow Cluster Undergraduate Advising Center (https://yellowcluster.ucdavis.edu/advising/undergraduate/).

- Science & Technology Studies, Bachelor of Arts (https://catalog.ucdavis.edu/departments-programs-degrees/science-technology-studies/science-technology-studies-ab/)

Science & Technology Studies (STS)

STS 001 — Introduction to Science, Technology & Medicine Studies (4 units)

Course Description: History, philosophy, sociology, politics, and cultural studies of science, technology, and medicine. Emphasis on a broad range of perspectives.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s).
Grade Mode: Letter.
General Education: Social Sciences; Writing Experience.

STS 002 — Introduction to the History of Science & Technology (4 units)

Course Description: Introduction to topics and methods of the history of science and technology. Emphasis on understanding the role of science and technology in the modern world through a long-term historical perspective.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s).
Cross Listing: HIS 002.
Grade Mode: Letter.
General Education: Arts & Humanities or Social Sciences; Scientific Literacy; World Cultures; Writing Experience.

STS 011 — Science on Trial: Law, Science, & Technology in the United States (4 units)

Course Description: Relationships among law, technology, and science. Scientific evidence and testimony, biology education, patenting, and sterilization.
Learning Activities: Lecture/Discussion 3 hour(s), Term Paper.
Grade Mode: Letter.
General Education: Social Sciences; American Cultures, Governance, & History.

STS 012 — Epidemics & Society (4 units)

Course Description: Epidemics in world history and the cultural impacts of contagious diseases. The roles of science, medicine, media, and the arts in shaping social conceptions of health and illness.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s).
Grade Mode: Letter.
General Education: Arts & Humanities or Social Sciences; Scientific Literacy; Visual Literacy; World Cultures; Writing Experience.

STS 016 — Sex, Science, & Society (4 units)

Course Description: Survey of the relationship between sex, science, and society in the history of the modern world. Emphasis on the development of scientific ideas about the human body against broader social, cultural, and political trends and from a global viewpoint.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s).
Cross Listing: HIS 016.
Grade Mode: Letter.
General Education: Arts & Humanities; Domestic Diversity; Scientific Literacy; World Cultures; Writing Experience.

STS 032 — Drugs, Science & Culture (4 units)

Course Description: Drugs, politics, science, society in a cultural perspective: emphasis on roles of science, government and the media in shifting attitudes toward alcohol, marijuana, Prozac and other pharmaceuticals; drug laws, war on drugs and global trade in sugar, opium, cocaine.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s).
Cross Listing: ANT 032.
Grade Mode: Letter.
General Education: Social Sciences; Visual Literacy; Writing Experience.

STS 040A — Media History 1, Gutenberg to Oppenheimer (4 units)

Course Description: History of Media to 1945, with particular focus on mechanically reproduced mass media technologies including the printing press, the newspaper, photography, cinema, radio and early computing technology. Analysis of inter-related cultural and political topics.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s), Film Viewing 2 hour(s), Extensive Writing.
Cross Listing: CTS 040A.
Grade Mode: Letter.
General Education: Arts & Humanities or Social Sciences; Oral Skills; Visual Literacy; Writing Experience.

STS 040B — Media History 2 1945-Present (4 units)

Course Description: History of media from 1945 to present, with particular focus on the development of the computer, digital network and Internet technologies in the context of other media infrastructures like radio, television and satellite networks. Analysis of inter-related cultural/political topics.
Prerequisite(s): STS 040A.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s), Film Viewing 2 hour(s), Extensive Writing.
Cross Listing: CTS 040B.
Grade Mode: Letter.
General Education: Arts & Humanities or Social Sciences; Oral Skills; Visual Literacy; Writing Experience.
STS 050 — Ancient Science (4 units)
Course Description: Study of science in ancient Greece and Rome; consideration of its social context; concentration on the basic concepts of physics the world of medicine and biology the history of mathematics and the practices of astronomy astrology and meteorology.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s).
Cross Listing: CLA 050.
Grade Mode: Letter.
General Education: Arts & Humanities; World Cultures; Writing Experience.

STS 051 — Ancient Medicine (4 units)
Course Description: Medicine in ancient Greece and Rome; physiological conceptions of the body within scientific and social frameworks; exploration of sanitation technology and health in antiquity; medical treatment of the female body; medicine and the economy.
Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s).
Cross Listing: CLA 051.
Grade Mode: Letter.
General Education: Arts & Humanities; World Cultures; Writing Experience.

STS 092 — Internship (1-12 units)
Course Description: Work experience off and on campus in all subject areas offered in the program in Science & Technology Studies under the supervision of a member of the faculty.
Prerequisite(s): Consent of instructor.
Learning Activities: Internship 3-36 hour(s).
Repeat Credit: May be repeated 12 unit(s).
Grade Mode: Pass/No Pass only.

STS 098 — Directed Group Study (1-5 units)
Course Description: Directed group study.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable 3-15 hour(s).
Repeat Credit: May be repeated.
Grade Mode: Pass/No Pass only.
General Education: Social Sciences.

STS 099 — Special Study for Undergraduates (1-5 units)
Course Description: Special study for undergraduates.
Learning Activities: Variable 3-15 hour(s).
Grade Mode: Pass/No Pass only.

STS 100 — Methods in Science, Technology, & Medicine Studies (4 units)
Course Description: Methodological approaches for studying science, technology, and medicine in social context. Detailed case studies illustrate different historical, philosophical, sociological, ethical, rhetorical, and political methods of analysis.
Prerequisite(s): STS 001 recommended.
Learning Activities: Lecture/Discussion 3 hour(s), Extensive Writing/Discussion.
Credit Limitation(s): Only two units of credit for students who have previously taken STS 020.
Grade Mode: Letter.
General Education: Social Sciences; Scientific Literacy.

STS 101 — Data & Society (4 units)
Course Description: Basic concepts in data science from a socio-cultural perspective. Identifying data stakeholders and their biases, reading and evaluating data documentation, exploring data through analysis and visualization, identifying knowledge gaps, and assessing data ethics.
Learning Activities: Lecture/Discussion 4 hour(s).
Grade Mode: Letter.
General Education: Social Sciences; Quantitative Literacy.

STS 108 — Intellectual Property in Science (4 units)
Course Description: Historical and conceptual framework for contemporary debates about intellectual property and science. Topics include U.S. patent system and copyright law, interaction between patents and industrial policy, credit in academic and industrial science, role of IP in global knowledge politics.
Prerequisite(s): STS 001; or other Social Science or Humanities writing course.
Learning Activities: Lecture/Discussion 4 hour(s).
Grade Mode: Letter.
General Education: Social Sciences; American Cultures, Governance, & History; Writing Experience.

STS 109 — Visualization in Science: A Critical Introduction (4 units)
Course Description: Anthropological approaches to scientific visualization techniques, informatics, simulations. Examination of different visualization techniques toward understanding the work involved in producing them, critical assessment of their power and limits, especially when visualizations are used socially to make claims.
Prerequisite(s): STS 001 or STS 020 or ANT 002 recommended.
Learning Activities: Lecture 3 hour(s), Extensive Writing/Discussion 1 hour(s).
Grade Mode: Letter.
General Education: Social Sciences; Visual Literacy; Writing Experience.

STS 110 — Computing, Data, & Law in the United States (4 units)
Course Description: Introduction to the problems in American law and policy borne out of the creation and use of information technologies. Topics include intellectual property, corporate law, privacy, and emerging problems surrounding big data.
Learning Activities: Lecture/Discussion 3 hour(s), Term Paper.
Grade Mode: Letter.
General Education: Social Sciences; American Cultures, Governance, & History; Writing Experience.

STS 112 — Visualizing Society with Data (4 units)
Course Description: Analysis and visualization of historical and contemporary data about populations and societies using R. Critical exploration of visual communication of information about people over time and critical assessment of role of data collection and analysis in societies.
Learning Activities: Lecture/Lab 3 hour(s), Term Paper.
Grade Mode: Letter.
General Education: Social Sciences; Domestic Diversity; Quantitative Literacy.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Unit Hours</th>
<th>Course Description</th>
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<tr>
<td>STS 113</td>
<td>Business &amp; Technology in the United States: From Electricity to E-Commerce</td>
<td>4 units</td>
<td>Course Description: Historical introduction to the joint development of business and technology in the United States from the late-19th century to the present day. Learning Activities: Lecture/Discussion 3 hour(s), Term Paper. Grade Mode: Letter. General Education: Social Sciences; American Cultures, Governance, &amp; History; Writing Experience.</td>
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<td>STS 114</td>
<td>The Global Information Age</td>
<td>4 units</td>
<td>Course Description: Introduction to the global spread of information technologies like computers and smartphones. Special focus on their social, cultural, and commercial impact. Learning Activities: Lecture/Discussion 3 hour(s), Term Paper. Grade Mode: Letter. General Education: Social Sciences; World Cultures; Writing Experience.</td>
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<td>STS 115</td>
<td>Data Sense &amp; Exploration: Critical Storytelling with Analysis</td>
<td>4 units</td>
<td>Course Description: Data science and the communication of data insights through critical storytelling. Attention to the historical and social contexts of data analysis, emphasizing narrative, visualization, and exploration. Introduction to the R computing environment for data analysis. Learning Activities: Lecture/Discussion 3 hour(s), Discussion/Laboratory 1 hour(s). Grade Mode: Letter. General Education: Oral Skills.</td>
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<td>STS 120</td>
<td>Religion, Magic &amp; Science</td>
<td>4 units</td>
<td>Course Description: Religion, magic, and science from the middle ages to the present. Contrast between modern scientific methodology and religious and magical thinking. Learning Activities: Lecture 3 hour(s), Extensive Writing. Cross Listing: RST 120. Grade Mode: Letter. General Education: Arts &amp; Humanities; Oral Skills; Visual Literacy; World Cultures.</td>
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<td>STS 121</td>
<td>Special Topics in Medical Anthropology</td>
<td>4 units</td>
<td>Course Description: Introduction to critical medical anthropology. Topics include anthropological analysis of bio-medicine, psychiatry, systems of knowledge and healing, the body, emotions, and clinical encounters in a cross-cultural perspective. Prerequisite(s): ANT 002 recommended. Learning Activities: Lecture/Discussion 4 hour(s). Cross Listing: ANT 121. Grade Mode: Letter. General Education: Social Sciences; World Cultures; Writing Experience.</td>
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<td>STS 122</td>
<td>Health &amp; Medical Technologies</td>
<td>4 units</td>
<td>Course Description: Critical/historical examination of medical technologies: imaging, pharmaceuticals, genetics, implants/devices. Exploration of mutually constitutive relationship between health, medical technologies, social difference (race/gender/class/sexuality). Learning Activities: Lecture/Discussion 3 hour(s), Term Paper. Grade Mode: Letter. General Education: Social Sciences; Domestic Diversity.</td>
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<td>STS 129</td>
<td>Health &amp; Medicine in a Global Context</td>
<td>4 units</td>
<td>Course Description: Recent works in medical anthropology and the science studies of medicine dealing with social and cultural aspects of global health issues such as AIDS, pandemics, clinical trials, cultural differences in illnesses, diabetes, organ trafficking, medical technologies, illness narratives, and others. Prerequisite(s): ANT 002 recommended. Learning Activities: Lecture/Discussion 3 hour(s), Term Paper. Cross Listing: ANT 129. Grade Mode: Letter. General Education: Social Sciences; World Cultures; Writing Experience.</td>
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<td>STS 130A</td>
<td>From Natural History to the History of Nature</td>
<td>4 units</td>
<td>Course Description: Evolution and demise of natural history as a discipline from Aristotle to Linnaeus. Considers ancient views of nature and its Renaissance rediscovery; the emergence of biology, botany, geology, and zoology; the history of taxonomy and classification. Prerequisite(s): HIS 135A recommended. Learning Activities: Lecture/Discussion 3 hour(s), Term Paper. Grade Mode: Letter. General Education: Arts &amp; Humanities or Science &amp; Engineering; Writing Experience.</td>
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<td>STS 130B</td>
<td>History of Modern Biology</td>
<td>4 units</td>
<td>Course Description: Development of modern biology from pre-Darwinian roots to the present. Considers emergence of modern biological specialties and consolidation of biological theory around evolutionary ideas. History of allied fields such as genetics, paleontology, embryology, ecology, systematics and molecular biology. Prerequisite(s): STS 130A recommended. Learning Activities: Lecture/Discussion 3 hour(s), Term Paper. Grade Mode: Letter. General Education: Arts &amp; Humanities or Science &amp; Engineering; Writing Experience.</td>
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<td>STS 131</td>
<td>Darwin</td>
<td>4 units</td>
<td>Course Description: Students will explore the life and times of Charles Darwin and will trace the development of evolutionary thinking before and after the Origin of Species to appreciate its place in Victorian society and in the corpus of Darwin's thought. Prerequisite(s): Upper division standing or consent of instructor. Learning Activities: Lecture 3 hour(s), Term Paper. Grade Mode: Letter. General Education: Arts &amp; Humanities or Science &amp; Engineering; Writing Experience.</td>
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<td>STS 136</td>
<td>Scientific Revolution</td>
<td>4 units</td>
<td>Course Description: Rise of modern science in Europe, 1500–1750. Transformation of ideas about nature, knowledge, medicine, and technology in the age of Copernicus, Vesalius, Galilei, Descartes, and Newton. Learning Activities: Lecture/Discussion 3 hour(s), Term Paper. Cross Listing: HIS 136. Grade Mode: Letter. General Education: Arts &amp; Humanities or Social Sciences; World Cultures.</td>
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STS 161 — Time: Mechanism & Measurement (4 units)
Course Description: Cultural concepts of time; units and instruments of time measurement; historical differences in the social organization of time; and time measurement in 20th-century science.
Prerequisite(s): STS 001.
Learning Activities: Lecture/Discussion 3 hour(s), Term Paper.
Grade Mode: Letter.
General Education: Social Sciences; Writing Experience.

STS 162 — Surveillance Technologies & Social Media (4 units)
Course Description: Study of the ubiquitous presence of CCTV, face recognition software, global tracking systems, biosensors, and data mining practices that have made surveillance part of our daily life. Exploration of the boundary between security and control, information and spying.
Prerequisite(s): STS 020 or TCS 001.
Learning Activities: Lecture 3 hour(s), Film Viewing 3 hour(s), Term Paper.
Cross Listing: CTS 162.
Grade Mode: Letter.
General Education: Arts & Humanities or Social Sciences; American Cultures, Governance, & History; Oral Skills; Visual Literacy; Writing Experience.

STS 163 — History of Communication Technologies (4 units)
Course Description: History of communication technologies from the late Middle Ages to the 20th century. Questions of technology, knowledge, power and culture. Particular attention to questions about information and truth.
Learning Activities: Lecture/Discussion 3 hour(s), Term Paper.
Grade Mode: Letter.
General Education: Social Sciences; Writing Experience.

STS 164 — Writing Science (4 units)
Course Description: Texts and writing practices in the production of scientific knowledge. Surveys the literary structure of scientific arguments; history of scientific genres; rhetoric and semiotics in scientific culture; graphical systems in the experimental laboratory; narratives of science, including science fiction.
Prerequisite(s): STS 001 or ENL 003; or equivalent.
Learning Activities: Lecture/Discussion 3 hour(s), Extensive Writing.
Cross Listing: ENL 164.
Grade Mode: Letter.
General Education: Arts & Humanities; Scientific Literacy; Writing Experience.

STS 165 — Built Environments (4 units)
Course Description: Built environments, which are designed to support forms of life. Their role as carriers of cultural memory and in turning knowledge of nature into social assets. Historical constellations of knowledge, social order, and power.
Learning Activities: Lecture 3 hour(s), Extensive Writing.
Grade Mode: Letter.
General Education: Social Sciences.

STS 166 — Critical Approaches to Sonification (4 units)
Course Description: Critical and creative approaches to auditory data and display in art, science, and technology. Practical introduction to sonification techniques through sound studies and sensory ethnography. Heuristic listening and collaborative sound design.
Learning Activities: Lecture/Discussion 3 hour(s), Term Paper/Discussion.
Grade Mode: Letter.
General Education: Social Sciences; Writing Experience.

STS 167 — Video Games & Culture (4 units)
Course Description: Critical approaches to the study of video games, focusing on formal, historical, and cultural modes of analysis. History of software and hardware in North American and global contexts. Relations of games to society, politics, economics, media, etc.
Prerequisite(s): CDM 072 or ENL 072 recommended.
Learning Activities: Lecture 3 hour(s), Extensive Writing/Discussion 1 hour(s).
Credit Limitation(s): Not open for credit to students who have taken CTS 172 (former course CTS 172).
Cross Listing: CDM 172, ENL 172.
Grade Mode: Letter.
General Education: Arts & Humanities or Social Sciences; American Cultures, Governance, & History; Visual Literacy; Writing Experience.
STS 173 — Science Fiction (4 units)
Course Description: The literary modes and methods of science fiction. Representative texts, authors, and themes of the genre; e.g., time travel, alternative universes, and utopias. Relations of science fiction to science, philosophy, and culture.
Prerequisite(s): STS 001 or ENL 003; or equivalent.
Learning Activities: Lecture/Discussion 3 hour(s), Extensive Writing.
Cross Listing: ENL 173.
Grade Mode: Letter.
General Education: Arts & Humanities; Writing Experience.

STS 175 — Laboratory Studies Lab (4 units)
Course Description: Hands-on training in Science & Technology Studies fieldwork, interviewing, archival research and data analysis. Review of laboratory studies literature, informed consent procedures, ethics, and care of the data. Individual and group projects possible.
Prerequisite(s): Upper division standing or consent of instructor.
Learning Activities: Discussion/Laboratory 4 hour(s).
Grade Mode: Letter.
General Education: Social Sciences; Writing Experience.

STS 176 — Sociology of Knowledge, Science, & Scientific Knowledge (4 units)
Course Description: Social, cultural, and historical dimensions of knowledge, especially scientific knowledge. Problems, methods, and theory in sociology of scientific knowledge. Laboratory and historical case studies. Scientific and technical knowledge in institutional and organizational contexts.
Prerequisite(s): SOC 001, SOC 002, or SOC 003 recommended.
Learning Activities: Lecture 3 hour(s), Term Paper/Discussion 1 hour(s).
Cross Listing: SOC 176.
Grade Mode: Letter.
General Education: Social Sciences.

STS 180 — Topics in Science & Technology Studies (4 units)
Course Description: In-depth treatment of selected topics in anthropology, history, philosophy, and sociology of science and related fields. Possible topics include science and society, science and power, scientific explanation, technology and culture, theory testing.
Prerequisite(s): Course in Science Technology Studies (STS) or other course-work relevant to topic.
Learning Activities: Term Paper, Seminar 3 hour(s).
Repeat Credit: May be repeated when content varies.
Grade Mode: Letter.
General Education: Social Sciences.

STS 190 — Seminar in Science, Technology & Medicine Studies (4 units)
Course Description: Intensive reading, discussion, research and writing by small groups in selected topics of science, technology, and medicine studies scholarship. Emphasis on individual research projects.
Prerequisite(s): Open to junior and senior Science Technology Studies majors only.
Learning Activities: Lecture/Discussion 3 hour(s), Term Paper.
Grade Mode: Letter.

STS 192 — Internship (1-12 units)
Course Description: Work experience off and on campus in all subject areas offered in the program in Science & Technology Studies under the supervision of a member of the faculty.
Prerequisite(s): Consent of instructor.
Learning Activities: Internship 3-36 hour(s).
Repeat Credit: May be repeated 3 time(s) up to 12 units.
Grade Mode: Pass/No Pass only.

STS 194A — Research in Science & Technology Studies (4 units)
Course Description: Directed reading and research in preparation for a thesis project.
Prerequisite(s): Consent of instructor; senior standing faculty approval recommended.
Learning Activities: Independent Study, Extensive Writing, Tutorial 3 hour(s).
Grade Mode: Letter.
General Education: Social Sciences.

STS 194B — Advanced Research in Science & Technology Studies (4 units)
Course Description: Development of a research thesis, supervised by a faculty member.
Prerequisite(s): STS 194A; consent of instructor; senior standing faculty approval recommended.
Learning Activities: Term Paper, Tutorial 3 hour(s), Independent Study.
Grade Mode: Letter.
General Education: Social Sciences.

STS 195 — Research in Data Studies (4 units)
Course Description: Analysis of real-world data in the form of case studies engaging current issues. Emphasizes teamwork in the identification of problems and sources of relevant data; data cleaning, exploration, analysis, and visualization using R; and interpretation and presentation of results to a variety of stakeholders in oral, visual, and textual formats.
Prerequisite(s): STS 101; or consent of instructor.
Learning Activities: Lecture/Discussion 3 hour(s), Discussion/Laboratory 1 hour(s).
Grade Mode: Letter.
General Education: Social Sciences.

STS 198 — Directed Group Study (1-5 units)
Course Description: Directed group study.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable.
Grade Mode: Pass/No Pass only.

STS 199 — Special Study for Advanced Undergraduates (1-5 units)
Course Description: Special study for advanced undergraduates.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable.
Grade Mode: Pass/No Pass only.
STS 200 — Theories & Methods in Science & Technology Studies (4 units)
Course Description: Theories and methods of Science & Technology Studies as a field of critical and empirical scholarship, and examination of various contexts in which STS has emerged worldwide.
Learning Activities: Seminar 3 hour(s), Term Paper.
Repeat Credit: May be repeated 1 time(s) with consent of instructor.
Grade Mode: Letter.

STS 205 — Contemporary Issues in Science & Technology Studies (4 units)
Course Description: Recent topics, debates, and innovative methods in Science & Technology Studies. Issues may include the governance of technoscience, science and media, data studies, indigenous knowledge, science and globalization, citizen science, new and emerging technologies.
Learning Activities: Discussion 3 hour(s), Term Paper.
Repeat Credit: May be repeated when topic differs.
Grade Mode: Letter.

STS 210 — Digital Technologies: History & Theory (4 units)
Course Description: Introduction to the history and theory of digital technologies. Human-machine interaction, cybernetics, software studies, and global networking.
Learning Activities: Discussion 3 hour(s), Term Paper.
Grade Mode: Letter.

STS 250 — History & Philosophy of Science (4 units)
Course Description: Interdisciplinary seminar in the history and philosophy of science. Focuses on issues such as historiography, methodology, and the conceptual foundations of science.
Prerequisite(s): Graduate standing or consent of instructor.
Learning Activities: Seminar 3 hour(s), Term Paper.
Repeat Credit: May be repeated with consent of instructor.
Grade Mode: Letter.

STS 298 — Group Study (1-5 units)
Course Description: Group study.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable.
Grade Mode: Satisfactory/Unsatisfactory only.

STS 299 — Research (1-12 units)
Course Description: Research.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable.
Grade Mode: Satisfactory/Unsatisfactory only.

STS 396 — Teaching Assistant Training Practicum (1-4 units)
Course Description: Teaching assistant training practicum.
Prerequisite(s): Graduate standing.
Learning Activities: Variable.
Repeat Credit: May be repeated.
Grade Mode: Pass/No Pass only.