Science, Technology, & Society

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Science, Technology, & Society
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School of Arts & Sciences

Bachelor of Science Degree

Farmingdale State College’s Bachelor of Science (BS) in Science, Technology, & Society (STS) is a dynamic interdisciplinary program that allows students to explore the connections between science, technology, and social change. With a cutting-edge focus on globalization, scientific advancement, and technological innovation, the STS degree represents the epitome of the applied social science program of the 21st century. Our program addresses the employment needs of the region and the diverse academic interests of its majors by providing students with an interdisciplinary program of study that incorporates the practical uses of technological knowledge, scientific inquiry, the application of theory to complex problems, and an integrated approach to the learning process. Students examine the real-world effects of globalization, exploring the historical, political, economic, and sociological impact of worldwide industrialization, cross-border technology transfer, global environmental issues, transnational economic interdependence, the spread of information and communication technologies, and other important facets of the current process of globalization. In addition to hands-on training in the technology-related fields, STS majors also develop a strong background in the ways in which scientific, technological, and industrial development have influenced and continue to shape history, society, and culture on the local, national, and international levels.

Graduates of the Science, Technology, & Society program are suited for employment in a variety of settings where their broad view of the technologies, natural sciences, social sciences, and humanities are desirable for the solution of problems. In particular, the program prepares students for careers in technological professions, government and non-governmental organizations (NGOs), environmental agencies, health and wellness, law, diplomacy, and graduate work in the social sciences, liberal arts, and education. Students who are interested in environmental protection and sustainability are able to take advantage of Farmingdale State College’s various “green” initiatives, including our nationally-recognized Solar Energy Center, the Green Building Institute, and other facilities associated with sustainable energy.

As globalization places increasingly complex demands on the workforce of the new millennium, international corporations on Long Island have indicated that their future employment needs include graduates who possess the skills developed by completing the Science, Technology, & Society program. While the primary focus of the Science, Technology, & Society program is to prepare its graduates for careers in the local Long Island region and across New York State, graduates of the STS program have a wide variety of employment options available to them upon graduation. For example, graduates of the program may wish to pursue additional training in an area that they investigated in their selected concentration or may elect to pursue graduate studies in a related discipline. As a result, the STS program provides students with a breadth of choices to embark upon once they have completed their degree.

Science, Technology, & Society (BS) Program Outcomes:
Students will select one of the following concentrations: 1) Global Affairs; 2) Media Studies; 3) Environmental Policy; or 4) Health, Wellness, and Society. At the completion of any of the concentrations within the Science, Technology, & Society program:

• Graduates will be able to describe and explain many applications of science and technology within our society.
• Graduates will be able to describe and explain the ways in which technology interacts with the social sciences and other disciplines.
• Graduates will have an in depth knowledge and understanding of a particular subject, while also being able to compare and contrast broader complex issues involving globalization, media, technological change, health and wellness, and environmental policy.
• Graduates will be able to work within the framework of a holistic view of globalization and understand real-world applications of globalization by viewing it from a variety of different disciplinary perspectives.

Fall 2019- Subject to Revision

<table>
<thead>
<tr>
<th>Subject Category</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Liberal Arts &amp; Sciences</td>
<td>(44 credits)</td>
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<tr>
<td>Communications (GE—other than EGL 101)</td>
<td>3</td>
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<tr>
<td>Humanities (GE)</td>
<td>3</td>
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<tr>
<td>Arts (GE)</td>
<td>3</td>
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<tr>
<td>American History (GE)</td>
<td>3</td>
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<tr>
<td>Other World Civilizations (GE)</td>
<td>3</td>
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<tr>
<td>Western Civilization (GE)</td>
<td>3</td>
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<tr>
<td>Mathematics (GE—one at 110 or higher)</td>
<td>6</td>
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<tr>
<td>Foreign Language—Level II (GE)</td>
<td>3</td>
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<tr>
<td>Social and Behavioral Sciences (GE)</td>
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<tr>
<td>Natural Science (GE)</td>
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<tr>
<td>Natural Science Elective/Lab</td>
<td>4</td>
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<tr>
<td>EGL 101—Composition I: College Writing</td>
<td>3</td>
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<td>EGL 102—Composition II: Writing about Literature</td>
<td>3</td>
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<tr>
<td>Free Electives</td>
<td>(9 credits)</td>
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<tr>
<td>STS Technology Requirements</td>
<td>(19 credits)</td>
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<td>BCS 160—Computers, Society and Technology2</td>
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<td>HIS 212—Technology, Politics, and the Modern World</td>
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<td>ENV 101— Energy Sustainability and Environment</td>
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<td>GEO 221—Introduction to Geographic Information Systems (GIS)</td>
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<tr>
<td>SOC 245—Technology, Society and Social Change</td>
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</table>
STS 400W—STS Seminar or STS 401W—Internship 3

STS Concentrations (48 credits)

All students will choose one of the following concentration areas: Global Affairs, Media Studies, Environmental Policy or Health, Wellness and Society. Primary fields, secondary fields, and STS electives will vary by concentration.

- 7 courses in a primary field 21
- 4 courses in a secondary field 12
- 5 STS Perspectives electives (at least 2 at the 300-level or above) 15

Total Credits: 120

1 In addition to meeting General Education requirements, STS students must take a Level II (second semester) or higher course in a Foreign Language or demonstrate oral and written fluency.

2 BCS 102 may be used by students who took the course prior to Fall 2013.

3 A grade of C or higher is required in the Capstone Course (STS 400W or 401W)

All graduates must have 30 credits in residency and a total of 15 credits of Upper Division (300-level or higher) courses in residency.

STS Concentrations:

Note: Many courses require prerequisites. Please see our course catalog.

Global Affairs

The Global Affairs concentration prepares students for career paths in a dynamic world connected by the flow of people, ideas, money, and goods, including but not limited to occupations in government service, diplomacy, and transnational advocacy. This track is also suitable for students planning to pursue graduate study in the fields of Global Studies, International Relations, Diplomacy, and Law. Students will pursue an applied social sciences curriculum examining such topics as world affairs, geopolitics, environmental issues, technological innovation, industrialization, economic interdependence, international trade, and cultural, social and political change around the globe.

- Seven courses (21 credits) in one of the following disciplines: History, Geography, Economics, Sociology, Anthropology, or Politics
- Four courses (12 credits) in a secondary field from one of the above listed disciplines, Philosophy, or Business Management (School of Business)
- Five STS Perspectives Electives (15 credits), including at least two courses at the 300 level; representative courses in Global Affairs include (others with permission of Department Chair):
  
  ANT 210—Anthropology and Globalization
  
  HIS 305—Culture and Technology in England
HIS 341—Terrorism and the Modern World
MLG 305—Hispanic Culture and Latin American Civilization
MLG 308—Arabic Culture and Civilization
POL 371—Geopolitics
SOC 350—Global Social Change
PSY 304—Multicultural Psychology

**Media Studies**

The Media Studies concentration prepares students for career paths dependent on a critical understanding of the rapidly changing nature of mass media and information and communication technologies (ICTs), including but not limited to occupations in the cultural industries (film, TV, music, radio, etc.), new media companies, political communication, and corporate/media relations. This track is also suitable for students planning to pursue graduate study in the fields of Media or Cultural Studies, as well as certain Area Studies programs. Students will pursue an applied social sciences/humanities curriculum examining such topics as media studies, cultural exchange, political identity, immigration and multiculturalism, intercultural communication, the evolution of media platforms, and issues of gender, ethnicity, and race.

- Seven courses (21 credits) in one of the following disciplines: History, Geography, Economics, Sociology, Anthropology, English, Modern Languages, or Politics
- Four courses (12 credits) in a secondary field from one of the above listed disciplines, Philosophy, Psychology, Business Management, Computer Systems, Sport Management, or Visual Communications (School of Business)
- Five STS Perspectives Electives (15 credits), including at least two courses at the 300 level; representative courses in Media Studies include (others with permission of Department Chair):

  BCS 130—Website Development
  ECO 320—Internet and Network Economics
  EGL 308—The City in Literature, Art, Film and Theatre
  EGL 311—Introduction to Writing for Electronic Media
  POL 320—Internet Politics
  POL 391—Mass Media and Politics
  SMT 220—Media and Sport

**Environmental Policy**

The Environmental Policy concentration prepares students for policy-related career paths in the evolving realm of “green” technologies, renewable energy, sustainable development, and the protection of ecosystems. This track is also suitable
for students planning to pursue graduate study in the fields of Environmental Studies, Public Policy, and International Development. Students will pursue an applied social sciences curriculum examining such topics as ecology, climate change, environmental policy-making, energy sustainability, ethics in the global sphere, green technologies, and regulatory issues.

- Seven courses (21 credit hours) in a single discipline within the Social Sciences (History, Geography, Sociology, Economics, Anthropology, Psychology, or Politics) or Physics
- Four courses (12 credits) in a secondary field from one of the above listed disciplines, Mathematics, Philosophy, or in Environmental Sciences (School of Engineering) or Horticulture (School of Business)
- Five STS Perspectives Electives (15 credits), including at least two courses at the 300 level; representative courses in Environmental Policy include (others with permission of Department Chair):
  
  BIO 353—Essentials of Plant Pathology

  BUS 230—Environmental Law

  ECO 350—Economics of Global Disasters

  ECO 435—Environmental Economics and Policy

  ENV 210—Energy and Policy Standards

  HIS 320—Europe since the Industrial Revolution

  PHI 307—Philosophy of Science and Technology

  POL 390—Environmental Politics

**Health, Wellness, and Society**

The Health, Wellness, and Society concentration prepares students for career paths in a variety of occupations associated with health, medicine, dentistry, nutrition, and well-being, both on the local and international levels. This track is also suitable for students planning to pursue graduate study in the fields of Public Health, Applied Healthcare, and Global Health Policy or degrees/professional programs in Medicine, Dentistry, Medical/Physician’s Assistant, Nutrition, Gerontology, Chiropractic, Holistic/Homeopathic Medicine, Midwife, Acupuncture, or other areas of healthcare. Students will pursue an applied social sciences/natural sciences curriculum examining such topics as nutrition, disease and hygiene, the history of healthcare, alternative approaches to medicine, public policy, and the relationship between the human behavior, the environment, and well-being.

- Seven courses (21 credit hours) in one of the following disciplines: History, Geography, Sociology, Anthropology, Economics, Psychology, Politics, Physics, Chemistry, or Biology
- Four courses (12 credits) in a secondary field from one of the above listed disciplines, Philosophy, or Health Studies (School of Health Sciences)
- Five STS Perspectives Electives (15 credits), including at least two courses at the 300 level; representative courses in Health, Wellness, and Society include (others with permission of Department Chair):

  BIO 240—Bioethics

  CHM 111—Chemistry and the Public Interest
Course Descriptions

**EGL 101—Composition I: College Writing**
This is the first part of a required sequence in college essay writing. Students learn to view writing as a process that involves generating ideas, formulating and developing a thesis, structuring paragraphs and essays, as well as revising and editing drafts. The focus is on the development of critical and analytical thinking. Students also learn the correct and ethical use of print and electronic sources. At least one research paper is required. A grade of C or higher is a graduation requirement. Note: Students passing a departmental diagnostic exam given on the first day of class will remain in EGL 101; all others will be placed in EGL 097. Prerequisite is any of the following: successful completion of EGL 097; an SAT essay score (taken prior to March 1, 2016) of 7 or higher; an SAT essay score (taken after March 1, 2016) of 5 or higher; on-campus placement testing. Credits: 3

**EGL 102—Composition II: Writing about Literature**
This is the second part of the required introductory English composition sequence. This course builds on writing skills developed in EGL 101, specifically the ability to write analytical and persuasive essays and to use research materials correctly and effectively. Students read selections from different literary genres (poetry, drama, and narrative fiction). Selections from the literature provide the basis for analytical and critical essays that explore the ways writers use works of the imagination to explore human experience. Grade of C or higher is a graduation requirement. Prerequisite(s): EGL 101 Credits: 3

**BCS 160—Computers, Society and Technology2**
This is an introductory course that provides students with the knowledge to stay current and informed in a technology-oriented, global society. Students will receive instruction in basic computer concepts and terminology, the fundamentals of the Windows operating system and have hands-on experience at the beginning to intermediate level using Microsoft Excel and Access. The Internet will be used to supplement textbook and lecture materials. Note: Students taking this course may not receive credit for BCS 102 or 202. Credits: 3

**HIS 212—Technology, Politics, and the Modern World**
Analyzes the impact of technology on the major political movements and governmental systems of the modern world since 1900. The course will examine the effects of technology on war, culture, ideology and the future. Credits: 3

**ENV 101—Energy Sustainability and Environment**
This is an introductory course to create and enhance the critical awareness of the student regarding various forms of energy, sustainability issues and the impact on the environment through unbridled use of energy in the present day context. A scientific and technological approach is used to discuss various topics. The knowledge base of this course is derived from certain natural sciences such as Physics, Chemistry, Biology and Eco-Science. The main topics of discussion are: Forms of energy, energy conservation, impact on the environment by the use of energy, forms of renewable energy and sustainability issues. The critical policy issues related to energy are also discussed. The course prepares the student to be a fully aware citizen on energy issues facing the community and the world. Credits: 3

GEO 221—Introduction to Geographic Information Systems (GIS)
Geographic information systems (GIS) are computer systems designed for the creation, storage, retrieval, analysis, and visualization of spatial data. GIS is applied across fields as diverse as urban planning, environmental management, law enforcement, industrial location, and marketing, and for scientific research in many disciplines. This course is a hands-on course with a required lab period which will introduce students to foundational concepts and skills in working with spatial data, including finding and creating data, spatial analysis, and GIS-based map production. This course is a prerequisite for several upper-level GEO courses. Prerequisite(s): EGL 101, GEO 110 Corequisite(s): GEO 221L Credits: 4

SOC 245—Technology, Society and Social Change
This course explores the ways in which science, technology, and society create social change. The focus is on the varying benefits, costs, and consequences of these changes across historical eras and cultures. This course carries a hands-on computer component as a requirement. Prerequisite(s): One course in social science Credits: 3

STS 400W—STS Seminar or STS 401W—Internship
The Senior Seminar in Science, Technology, & Society is a capstone course for those students intending to graduate from the Science, Technology, & Society (STS) program. Students will participate in a reading and writing-intensive seminar organized around a common theme in the sciences and technologies, exploring how social, political, and cultural values affect the production and dissemination of knowledge and the development and use of new technologies. Students in the seminar will be required to complete a substantial research project integrating what they have learned during their course of study and their specific areas of interest. Students should consult the department before registering for any seminar course. This is a writing-intensive course. Note: Students cannot get credit for STS 400 and 400W; STS 400W can be used to fulfill the writing intensive requirement. Note: Offered at the discretion of the Science, Technology, & Society Department Prerequisite(s): Senior status in STS program and EGL 101 with a grade of C or higher. Credits: 3

Admission to Farmingdale State College - State University of New York is based on the qualifications of the applicant without regard to age, sex, marital or military status, race, color, creed, religion, national origin, disability or sexual orientation.