

B.S. in STS (2011-2012)

Science, Technology, and Society: Requirements for the B.S. Major

- This form must be drafted, in pencil, before your declaration of STS as your major will be approved in Axess.
- You do not need component signatures of approval to declare, however, the signed version of the form must be returned to the STS office before the end of your declaration quarter.
- You may not double-count one course for two separate component requirements.
- A course is defined as 3 or more units.
- You may not use more than one freshman or sophomore seminar towards your STS degree requirements.
- **NOTE: It is your responsibility to update your course plan in the STS Office each quarter if you deviate from your original, approved plan. Unapproved changes may not be approved for graduation.**

The STS B.S. major curriculum has two components: Core and Technical Depth. For each course, fill in the quarter and year of planned or completed enrollment (i.e., A/2011-12), course number and title, units, and grade earned (if available) on the form. You must obtain a signature of approval from a Stanford Academic Council faculty member for each component – the STS undergraduate advisor will assist you with faculty referrals after you declare.

The number or range of units for a class and the quarter in which it will be offered in 2011-12 are indicated in parentheses after each course title below (A = Autumn, W = Winter, S = Spring, NO = “not offered in 2011-12”).

Component # 1: STS Core

Requirements: successful completion, for a letter grade wherever available, of 8 courses in the following categories:

1. Required Interdisciplinary Foundational Course (1 course):

STS 101. Science, Technology, and Contemporary Society (4-5, A) **or**
STS 101Q. Technology in Contemporary Society (4, A)

2. Disciplinary Analyses (6 courses):

- ✓ **Choose 1 course in each area, at least 3 of which must be upper-level (targeted primarily at juniors and seniors)**
- ✓ **One of the courses in the STS Core must satisfy the Writing in the Major requirement - indicated with an *asterisk**
- ✓ **Make sure you check the pre-requisites for the courses you choose!**

Philosophical/Ethical/Aesthetic perspectives (indicate as **P** on Curriculum Form)

- *STS 110. Ethics and Public Policy (5, W)
- STS 112. Ten Things: An Archaeology of Design (3-5, A)
- STS 114. Technology, Ecology & the Imagination of the Future (5, NO)
- STS 210. Ethics, Science, and Technology (4, NO)
- ARTHIST 158A. History of Photography (4, W)
- COMM 131. Media Ethics and Responsibility (4-5, NO)
- COMM 137W. The Dialogue of Democracy (4-5, W)
- *CS 181. Computers, Ethics, and Public Policy (4, A/S)
- ENGLISH 176. Science Fiction: Techno Dreams and Nightmares (5, NO)
- ME 120. History and Philosophy of Design (3, S)
- ME 214/314. Good Products, Bad Products (3-4, W)
- PHIL 60. Introduction to Philosophy of Science (5, W)
- PHIL 163H. The History of Scientific Methods, Pythagoras to Popper (4, S)

Historical perspectives (indicate as **H** on Curriculum Form)

- ARTHIST 158A. History of Photography (4, W)
- CEE 64. Air Pollution and Global Warming: History, Science, and Solutions (3, W)
- CLASSGEN 123. Urban Sustainability: Long-Term Archaeological Perspectives (3-5, A)
- CLASSGEN 133. Invention of Science (3-5, S)
- EARTHSYS 145. The Environmental History of North America (4-5, S)
- ECON 116. American Economic History (5, S)
- ECON 226. U.S. Economic History (2-5, NO)
- HISTORY 31/131. Science, Technology and Art: The Worlds of Leonardo da Vinci (3-5, NO)
- HISTORY 40/140. World History of Science: From Prehistory to the Scientific Revolution (3-5, W)
- HISTORY 41A/141A. The Emergence of Medicine: The Middle Age and the Renaissance (3, NO)
- HISTORY 130A. The Rise of Scientific Medicine in the United States, 1825-Present (4-5, S)
- *HISTORY 140A. The Scientific Revolution (5, NO)
- HISTORY 208A. Science and Law in History (4-5, NO)
- HISTORY 242G. Einstein: Science, Technology, and Culture (4-5, W)
- HISTORY 243G. Tobacco and Health in World History (4-5, A)
- ME 120. History and Philosophy of Design (3, S)
- PHIL 163H. The History of Scientific Methods, Pythagoras to Popper (4, S)
- POLISCI 116. History of Nuclear Weapons (5, S)

Social Scientific perspectives (indicate as **S** on Curriculum Form)

- STS 190. STS Junior Seminar (4, W)
- AA 116N. Electric Automobiles and Aircraft (3, W)
- ANTHRO 82. Medical Anthropology (5, S)
- ANTHRO 180. Science, Technology, and Gender (3-5, NO)
- COMM 1B. Media, Culture, and Society (5, W)
- COMM 108. Media Processes and Effects (4-5, W)
- *COMM 120. Digital Media in Society (4-5, NO)
- COMM 166. Virtual People (4-5, S)
- COMM 168. Experimental Research in Advanced User Interfaces (1-5, NO)
- COMM 169. Computers and Interfaces (4-5, NO)
- COMM 172. Media Psychology (4-5, S)
- COMM 182. Virtual Communities and Social Media (4-5, A)
- COMPMED 87Q. Introduction to the Mouse in Biomedical Research
- EARTHSYS 57Q. Climate Change from the Past to the Future (3, W)
- EARTHSYS 111. Biology and Global Change (4, W)
- EARTHSYS 173. Aquaculture and the Environment: Science, History, and Policy (3, S)
- EARTHSYS 184. Climate and Agriculture (3-4, S)
- ECON 113. Economics of Innovation (5, S)
- ECON 224. Science and Technology in Economic Growth (2-5, NO)
- ECON 225. Economics of Technology and Innovation (2-5, S)
- EDUC 358X. Developments in Access to Knowledge & Scholarly Communication (1-4, W)
- ENGR 110. Perspectives in Assistive Technology (3, W)
- HUMBIO 175. Health Care as Seen Through Medical History, Literature, and the Arts (3, A)
- MS&E 181. Issues in Technology and Work for a Post-Industrial Economy (3, S)
- MS&E 185. Global Work (4, A/S)
- MS&E 189. Social Networks - Theory, Methods, and Applications (3, A)
- *MS&E 193. Technology and National Security (3, A)
- POLISCI 114S. International Security in a Changing World (5, W)
- POLISCI 122. Introduction to American Law (3-5, A)
- PUBLPOL 194. Technology Policy (5, W)
- SOC 114. Economic Sociology (5, A)
- SOC 160. Formal Organizations (5, S)
- SOC 161. The Social Science of Entrepreneurship (5, NO)

3. Required Interdisciplinary Senior Seminar (1 course):

- STS 200. STS Senior Colloquium (4, A & S) **or**
STS 299. Advanced Individual Work (1-5, A/W/S) for students writing an STS honors thesis

Component # 2: Technical Depth

Requirement: A minimum-50-unit package of courses in the natural, biological, cognitive, or formal sciences, satisfying the guidelines of either the Focused Depth or the Clustered Depth option described below. A maximum of 2 Technical Depth courses may be taken on a pass/no credit basis. All courses taken as part of the student's Technical Depth package should be "technical," i.e., courses in the natural (physical, biological, or earth) sciences, formal sciences; engineering; or mathematics, and will normally be in one or more of the following fields:

<u>Science</u>	<u>Engineering</u>	<u>Mathematical Sciences</u>
Applied Physics	Aeronautics and Astronautics	Mathematics
Biology	Bioengineering	Statistics
Chemistry	Chemical	
Earth Systems	Civil and Environmental	
Human Biology	Computer Science*	
Physics	Electrical Engineering	
	Management Science & Engineering**	
	Material Science & Engineering	
	Mechanical Engineering	

* *Computer Science Note:* CS 105 cannot be used towards the BS degree. CS 106A, while not required, is strongly recommended.

***Management Science & Engineering Note:* If one chooses MS&E as a Technical Depth field, at least half of the advanced courses (i.e, 2 of the advanced classes for the Focused Depth option; 1 for the Clustered Depth option) must be drawn from this list of technical and advanced MS&E courses: 121, 142, 206, 211, 220, 221, 223, 241, 242, 243, 245G, 246, 248, 250A, 252, 265, 292, 294. Be aware that MS&E courses often have limited enrollment and/or pre-requisites. Enrollment is not guaranteed.

Option 1: Focused Depth

Requirement: a minimum of 7 courses amounting to at least 25 units in a single field of engineering, natural science, or mathematics. For this option, with the exception of at most two "stand-alone" courses, the remaining units of the Technical Depth Component MUST be comprised of sequences of at least three courses each in technical fields complementing the field of focus. For example, a Focused Technical Depth package might contain eight mechanical engineering, three mathematics, and three computer science courses, plus one each in electrical engineering and earth sciences.

Important: Four or more courses in the field of focus must be "advanced," i.e., not normally taken in freshman year or in the first year of study in the field and intended for juniors and seniors. Indicate advanced courses with an "A" on the Curriculum Form.

Option 2: Clustered Depth

Requirement: a minimum of two clusters of at least 5 technical courses and 15 units each in different fields of engineering, science, or mathematics. For this option, with the exception of at most two "stand-alone" courses, the remaining units of the Technical Depth Component must be comprised of sequences of at least three courses each in fields complementing the cluster fields. For example, a Clustered Technical Depth package might contain five courses each in electrical engineering and computer science, three courses in civil engineering, and one course each in industrial engineering and physics.

Important: two or more courses *in each cluster* must be "advanced," i.e., not normally taken in freshman year or in the first year of study in the field and intended for juniors and seniors. Indicate advanced courses with an "A" on the Curriculum Form.

B.S. in STS

Curriculum Form: 2011-12

Name: _____

Student ID Number: _____

Stanford E-Mail: _____

Expected Graduation Qtr/Yr: _____

Are you a Stanford NCAA Varsity Athlete? If yes, please list sport: _____

Component # 1: STS Core

(All courses must be taken for a letter grade where offered)

Requirement? Indicate with P, H, or S	Qtr/Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1. _____	Aut/	STS 101 or STS 101Q	Science, Technology, and Contemporary Society or Technology in Contemporary Society		
2.					
3.					
4.					
5.					
6.					
7.					
8. _____		STS 200 or STS 299	Senior Colloquium or Advanced Individual Work Sections		

My WIM course (listed above in the Core) is: _____ (STS 110; Comm 120; CS 181; History 140A; MS&E 193W)

Are you interested in pursuing an STS Honors Thesis? No ___ Yes ___

This degree plan has been reviewed by the STS Undergraduate Advisor:

Advisor Signature: _____ Date: _____

**Technical Depth
Option #1: Focused Depth**

(At most two courses may be taken on a pass/no credit basis in the technical depth)

Field of Focused Depth: _____ (minima: 7 courses including 4 advanced)

Advanced? Mark "A"	Qtr./Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1.					
2.					
3.					
4.					
5.					
6.					
7.					

Total number of units in Focused Depth: _____ (25 units min.)

Optional Complementary Sequence # 1 Field: _____ (minima: 3 courses, 9 units)

Qtr./Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1.				
2.				
3.				

Optional Complementary Sequence # 2 Field: _____ (minima: 3 courses, 9 units)

Qtr./Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1.				
2.				
3.				

Optional Complementary Sequence # 3 Field: _____ (minima: 3 courses, 9 units)

Qtr./Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1.				
2.				
3.				

“Stand-Alone” Courses (optional but a maximum of 2):

Qtr./Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade

Total number of units in Technical Depth Component: _____ (50 units min.)

Technical Depth Component Approval (Focused Depth Option):

The signature below must be that of a Stanford faculty member who is knowledgeable in the Technical Depth area and *a member of the Stanford Academic Council* (not a visiting professor or a lecturer).

Note to would-be signer: your signature will be taken to mean that in your view (a) the listed courses comprise a suitable package of offerings for the purpose of the STS B.S. degree Technical Depth, and (b) successful completion of these courses is likely to foster a measure of progressive competence by the student in the chosen concentration area.

Signature: _____ Dept. _____

Name: _____ Date: _____

**Technical Depth
Option #2: Clustered Depth**

(At most two courses may be taken on a pass/no credit basis in the technical depth)

Cluster #1 Field: _____ (minima: 5 courses including 2 advanced)

Advanced? Mark "A"	Qtr/Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1.					
2.					
3.					
4.					
5.					

Total number of units in Cluster #1: _____ (15 units min.)

Cluster #2 Field: _____ (minima: 5 courses including 2 advanced)

Advanced? Mark "A"	Qtr/Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1.					
2.					
3.					
4.					
5.					

Total number of units in Cluster #2: _____ (15 units min.)

Optional Cluster #3 Field: _____ (minima: 5 courses including 2 advanced)

Advanced? Mark "A"	Qtr./Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1.					
2.					
3.					
4.					
5.					

Total number of units in Cluster #3: _____ (15 units min.)

Optional Complementary Sequence # 1 Field: _____ (minima: 3 courses, 9 units)

Qtr./Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade
1.				
2.				
3.				

“Stand-Alone” Courses (optional but a maximum of 2):

Qtr./Yr.	Course Dept and Number	Course Title (may be abbreviated)	Units	Grade

Total number of units in Technical Depth Component: _____ (50 units min.)

Technical Depth Component Approval (Focused Depth Option):

The signature below must be that of a Stanford faculty member who is knowledgeable in the Technical Depth area and *a member of the Stanford Academic Council* (not a visiting professor or a lecturer).

Note to would-be signer: your signature will be taken to mean that in your view (a) the listed courses comprise a suitable package of offerings for the purpose of the STS B.S. degree Technical Depth, and (b) successful completion of these courses is likely to foster a measure of progressive competence by the student in the chosen concentration area.

Signature: _____ Dept. _____

Name: _____ Date: _____