

Technology and Social Change

Undergraduate Study

Technology and social change is a cross-disciplinary program examining the relationships between technologies and the social and cultural environments. The program has a national and international perspective, with courses addressing the interrelationships, policies, and impacts created by the international exchange of technologies. Through T SC, students will better understand the institutional and sociocultural consequences of technological change from differing perspectives and will become sensitive to the issues attending the use of technology to improve people's lives. Work in the program can also serve as preparation for advanced study in this field.

Minor

The program requirement for a minor in technology and social change is a minimum of 15 credits.

T SC 341	Technology: International, Social, and Human Issues	3
3 credits from T SC cross-listed courses		3
9 credits selected from T SC cross-listed courses or from the list of T SC approved courses		9
Total Credits		15

At least 9 of the 15 credits must be in courses numbered 300 or above. Because technology and social change is an interdisciplinary study, minor programs must include coursework in at least two departments. Students seeking a minor should develop a specific program of courses either with the T SC faculty representative in their department or with the T SC coordinator. The student's minor program must be approved by the T SC program coordinator.

T SC courses are listed below. The list of T SC approved courses is available from the program coordinators. Through the program coordinator, students may petition for approval of courses not on the approved list that address matters relevant to technology and social change.

Graduate Study

The graduate minor in technology and social change is a cross-disciplinary program that enables students to study the interactions between technologies and their users, on both societal and individual levels. The minor strengthens the ability of students to apply differing perspectives in understanding the effects of the global exchange of technologies and to heighten their sensitivity to the institutional and sociocultural issues attending the use of technology to improve people's lives.

Students choosing to minor in technology and social change will pursue a degree program in the major department. In consultation with their major professor, students are to identify a T SC Faculty member to serve on the committee guiding their program of study. This T SC Faculty member must be on the Graduate faculty and must be from a discipline outside the major field of study. With the agreement of the POS committee, the student declaring a minor in T SC will select a group of courses from the list of T SC approved courses available through the program coordinators. For the master's degree, this group should be at least 9 credits; for a doctoral degree, the group should be at least 15 credits. In either case, T SC 543 Technological Innovation, Social Change, and Development is required. Students may not include in their minor any courses from their own major. All programs of study that include a T SC minor must be approved by the T SC Program coordinator.

Courses primarily for undergraduates:

T SC 220. Globalization and Sustainability.

(Cross-listed with ANTHR, ENV S, GLOBE, MAT E, M E, SOC). (3-0) Cr. 3. F.S. An introduction to understanding the key global issues in sustainability. Focuses on interconnected roles of energy, materials, human resources, economics, and technology in building and maintaining sustainable systems. Applications discussed will include challenges in both the developed and developing world and will examine the role of technology in a resource-constrained world. Cannot be used for technical elective credit in any engineering department. Meets International Perspectives Requirement.

T SC 341. Technology: International, Social, and Human Issues.

(3-0) Cr. 3. F. Prereq: Junior classification

An interdisciplinary study of the international significance of technology and of the societal and human issues attending its development and adoption.

T SC 342. World Food Issues: Past and Present.

(Cross-listed with ENV S, FS HN, AGRON). (3-0) Cr. 3. F.S. Prereq: Junior classification

Zdorkowski, Ford. Issues in the agricultural and food systems of the developed and developing world. Emphasis on economic, social, historical, ethical and environmental contexts. Causes and consequences of overnutrition/undernutrition, poverty, hunger and access/distribution. Explorations of current issues and ideas for the future. Team projects. Nonmajor graduate credit. Meets International Perspectives Requirement.

T SC 342H. World Food Issues: Past and Present, Honors.

(Cross-listed with ENV S, FS HN, AGRON). (3-0) Cr. 3. F.S. Prereq: Junior classification

Zdorkowski, Ford. Issues in the agricultural and food systems of the developed and developing world. Emphasis on economic, social, historical, ethical and environmental contexts. Causes and consequences of overnutrition/undernutrition, poverty, hunger and access/distribution. Explorations of current issues and ideas for the future. Team projects. Nonmajor graduate credit. Meets International Perspectives Requirement.

T SC 343. Philosophy of Technology.

(Cross-listed with PHIL). (3-0) Cr. 3. F.S. Prereq: 6 credits of social science or T SC 341 and 3 credits of social science

Moral and other philosophical problems related to developments in technology. Topics may include conditions under which technological innovations contribute to human emancipation, relationship of technology and democracy, utility and limits of technical rationality, and problems of ensuring that benefits of technological advance are communally shared. Topics discussed with reference to such issues as contemporary developments in microelectronics, technology transfer to the Third World, etc. Nonmajor graduate credit.

T SC 474. Communication Technology and Social Change.

(Cross-listed with JL MC). (3-0) Cr. 3. Prereq: Junior classification

Examination of historical and current communication technologies, including how they shape and are shaped by the cultural and social practices into which they are introduced.

Meets International Perspectives Requirement.

T SC 490. Independent Study.

Cr. arr. Repeatable. Prereq: T SC 341, permission of instructor and of T SC coordinator

Courses primarily for graduate students, open to qualified undergraduates:

T SC 543. Technological Innovation, Social Change, and Development.

(3-0) Cr. 3. Alt. F., offered 2012. Prereq: 6 credits in social sciences

Sources, theories and models of technological innovation; social and institutional contexts of technology transfer; appropriate/intermediate technology; issues and methods of impact assessment; planning technology related social change; democratic control of technological innovations and application; local and international case studies.

T SC 574. Communication Technologies and Social Change.

(Cross-listed with JL MC). (3-0) Cr. 3. Prereq: 6 credits in social science

Personal, organizational, and social implications of the use of communication technologies. Includes theories and empirical research across the continuum of perspectives, from techno-utopianism through an anti-technology stance. Meets International Perspectives Requirement.

T SC 590. Special Topics: Technology and Social Change.

Cr. arr. Prereq: T SC 541, permission of instructor and of T SC coordinator
Individual study of topics concerning global and local implications of technological change.