

October 29, 2008

TO: The General Studies Council
FROM: Nicholas Alozie *NOA*
Head, Social and Behavioral Sciences
RE: STS Courses Submitted for General Studies Review

Earlier this year the ABOR approved the B.S. degree program in Science, Technology, and Society for the Polytechnic campus (see attached memorandum from Provost Capaldi). ~~Science, Technology, and Society (STS) is a social science discipline that~~ investigates the interrelationship of science/technology and human systems. Typically, issues concerning the impact of science/technology on globalization, reproductive technology and human values, information technology and human relations, and science/technology and public policy and governance all come under the general domain of studies in STS. All of the STS courses included in this review are *required* to support this new degree program. These courses have all gone through the ACRES process and have received final approval (see attached front sheet from ACRES).



ARIZONA STATE UNIVERSITY

March 28, 2008

TO: David Schwalm, Dean
School of Applied Arts and Sciences

FROM: Elizabeth D. Capaldi
Executive Vice President and Provost of the University

SUBJECT: B.S. in Science, Technology, and Society

This is to notify you that on March 25, 2008, the Academic Affairs Committee of the Board of Regents approved the request for authorization to implement the B.S. in Science, Technology, and Society.

You may proceed to implement the proposal effective immediately. The following plan code has been established in OASIS, effective fall 2008: ECSTSBS

XC: Maria Allison
Bridgot Allcott
Jill Andrews
Nancy Dickson
Melinda Gebel
Jennifer Glawson
Heather Hoffart
Cecilia Hook
Glenn Irvin
Nancy Kiernan
Phyllis Lucie
Linda Pedersen
Julie Ramsden
Adrian Sannier
Gini Sater
David Young
Nicholas Alozie
Lisa Frank

EXECUTIVE VICE PRESIDENT AND PROVOST OF THE UNIVERSITY

FULTON CENTER, SUITE 420
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PO BOX 877805, TEMPE, AZ 85287-7805
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New Course Curriculum Form

Arizona State University

E STS 301 Research in Science and Technology Studies 3.0 - Spring 2009 | CL: None

Originator: Silvia Llamas-Flores **Status:** Approved **Department:** Social and Behavioral Sciences (Polytechnic)**Date Created:** 05/06/2008 **Submitted:** 05/14/2008 **Completed:** 10/20/2008 **To****ACETS:****Campus:** E**College:** Applied Arts and Sciences**Subject:** STS**Number:** 301**Title:** Research in Science and Technology Studies**Abbreviated title:** Research in Sci Tech Studies**Semester hours:** 3.0**Effective semester:** - Spring**Summer justification:** N/A**Effective year:** 2009**Catalog description:** Examines methods of inquiry in the Social Sciences with emphasis on STS, including both qualitative and quantitative approaches, philosophy of science and scientific revolutions.**Primary component:** Lecture**Graded component:** *Same as primary component**Additional component(s):****Optional component(s):****Cross-listing:** | CL: None**Cross-listed course (s):****Enrollment Requirements?:** No**Prerequisite(s):** ENG 101**Conditional prerequisite(s):****Corequisite(s):****Pre-/corequisite(s):** ENG 101**Repeat for credit:** No**Total hours allowed:****Total completions allowed:**

ARIZONA STATE UNIVERSITY EAST/TEMPE CAMPUS
GENERAL STUDIES PROGRAM COURSE PROPOSAL COVER FORM

Courses submitted to the GSC between 2/1 and 4/30 if approved, will be effective the following Spring.

Courses submitted between 5/1 and 1/31 if approved, will be effective the following Fall.

(SUBMISSION VIA ADOBE.PDF FILES IS PREFERRED)

DATE 10/31/2008

1. ACADEMIC UNIT: ASUP SOCIAL AND BEHAVIORAL SCIENCES
2. COURSE PROPOSED: STS 301 Research in Science and Technology Studies (3)
(prefix) (number) (title) (semester hours)
3. CONTACT PERSON: Name: Sherrie Loomis Phone: 480/727-1984
Mail Code: 0180 E-Mail: sherrie.loomis@asu.edu

4. ELIGIBILITY: New courses must be approved by the Tempe Campus Curriculum Subcommittee and must have a regular course number. For the rules governing approval of omnibus courses, contact the General Studies Program Office at 965-0739.
5. AREA(S) PROPOSED COURSE WILL SERVE: A single course may be proposed for more than one core or awareness area. A course may satisfy a core area requirement and more than one awareness area requirements concurrently, but may not satisfy requirements in two core areas simultaneously, even if approved for those areas. With departmental consent, an approved General Studies course may be counted toward both the General Studies requirement and the major program of study.

Core Areas

- Literacy and Critical Inquiry-L
Mathematical Studies-MA CS
Humanities and Fine Arts-HU
Social and Behavioral Sciences-SB
Natural Sciences-SQ SG

Awareness Areas

- Global Awareness-G
Historical Awareness-H
Cultural Diversity in the United States-C
(Note: one course per form)

6. DOCUMENTATION REQUIRED.
(1) Course Description
(2) Course Syllabus
(3) Criteria Checklist for the area
(4) Table of Contents from the textbook used, if available.
7. *In the space provided below (or on a separate sheet), please also provide a description of how the course meets the specific criteria in the area for which the course is being proposed.*

CROSS-LISTED COURSES: No Yes; Please identify courses: _____

Is this a multisection course?: No Yes; Is it governed by a common syllabus? _____

NICHOLAS ALOZIE
Chair/Director (Print or Type)

Nicholas Alozie
Chair/Director (Signature)

Date: 10/29/2008

Syllabus
Arizona State University Polytechnic Campus
School of Applied Arts and Sciences
Social and Behavioral Sciences

STS 301 Research in Science and Technology Studies

Fall, 2008

Schedule Line Number:

Satisfies General Studies:

Venue: Santa Catalina Hall 133
Time: 2:00PM – 3:15PM
Days: Monday and Wednesday
Meeting Dates: 8/25/2008 – 12/9/2008
Class Format: Lecture/Discussion

Professor: Dr. Nicholas Alozie
Office: Santa Catalina (SANCA) 252M
Tel.: (480) 727-1395
E-Mail: Alozie@asu.edu

Office Hours: Mondays & Wednesdays
12:00pm-1:30pm, and by appointment.

Course Description:

Provides an introduction to basic social science methodology, including the fundamental questions of and approach to research and its uses. Key issues of survey, experimentation, and observation techniques are identified, as are how these research approaches are used for both qualitative and quantitative purposes. As a point of emphasis, the role of identification of research problems as leading to the utilization of appropriate methodologies is emphasized. On this foundation, the course explores how these research techniques can address questions in science and technology studies with a particular focus on issues of applied research in STS areas within the United States and abroad.

The following issues will be treated in the course: Human Inquiry and Science; Social Scientific Inquiry; Basic vs. Applied Research; Fundamentals of Research; Inductive and Deductive Reasoning; Structuring the Research Process; Units of Analysis; Time and Research-- Cross-sectional, Longitudinal, and Panel Studies; Conceptualization and Operationalization; Constructing Variables; Levels of Measurement; Identifying Research Problems in the field; Survey Research: Questionnaire Construction; Question Structure and Design; Question Ordering; Questionnaire Coding; Experimental Research; Observation/Participant Observation Research; Exam results; Research Outline Due; The Logic of Sampling; Probability vs. Non-Probability Sampling; Homogeneity and Heterogeneity; Representativeness; Sampling Frames and Lists; Sampling Designs-SRS, Systematic, and Stratified Cluster Sampling; Field Research; Content Analysis; Experimental Design; Quasi-Experimental Design; Use of controls; Archival techniques; Secondary Studies; Unobtrusive Measures; Research Problems in Science and Technology; Protocol Presentations; and Mixed-Method Design and Final Issues.

Course Learning Goals:

- Development of a basic understanding of the research perspective and the use of the scientific method in terms of the examination of STS issues
- Ability to identify research design called for by examination of the research problem.
- Understanding of the use of survey, experimental, and observation research designs
- Ability to operationalize variables and utilize a variety of scaling techniques for their measurement
- Understanding of the relationships between research methods and statistical applications in the examination of social scientific phenomena.

Required Materials:

Babbie, Earl R. *The Practice of Social Research: Eleventh Edition* (Belmont, CA: Wadsworth, 2006)

Wysocki, Diane Kholos. *Readings in Social Research Methods: Second Edition* (Belmont, CA: Wadsworth, 2005)

American Psychological Association. *Publication Manual of the American Psychological Association* (Washington, DC: American Psychological Association, 2001)

Grading:

In this class, it is assumed that the student is committed to excellence and will endeavor to perform to the best of her/his abilities. Therefore, grades are not used to provide “incentives” toward improving performance. Rather, grades are meant to acknowledge the achievement of the courses aims and the degree to which the student can master its techniques and concepts. All coursework will be used to document a grade decision, and it stands to reason that the research protocol and the exams will be large portions of the grade determination. In addition, one part of the purpose of this course is to acquaint students with how research is done in the “real world”. Accordingly, completing work in the given time frame is one of the ground rules.

Given that standard, the grade awarded will be a function of total points earned. Assuming, therefore, a total of 400 points available, grades will be allocated according to the schedule below:

A+=98-100%= 392-400

A =92- 97%= 368-388

A-= 90-91%= 360-364

B+=87- 89% =348-356

B =82-86%=328-344

B-=80-81%=320-324

C+=77-79%=308-316

C =70-76% =280-304

D=60-69% =240-276

E=59% or less=236 points or less

The instructor will exercise discretion in grading only in cases where the point total falls within the “gap” between grading categories. As always, the benefit of any doubt will be given to those who participate and consistently seek to achieve the goals of the course.

Topical Outline:

Week 1

- Introduction to course
- The Research Perspective
- Human Inquiry and Science

Week 2

- Social Scientific Inquiry
- Basic vs. Applied Research
- Fundamentals of Research
- Inductive and Deductive Reasoning
- Examples of Development Studies Utilizing Research Methods

Week 3

- Structuring the Research Process
- Units of Analysis
- Time and Research: Cross-sectional, Longitudinal, and Panel Studies

Week 4

- Conceptualization and Operationalization
- Constructing Variables
- Levels of Measurement
- Identifying Research Problems in the field

Week 5

- Survey Research: Questionnaire Construction
- Question Structure and Design
- Question Ordering
- Questionnaire Coding

Research Protocol Problem Due

Week 6

- Experimental Research

Week 7

- Observation/Participant Observation Research

Week 8

- Mid-term exam

Week 9-10

- Exam results
- Research Outline Due
- The Logic of Sampling
- Probability vs. Non-Probability Sampling
- Homogeneity and Heterogeneity
- Representativeness

- Sampling Frames and Lists
- Sampling Designs-SRS, Systematic, and Stratified Cluster Sampling

Week 11

- Field Research
- Content Analysis

Week 12

- Experimental Design
- Quasi-Experimental Design
- Use of controls

Week 13

- Archival techniques
- Secondary Studies
- Unobstrusive Measures

Week 14

- Research Problems in Science and Technology
- Protocol Presentations

Week 15

- Mixed-Method Design and Final Issues

Week 16 Final Exam and Proposals Due

ADA Statement:

The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. One element of this legislation requires that all qualified students with documented disabilities be guaranteed a learning environment that provides reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation please contact the Disability Resource Center at ASU Polytechnic located in Student Affairs Quad #4 or call 480-727-1039/TTY 480-727-1009. Eligibility and documentation policies online at <http://www.asu.edu/studentaffairs/ed/drc>

Student Academic Integrity: Students are required to adhere to the policy on student conduct identified in the ASU Student Academic Integrity Policy (http://www.asu.edu/studentaffairs/studentlife/judicial/academic_integrity.htm) and the Arizona Board of Regents Policy Manual (http://www.abor.asu.edu/1_the_regents/policymanual/chap5/chapter_v.htm#C.%20CODE%20)

Arizona State University Criteria Checklist for

SOCIAL AND BEHAVIORAL SCIENCES [SB]

Rationale and Objectives

The importance of the social and behavioral sciences is evident in both the increasing number of scientific inquiries into human behavior and the amount of attention paid to those inquiries. In both private and public sectors people rely on social scientific findings to assess the social consequences of large-scale economic, technological, scientific, and cultural changes.

Social scientists' observations about human behavior and their unique perspectives on human events make an important contribution to civic dialogue. Today, those insights are particularly crucial due to the growing economic and political interdependence among nations.

Courses proposed for General Studies designation in the Social and Behavioral Sciences area must demonstrate emphases on: **(1)** social scientific theories and principles, **(2)** the methods used to acquire knowledge about cultural or social events and processes, and **(3)** the impact of social scientific understanding on the world.

Proposer: Please complete the following section and attach appropriate documentation.

ASU--[SB] CRITERIA					
A SOCIAL AND BEHAVIORAL SCIENCE [SB] course should meet all of the following criteria. If not, a rationale for exclusion should be provided.					
YES	NO		Identify Documentation Submitted		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Course is designed to advance basic understanding and knowledge about human interaction.	Syllabus		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Course content emphasizes the study of social behavior such as that found in: <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-right: 1px solid black;"> <ul style="list-style-type: none"> • ANTHROPOLOGY • ECONOMICS • CULTURAL GEOGRAPHY • HISTORY </td> <td style="width: 50%;"> <ul style="list-style-type: none"> • LINGUISTICS • POLITICAL SCIENCE • SOCIAL PSYCHOLOGY • SOCIOLOGY </td> </tr> </table>	<ul style="list-style-type: none"> • ANTHROPOLOGY • ECONOMICS • CULTURAL GEOGRAPHY • HISTORY 	<ul style="list-style-type: none"> • LINGUISTICS • POLITICAL SCIENCE • SOCIAL PSYCHOLOGY • SOCIOLOGY 	Syllabus
<ul style="list-style-type: none"> • ANTHROPOLOGY • ECONOMICS • CULTURAL GEOGRAPHY • HISTORY 	<ul style="list-style-type: none"> • LINGUISTICS • POLITICAL SCIENCE • SOCIAL PSYCHOLOGY • SOCIOLOGY 				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Course emphasizes: <ul style="list-style-type: none"> a. the distinct knowledge base of the social and behavioral sciences (e.g., sociological anthropological). <li style="text-align: center;">OR b. the distinct methods of inquiry of the social and behavioral sciences (e.g., ethnography, historical analysis). 	Syllabus		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Course illustrates use of social and behavioral science perspectives and data.	Syllabus		
		THE FOLLOWING TYPES OF COURSES ARE EXCLUDED FROM THE [SB] AREA EVEN THOUGH THEY MIGHT GIVE SOME CONSIDERATION TO SOCIAL AND BEHAVIORAL SCIENCE CONCERNS: <ul style="list-style-type: none"> • Courses with primarily fine arts, humanities, literary, or philosophical content. • Courses with primarily natural or physical science content. • Courses with predominantly applied orientation for professional skills or training purposes. • Courses emphasizing primarily oral, quantitative, or written skills. 			

Course Prefix	Number	Title	Designation
STS	301	RESEARCH IN SCIENCE AND TECHNOLOGY STUDIES	SB

Explain in detail which student activities correspond to the specific designation criteria. Please use the following organizer to explain how the criteria are being met.

Criteria (from checksheet)	How course meets spirit (contextualize specific examples in next column)	Please provide detailed evidence of how course meets criteria (i.e., where in syllabus)
Course is designed to advance basic understanding and knowledge about human interaction and emphasizes the study of social behavior such as found in anthropology, economics, cultural geography, history, political science, social psychology, and sociology.	This is the basic social science research methods course for the B. S. in Science, Technology, and Society. The course is designed to utilize information on social and human behavior to articulate the methods used in asking questions, gathering social science data, and making sense of that data. It teaches the basics of social science methodology, including theory building, hypothesis testing, and data collection and analysis.	Page 1 of the syllabus lists the topics that will be treated in the course. These topics include human inquiry and science, social scientific inquiry, identifying research problems in the field, field research, and human observation techniques.
Course emphasizes both the distinct knowledge of the social and behavioral sciences and the distinct methods of inquiry of the social and behavioral sciences.	The course emphasizes core social science techniques of inquiry.	As the syllabus shows, this course emphasizes a uniquely social and behavioral science knowledge base focused on methodology. The comparison course and material to STS 301 is POS 301.
Course illustrates use of social and behavioral science perspectives and data.	The course relies on accumulated literature predicated upon practical and theoretical evidence. This literature focuses primarily on the techniques of studying human behavior including ethnography, survey techniques, and indirect observations.	On pages 3-4 of the syllabus, the course weekly schedule lays out the selected topics and their relevance to both core social science content and the techniques of inquiry.