ARIZONA STATE UNIVERSITY

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 1/31/11

1. ACADEMIC UNIT: School of Letters and Sciences

2. COURSE PROPOSED: STS 401 Statistics in Science and Technology Studies 3.0
   (prefix) (number) (title) (semester hours)

3. CONTACT PERSON:
   Name: Irene Rodriguez
   Phone: 480-727-1385
   Mail Code: D180 E-Mail: irene@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. (Please submit one designation per proposal)

   Core Areas
   Literacy and Critical Inquiry—☐
   Mathematical Studies—MA ☐ CS ☑
   Humanities, Fine Arts and Design—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 ☐

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 an multisection course?: ☒ No ☐ Yes; Is it governed by a common syllabus?

   Nicholas Alozie
   Chair/Director (Print or Type)
   Date: 1/31/11

   Chair/Director (Signature)

Rev. 1/94, 4/95, 7/98, 4/00, 1/02, 10/08
Arizona State University Criteria Checklist for

MATHEMATICAL STUDIES [CS]

Rationale and Objectives

The Mathematical Studies requirement is intended to ensure that students have skill in basic mathematics, can use mathematical analysis in their chosen fields, and can understand how computers can make mathematical analysis more powerful and efficient. The Mathematical Studies requirement is completed by satisfying both the Mathematics [MA] requirement and the Computer/Statistics/Quantitative Applications [CS] requirement explained below.

The Mathematics [MA] requirement, which ensures the acquisition of essential skill in basic mathematics, requires the student to complete a course in College Mathematics, College Algebra, or Precalculus, or demonstrate a higher level of skill by completing a mathematics course for which any of the first three courses is a prerequisite.

The Computer/Statistics/Quantitative Applications [CS] requirement, which ensures skill in real world problem solving and analysis, requires the student to complete a course that uses some combination of computers, statistics, and mathematics.

Approved: Feb. 2000
Proposer: Please complete the following section and attach appropriate documentation.

### ASU- [CS] CRITERIA

A COMPUTER/STATISTICS/QUANTITATIVE APPLICATIONS [CS] COURSE MUST SATISFY ONE OF THE FOLLOWING CRITERIA: 1, 2, OR 3

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<thead>
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<th>YES</th>
<th>NO</th>
<th>Identify Documentation Submitted</th>
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</table>

1. **Computer applications**: courses must satisfy both a and b:
   
   a. Course involves the use of computer programming languages or software programs for quantitative analysis, modeling, simulation, animation, or statistics.
   
   b. Course requires students to analyze and implement procedures that are applicable to at least one of the following problem domains (check those applicable):
      
      i. Spreadsheet analysis, systems analysis and design, and decision support systems.
      
      ii. Graphic/artistic design using computers.
      
      iii. Music design using computer software.
      
      iv. Modeling, making extensive use of computer simulation.
      
      v. Statistics studies stressing the use of computer software.

*The computer applications requirement cannot be satisfied by a course, the content of which is restricted primarily to word processing or report preparation skills; learning a computer language or a computer software package; or the study of the social impact of computers. Courses that emphasize the use of a computer software package or the learning of a computer programming language are acceptable, provided that students are required to understand, at an appropriate level, the theoretical principles embodied in the operation of the software and are required to construct, test, and implement procedures that use the software to accomplish tasks in the applicable problem domains.*

2. **Statistical applications**: courses must satisfy both a and b.
   
   a. Course has a minimum mathematical prerequisite of College Mathematics, College Algebra, or Precalculus, or a course already approved as satisfying the MA requirement.  
      
      b. The course must be focused principally on developing knowledge in statistical inference and include coverage of all of the following:

   - MAT 142
### ASU--[CS] CRITERIA

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<th>YES</th>
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<th>Identify</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>- i. Design of a statistical study.</td>
<td>Chapter 1</td>
</tr>
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<td></td>
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<td>- ii. Summarization and interpretation of data.</td>
<td>Chapter 2</td>
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<td>- iii. Methods of sampling.</td>
<td>Chapter 8</td>
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<td>- iv. Standard probability models.</td>
<td>Chapters 4 - 8</td>
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<td></td>
<td></td>
<td>- v. Statistical estimation</td>
<td>Chapters 8, 9.</td>
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<td>- vi. Hypothesis testing.</td>
<td>Chapters 10, 11, 12.</td>
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<td></td>
<td></td>
<td>- vii. Regression or correlation analysis.</td>
<td>Chapters 13, 14.</td>
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3. **Quantitative applications: courses must satisfy both a and b.**
   a. Course has a minimum mathematical prerequisite of College Mathematics, College Algebra, or Precalculus, or a course already approved as satisfying the MA requirement.

   b. The course must be focused principally on the use of mathematical models in quantitative analysis and design making. Examples of such models are:

   - i. Linear programming.
   - ii. Goal programming.
   - iii. Integer programming.
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<tr>
<th>YES</th>
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<td>iv. Inventory models.</td>
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<td>v. Decision theory.</td>
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<td>vi. Simulation and Monte Carlo methods.</td>
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<td></td>
<td>vii. Other (explanation must be attached)</td>
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</table>
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.

<table>
<thead>
<tr>
<th>Criteria (from checksheet)</th>
<th>How course meets spirit (contextualize specific examples in next column)</th>
<th>Please provide detailed evidence of how course meets criteria (i.e., where in syllabus)</th>
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<tbody>
<tr>
<td>2i - Vii</td>
<td>The course presents statistical techniques for the social sciences. It is designed to provide junior/senior level students with a working set of statistical tools.</td>
<td>Listed in course objectives and learning outcomes outlined in the syllabus.</td>
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Course Description:
Introduces statistical techniques for the social sciences, including the role and rationale of statistics, descriptive measures, associational measures and inferential statistics.
GENERAL COURSE INFORMATION

Catalogue Description
Overview
Prerequisite
Course Description
Course Objectives
Course Learning Outcomes
Required Texts
Recommended Sources
LearningStudio
Graded Work
Assignment Summary
Points Available
Grade Policy
Late Work and Computer Problems

COURSE POLICIES

Online Learning Experience
Online Etiquette
Online Assistance
General Assistance at ASU

Academic Integrity Policy

Family Educational Rights and Privacy Act of 1974 (FERPA)

Americans with Disabilities Act (ADA) Policy

Other Course Policies

COURSE CALENDAR

Class Schedule

March 21, 2011: Course Organization and Introduction

- Take the LearningStudio tutorial by 10 AM, March 28, 2011 for 15 possible extra-credit points (LearningStudio tutorial is required).
- Take the Course Manual Quiz by 10 AM, March 28, 2011 for 25 possible extra-credit points.


- Take Quiz 1 by 10 AM, March 31, 2011. Quiz 1 covers Units 1 and 2.

Unit 2: March 28, 2011: The U.S. Constitution

- Take Quiz 1 by 10 AM, March 31, 2011. Quiz 1 covers Units 1 and 2.

Unit 3: March 31, 2011: Political Culture

- Take Quiz 2 by 10 AM, April 7, 2011. Quiz 2 covers Units 3 and 4.

Unit 4: April 4, 2011: Public Opinion / Media

- Take Quiz 2 by 10 AM, April 7, 2011. Quiz 2 covers Units 3 and 4.

Unit 5: April 7, 2011: Political Parties

- Take Quiz 3 by 10 AM, April 14, 2011. Quiz 3 covers Units 5 and 6.

Unit 6: April 11, 2011: Interest Groups / Political Parties

- Take Quiz 3 by 10 AM, April 14, 2011. Quiz 3 covers Units 5 and 6.
Unit 7: April 14, 2011: Elections and Voters
  - Take Quiz 4 by 10 AM, April 21, 2011. Quiz 4 covers Units 7 and 8.

Unit 8: April 18, 2011: Congress
  - Take Quiz 4 by 10 AM, April 21, 2011. Quiz 4 covers Units 7 and 8.

Unit 9: April 21, 2011: Presidency
  - Take Quiz 5 by 10 AM, April 28, 2011. Quiz 5 covers Units 9 and 10.

Unit 10: April 25, 2011: Bureaucracy
  - Take Quiz 5 by 10 AM, April 28, 2011. Quiz 5 covers Units 9 and 10.

Unit 11: April 28, 2011: Federal Judiciary

Unit 12: May 2, 2011: Public Policy

Unit 13: May 5, 2011: Conclusions
  - Complete Final by 5 PM, Friday, May 6, 2011. Your Final has two parts. Please be sure to complete both parts.

Final: Due Friday, May 6, 2011, 5 PM.

OTHER USEFUL INFORMATION SUMMARY INFORMATION

To reach me:

Dr. Sara D. Moya
sdmoya@asu.edu
Office Hours Telephonic (480-991-1906 between 7 AM and 5 PM, please)

To reach LearningStudio technical support:

“Help” link at the top of the navigation bar (chat available), right side.
helpdesk@ecollege.asu.edu
480-965-6500, option 6
To reach LearningStudio tutorial, log onto ecollege.asu.edu and go to:

.NExT Student Orientation Tutorial - eCourse.NExT

To reach general ASU technical support:

http://helptech.asu.edu/
helpdesk@asu.edu
http://help.asu.edu/studentinfo; then click on ASU Help Desk (email or chat)
http://helpdesk.poly.asu.edu/
480-965-6500
480-727-1188

To reach student support services:

http://www.poly.asu.edu/students/services
http://help.asu.edu/studentinfo

You can access your quizzes and the final through the link in the appropriate unit.

The Course Calendar is in the Course Calendar of your Course Manual and in the Calendar area of the Course website. Each unit is listed separately on the left side of the Course website.

Course Standards

You are required to adhere to the behavior standards listed in:
Arizona State University Student Code of Conduct
(http://www.abor.asu.edu/1_the_regents/policymanual/index.html#5); ASU Computer, Internet and Electronic Communications
(http://www.asu.edu/aad/manuals/acd/acd125.html); and ASU Student Academic Integrity Policy
(http://provost.asu.edu/academicintegrity/policy/StudentObligations) Additionally, the Federal Employees Code of Ethics, the ASPA Code of Ethics, and the ICMA Code of Ethics will guide our conduct throughout the semester.
Overview of Course

This course is designed to provide students with a working set of basic statistical tools, focusing on description, inference, and applied statistical techniques. The course deals primarily with (1) descriptive statistics (summarizing and describing the major characteristics of collected data); (2) inferential statistics (making predictions or drawing inferences about the likelihood that relationships between variables within the data set also exist beyond the data actually collected); and (3) applied statistical techniques (using analytic tools). The course is designed to help students appreciate, interpret, use, and integrate statistics within their disciplines.

Prerequisite

None.

Course Description

Professionals rely on quantitative methods (statistical analyses) to investigate various types of problems. Research documents, describes, and explains a wide range of issues. Research also permits predictions for the future based on the past. Students and professionals need a basic knowledge of statistics to understand, to critique, or to conduct quantitative research. Statistics is a valuable tool for academic studies and professional life.

Statistics in Science and Technology Studies emphasizes the specific quantitative techniques professionals need to be successful in their careers. Professionals need to understand the computation, use, and interpretation of particular statistical techniques specifically related to their fields. Professionals must be prepared to undertake their own research and to interpret the research of others.
This course is designed to provide Professionals with a working set of basic statistical tools. The curriculum contains three main components: (1) descriptive statistics; (2) inferential statistics; and (3) applied statistical techniques. Descriptive statistics allow students to summarize and describe quantitative data using concepts such as central tendency and dispersion. Inferential statistics allow students to make estimates about a population based on a smaller subset of the population (a sample) by applying the basic rules of probability. Applied statistical techniques assist students to create, understand, and interpret analytic tools such as contingency tables, correlations, and regressions. These techniques are applied in undergraduate classes, graduate programs, and professional life.

Course Objectives

1. To develop the student’s statistical literacy.
2. To train the student in descriptive, inferential, and applied statistics.
3. To educate the student to perform statistical analysis correctly.
4. To train the student to determine if a statistical analysis was performed correctly by others (i.e., is the statistical analysis credible).
5. To educate the student on the correct statistical techniques to use for various research projects.
6. To develop the student’s ability to communicate the implications of statistical analysis to others.
7. To develop the student’s ability to make recommendations based on the correct application and interpretation of statistical analysis.
8. To prepare the student for conducting his/her own research, both academically and professionally.

Course Learning Outcomes

1. To understand, apply, and interpret basic descriptive and inferential statistical procedures in academic and professional contexts.
2. To select appropriate basic statistical procedures for each situation and to use them correctly.
3. To interpret statistical results and communicate those results in terms that are meaningful to others.
4. To appreciate the manner in which variables such as productivity, biodiversity, race, gender, age, educational achievement, and income inform problems and shape decisions.
5. To apply statistical inference to predict the long range consequences of present decisions.
6. To interpret a computer-generated print-out of statistical results.

Required Materials


Earlier editions of the Sirkin text are acceptable, but your assignments and lectures are geared to the Third Edition.
Your required online class lectures are supplemental to your required text. The online class lectures clarify your text. Please ensure that you read your text and the online class lecture for each unit. Both your text and the online lectures are required.

**Recommended Tools**

You will benefit from having a calculator available to you. Although sophisticated computer programs are available to assist with extensive calculations, you are expected to master basic computational skills to help you understand the origin and implications of various statistical measures. A relatively simple calculator should be sufficient for your statistics class.

You do not need calculus to be successful in *Statistics in Science and Technology Studies*. Your course focuses on concepts rather than on mathematics (computers now do many of our calculations). You are responsible for understanding the concepts in the computations, however; and you will do some calculations. Consequently, you will benefit from having a calculator available to you.

**Learning Studio**

Please note that ASU’s eCollege uses LearningStudio as its basic software program. It is imperative that you are familiar with LearningStudio. Please log into LearningStudio at http://ecollege.asu.edu and take the LearningStudio tutorial at .NExT Student Orientation Tutorial - eCourse.NExT

It is a requirement for STS 401 that you take the tutorial listed above. If you take the tutorial listed above by Monday, March 28, 2011 at 10 AM, you will receive 15 extra-credit points. To receive your extra-credit points, take the tutorial by 10 AM Monday, March 28, 2011.

**Graded Work**

**Assignment Overview**

Please note that all times in this Course Manual are Mountain Standard time.

Please note that you are enrolled in a seven-week statistics course. You have two units due each week. This is a very intense schedule. Please do yourself a favor and maintain the pace of the class. **Please do not fall behind:** Statistics is a cumulative discipline that builds on concepts previously covered in the course. If you fall behind, you will have a difficult time catching up.

Please note that your seven-week course contains the full curriculum of a 15-week semester condensed into seven weeks. Toward the end of your course, materials will be posted in advance.
of their usual posting date to allow flexibility during your preparation for the final. Please check your Course Manual and Course Calendar for posting and due dates.

Your text and lecture assignments are detailed in the Course Calendar section below. For academic content, your course week begins on Thursday. You will have access to each week’s lectures at the same time you have access to each week’s quiz, usually by 12:01 AM Thursday. Your lectures will remain posted for the rest of the semester.

Please note that you have a quiz due each week, usually by 10 AM on Thursday. You will have access to the quizzes at 12:01 AM on the previous Thursday morning until the quiz is due at 10 AM the following Thursday.

You have a final examination due Friday, May 6, 2011 at 5 PM. The final is a full-length examination that covers the entire course. Your final will be posted in two parts, allowing you to take a break during your final. Please be sure to complete both parts of your final. You may complete either part of the final first. Because grades are due shortly after May 6, 2011, there is no extension on the due date or time of the final examination. Please plan your schedule accordingly. Both parts of the final will be posted on Thursday, March 28, 2011 at 12:01 AM to allow you over a week to complete both parts of your final. You should study the units on tests of significance and chi square and complete Quiz 6, before you access your final.

You have approximately 13 enrichment assignments (“assignments”). Assignments are designed to help you understand the concepts presented in your text and lectures. Assignments are awarded points toward your grade. You can find the assignments (1) referenced below in the Course Calendar section of your Course Manual; (2) referenced in the Course Calendar area of the course website; and (3) detailed in the Assignments area of the course website. Additional assignments may be added during the Semester, depending on the educational needs of students. Please submit your assignments to the Dropbox in the Course Toolbar at the top of the screen, right side, section of the course website by 10 AM on the due date of the assignment (usually Thursdays at 10 AM). Please label the assignment with your name and the assignment number. Your submission should look like this: “Jane Doe Assignment 3.” Please note that course materials submitted to the Dropbox will graded, but generally not acknowledged.

You have four optional extra-credit opportunities. All four occur during the first week of the Semester. The extra-credit opportunities are detailed below in the Course Calendar section of your Course Manual and in the Course Calendar portion of the course website.

Your tutorial on the LearningStudio software will give you 15 extra-credit points IF you complete the tutorial by 10 AM on Monday, March 28, 2011. The LearningStudio tutorial is required.

You will have access to each quiz and final website once. If you experience computer or connectivity difficulties, please email your instructor immediately at sdmoya@asu.edu.

Please allow sufficient time to complete your quizzes and final. A timer will be set for each quiz and for your final. The timer is for informational purposes only. You will not be tossed out of
quiz or final websites because of the amount of time you spend on a quiz or final. Please work at your own pace. There is no advantage to completing a quiz or final quickly. Correspondingly, there is no penalty for taking longer than the amount of time for which the timer is set.

It is wise to keep a complete copy of your responses to your quizzes and final in case you experience unexpected technical difficulties.

You may use your texts, lectures, and outside resources for quizzes and the final. In accordance with ASU’s Academic Integrity Policy (quoted below), you are required to do all your coursework yourself and not to plagiarize.

**Points Available**

- Quiz = Variable points each (approximately 310 points total)
- Final = 240 points total (approximately)
- Assignments = 10 points each (approximately 130 points total)
- Extra-Credit = 55 points possible

**Grade Policy**

An "A" grade means that a student is doing outstanding or excellent work. The student hands-in all of the course assignments on time and demonstrates a thorough grasp of the material. To receive an "A" grade a student must go well above and beyond the basic expectations for the course.

A "B" grade means that a student is doing above average work. The student hands-in all of the course assignments and demonstrates a strong grasp of the material.

A "C" grade means that a student is doing at least satisfactory work, and meeting the minimum requirements for the course. The student hands in all the course assignments and demonstrates a basic level of understanding of the course concepts.

A "D" or "E" grade means that a student is doing unacceptable work, demonstrating a lack of understanding of course concepts or incomplete course requirements. The student does not hand-in all required assignments.

Grades are curved. “Curved grades” means that grades are awarded on a relative scale, one that depends on the overall performance of the class. Thus, the curve corrects for potential issues such as particularly difficult exam questions.

Because grades are curved, it is impossible to predict accurately the percentage necessary to earn a specific letter grade in STS 401, *Statistics in Science and Technology Studies* until all assessments for the Semester are complete. Nonetheless, earning a percentage below 65 percent...
on quizzes and the final most likely will result in an “E.” Please remember that this is an estimate only.

Pluses and minuses are used. Pluses and minuses allow greater accuracy in grading and provide more precise information about student performance.

**Late Work and Computer Problems**

You may make-up quizzes IF you request a make-up quiz by 10 AM Friday after the original due date and time. Make-up quizzes must be completed by 10 AM on the Saturday following the original due date of the quiz. The last week of class, make-up quizzes must be completed by 5 PM Friday, May 6, 2011. Points will be deducted for late quizzes (10 percent for the first late work; 20 percent for the second late work; 40 percent for the third late work). Please refer to the FAQs Discussion Board for details on point deductions.

You may complete quizzes if you experience technical difficulties with LearningStudio, your computer, or your computer connection if you email me immediately describing your difficulty. Make-up quizzes for LearningStudio, connectivity, or computer problems are subject to the same time limitations as other make-up quizzes (please refer to the preceding paragraph).

It is your responsibility to ensure that you have adequate computer skills, and a reliable computer and internet access. ASU and LearningStudio technical support are available to you as listed above (please refer to the “Online Assistance” section below). Excessive technical problems will have points deducted (10 percent for third technical problem; 20 percent for fourth technical problem; 40 percent for fifth technical problem). Please see the FAQs Discussion Board for details on point deductions.

To submit a make-up quiz, please submit the quiz through the quiz website. If the due date and time for the quiz has passed, you will have to request access from me to enter the quiz website by emailing me at sdmoya@asu.edu. The same is true for a quiz that was interrupted by a computer problem.

Please submit make-up quizzes through the original quiz website. If you have difficulty submitting a quiz through the original quiz website, please email me. Alternately, you may submit the entire quiz as a Word document through the Dropbox. Please note that make-up work generally will not be acknowledged; once graded, your grade on make-up work will be added to your listing in the Grade Center.

Please see the FAQs Discussion Board for details on point deductions for late work or for LearningStudio, computer-related, or connectivity problems.
COURSE POLICIES

Online Learning Experience

An online course is no more or less rigorous than a traditional classroom course. You should expect this course to be academically challenging.

In an online course, you should expect the same workload as in a traditional classroom course. You should plan to spend the same amount of time on class-related activities for an internet course as you would for a traditional classroom course. Your workload will differ in that your studies are more individually driven and your class-related time is tailored to your individual schedule.

You will be completing the full curriculum of a 15-week-semester course in seven weeks. The pace of the course will be accelerated.

The medium for the delivery and reception of information in an online course differs from a traditional classroom course. Online courses are not the correct learning medium for every student. Some students learn better in a traditional classroom setting with direct visual and auditory interaction among the student, other students, and the professor. Other students learn well in an online setting through independent study and learning.

To be successful in Statistics in Science and Technology Studies online, you should be comfortable studying, learning, assimilating, and analyzing on your own. You should have daily, high-speed access to the internet and should access the Course website once every 24 hours. You should be comfortable using the internet generally and ASU’s LearningStudio program specifically. You should have broadband or DSL access to the internet. You should have appropriate computer skills and daily access to a dependable computer. You should have an appropriate physical environment.

You are responsible for: (1) your computer skills, computer availability, and internet access; (2) accessing the Course website daily; (3) mastering the Course website; (4) reading and assimilating the required texts and lectures; (4) completing the required quizzes and final; and (5) meeting the Course requirements as detailed below in the Course Calendar section.

Please create an appropriate physical online learning setting for yourself. Please allow yourself sufficient time to master the course material. Please do not fall behind because concepts build on concepts already covered in the course.

Online Etiquette

By enrolling in this course you are joining an online community (please see course etiquette information, refer to your “Welcome-to-STS 401, Statistics in Science and Technology Studies” Course Announcement, and read the Online Etiquette section of the FAQs Discussion Board). You should visit the course website at least once a day during the semester to watch for new announcements, complete assignments, engage in online discussions, stay current with
assignments, and take advantage of additional information posted that may arise from student needs or concerns about the course content.

Also by enrolling in this course, you have joined an online community of adult learners. As such, you are invited to contribute to our learning community through discussion, comments, and questions related to course objectives and content. We jointly share the responsibility for maintaining a safe, respectful, and appropriate learning environment. We jointly share responsibility for maintaining appropriate academic standards (which include, but are not limited to, doing and submitting your own work).

Students are entitled to receive instruction free from interference by other members of the class. If a student is disruptive, the instructor may ask the student to stop the disruptive behavior and warn the student that such disruptive behavior can result in withdrawal from the course. The instructor may withdraw a student from a course when the student's behavior disrupts the educational process.

Appropriate classroom behavior is defined by the instructor. This includes the number and length of individual messages online. Course discussion messages should remain focused on the assigned discussion topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion.

Inappropriate discussion board messages may be deleted if an instructor feels it is necessary. Students will be notified privately that their posting was inappropriate.

Individual issues are best discussed individually rather than on the class discussion board. Issues that relate personally to one individual are best emailed directly to your instructor at sdmoya@asu.edu.

Questions about the responses to questions on quizzes are best emailed directly to your instructor at sdmoya@asu.edu. Please be aware that not all students complete assignments at the same time. You “advantage” other students by posting questions before all students take a quiz and correspondingly “disadvantage” yourself because grades are curved.

Please complete the Online Writing Skills tutorial at ASUonline if you feel you need additional information on Internet communication etiquette.

**Online Communication**

Generally, our communication will be electronic. Please log onto the class website at least once a day during the Semester to check your grade, download the lectures and assignments, and read announcements. Logging onto the class website daily is a requirement of *Statistics in Science and Technology Studies*. Logging onto the class website is analogous to attending class in a traditional classroom course.

For general questions about class, you will find two discussion boards particularly useful. The discussion boards will be updated during the Semester, based on questions raised.
(1) At “FAQs” you will find responses to questions of general interest to class members. By visiting the “FAQs” discussion board, you are likely to receive an immediate response to your question or comment about class. If a response to your question or comment is not available on the “FAQs” discussion board, you can use the “Ask Dr. Moya” discussion board IF the question is of a general nature (i.e., not personal).

(2) At “Ask Dr. Moya” you can ask about, or comment on, anything of a general nature related to the class. Please note that issues of a personal nature or about a quiz or final question should be emailed directly to me at sdmoya@asu.edu.

Please note that issues of a personal nature or concerning a quiz or final question should be emailed directly to me at sdmoya@asu.edu.

My individual communication with you will be through your ASU email address. To comply with the Family Educational Rights and Privacy Act (FERPA) and ASU policies developed to conform to FERPA, only our ASU email address will be used for STS 401. Please check your ASU email daily for the duration of the class.

Please add my email addresses to your list of accepted email addresses. Communication problems result from an inability to receive email messages from each other.

To reiterate: Because of FERPA requirements and ASU policies, we will use only our ASU email addresses for STS 401. Responses will not be made to email addresses other than your ASU email address. My ASU email address: sdmoya@asu.edu.

Each time you email me, please include your name. It is sometimes difficult to identify a student by email address.

If you experience personal issues, please email me. Communication is important in an internet course.

Generally assignments submitted through areas of the Course website will not be acknowledged unless you request acknowledgement. If you submit an assignment directly to me through email and have not heard from me within 48 hours, please resubmit the material, including your original communication.

Student access to the course “Send Email” feature may be limited or removed if an instructor feels that the students are sending inappropriate electronic messages to other students in the course.

**Online Assistance**

For those new to myASU or students wishing refresher information, there are several online tutorials available at

- [http://help.asu.edu/My_ASU](http://help.asu.edu/My_ASU)
The tutorials guide you through the use of the components of the myASU system.

LearningStudio tutorials are available by logging onto ecollege.asu.edu and going to
- NExT Student Orientation Tutorial - eCourse.NExT

LearningStudio questions can be asked at
- “Help” link at the top of the navigation bar (chat available), right side.
- helpdesk@ecollege.asu.edu
- 480-965-6500, option 6

General ASU technical support is available at
- http://helptech.asu.edu/
- helpdesk@asu.edu
- http://help.asu.edu/studentinfo; then click on ASU Help Desk (email or chat)
- http://helptech.poly.asu.edu/
- 480-965-6500
- 480-727-1188

General technical articles and resources are available at
- http://helptech.asu.edu/

No matter your experience with online courses, please take the LearningStudio tutorial listed above. You will need to be familiar with the current version of the LearningStudio software. It is a requirement of STS 401 that you take the LearningStudio tutorial listed above. If you have problems with LearningStudio, please contact the LearningStudio or ASU help desks listed above.

**General Assistance at ASU – Student Resources**

Student Advocacy and Assistance
- http://www.asu.edu/studentaffairs/vp/advocacy/asresources.htm

Counseling Centers at ASU
- http://students.asu.edu/counseling

ASU Health Services
- http://students.asu.edu/health

Wellness and Health Promotion
- http://www.asu.edu/studentaffairs/wellness/about/index.html
ASU Libraries

- [http://libguides.asu.edu/onlineprograms](http://libguides.asu.edu/onlineprograms)

Disability Resource Center


Learning Resource Center

- [http://www.asu.edu/studentaffairs/lss](http://www.asu.edu/studentaffairs/lss)

Writing Center

- [http://studentsuccess.asu.edu/home/writingcenters](http://studentsuccess.asu.edu/home/writingcenters)

Career Services

- [http://students.asu.edu/career](http://students.asu.edu/career)

Student Financial Aid Office

- [http://students.asu.edu/financialaid](http://students.asu.edu/financialaid)

Student Legal Assistance


Help Wiki

- [http://wiki.asu.edu/help](http://wiki.asu.edu/help)

EMPACT Crisis Hotline

- [http://www.empact-spc.com](http://www.empact-spc.com)

Academic Integrity Policy

Students in this Course are required to adhere to the ASU academic integrity policy. The full ASU academic integrity policy may be found at [http://provost.asu.edu/academicintegrity/policy](http://provost.asu.edu/academicintegrity/policy)

Excerpted from the ASU academic policy:

“Each student must act with honesty and integrity, and must respect the rights of others in carrying out all academic assignments. A student may be found to have engaged in academic dishonesty if, in connection with any Academic Evaluation or academic or research assignment (including a paid research position), he or she:
A. Engages in any form of academic deceit;
B. Refers to materials or sources or uses devices (e.g., computer disks, audio recorders, camera phones, text messages, crib sheets, calculators, solution manuals, materials from previous classes, or commercial research services) not authorized by the instructor for use during the Academic Evaluation or assignment;
C. Possesses, reviews, buys, sells, obtains, or uses, without appropriate authorization, any materials intended to be used for an Academic Evaluation or assignment in advance of its administration;
D. Acts as a substitute for another person in any Academic Evaluation or assignment;
E. Uses a substitute in any Academic Evaluation or assignment;
F. Depends on the aid of others, including other students or tutors, in connection with any Academic Evaluation or assignment to the extent that the work is not representative of the student's abilities;
G. Provides inappropriate aid to another person in connection with any Academic Evaluation or assignment, including the unauthorized use of camera phones, text messages, photocopies, notes or other means to copy or photograph materials used or intended for Academic Evaluation;
H. Engages in Plagiarism;
I. Uses materials from the Internet or any other source without full and appropriate attribution;
J. Permits his or her work to be submitted by another person in connection with any Academic Evaluation or assignment, without authorization;
K. Claims credit for or submits work done by another;
L. Signs an attendance sheet for another student, allows another student to sign on the student's behalf, or otherwise participates in gaining credit for attendance for oneself or another without actually attending;
M. Falsifying or misrepresenting hours or activities in relationship to an internship, externship, field experience, clinical activity or similar activity; or
N. Attempts to influence or change any Academic Evaluation, assignment or academic record for reasons having no relevance to academic achievement."

Family Educational Rights and Privacy Act of 1974 (FERPA)

Educational records are kept by University offices to facilitate the educational development of students. Faculty and staff members may also keep informal records relating to their functional responsibilities with individual students.

FERPA, as amended, affords students certain rights concerning their student educational records. Students have the right to have some control over the disclosure of information from the records. Educational institutions have the responsibility to prevent improper disclosure of personally identifiable information from the records.

For additional details, please see http://students.asu.edu/policies/ferpa.
Because of FERPA requirements, only our ASU email addresses will be used for email communication between us. My ASU email address is sdmoya@asu.edu. Please email me only from your ASU email account and please include your full name in every communication.

**Americans with Disabilities Act (ADA) Policy**

Please note that this Course conforms to ASU ADA policies. 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 for 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 are available online at: [http://www.asu.edu/studentaffairs/ed/drc/](http://www.asu.edu/studentaffairs/ed/drc/).

**Other Course Policies**

Please note Course policies posted on the FAQs discussion board. Those policies include, but are not limited to, missing work; late work; LearningStudio, software, hardware, and connectivity; incomplete grades; student conduct; accommodations for disabilities; the public nature of the class (writing and discussion); attendance (logging-on daily for our Course); time commitment; late assignments; point deductions for late assignments; point deductions for excessive loss of connectivity; keeping your work; labeling work; grading policy; important dates for this Course and for ASU. The policies are part of our Course; you are responsible for adhering to all Course policies.

**COURSE CALENDAR**

Please note that all times in the Course Calendar refer to Mountain Standard time.

When you check the weekly assignments for the course, you will notice that reading assignments are heaviest in the beginning and end of the Semester. Please plan your time accordingly.

Please note that two chapters of your text are not assigned. These are Chapter 10 (One-Way Analysis of Variance) and Chapter 14 (Additional Aspects of Correlation and Regression Analysis). You are not expected to master the material in either chapter.

**Course Calendar**

Generally you can expect your lectures and quizzes to be posted at 12:01 AM on Thursday. You may take your quizzes anytime after they are posted until the following Thursday at 10 AM.

Your final will be posted no later than 12:01 AM, Thursday, April 28, 2011 and is due by 5 PM May 6, 2011. Please note that grades are due shortly after your final, so there will be no extension of time for the final. If you experience computer difficulties during the final, it is critical to your grade that you notify me immediately at sdmoya@asu.edu.
Assignments are due on the dates detailed in your Course Manual and in the Course Calendar area of the Course website. Quizzes usually are due each Thursday of the Semester by 10 AM. Once you have entered a quiz website you should take the entire quiz because you will be unable to exit and re-enter that specific quiz website. If you experience difficulty with LearningStudio or loss of connectivity during a quiz, please notify me immediately at sdmoya@asu.edu.

Because the Course Manual is a contract among you, your instructor, and ASU, please be sure to confirm in an email to sdmoya@asu.edu that you have read and understood the Course Manual, and that you agree to abide by its terms. Please email me your acceptance or questions about the Course Manual by 10 AM Monday, March 28, 2011.

For general information about the ASU academic calendar, please visit http://www.asu.edu/calendar/academic.html.

Course Contract

Please be aware that your professor views the Course Manual as an educational contract between the instructor and student. Every effort will be made to avoid changing the course schedule, but the possibility exists that unforeseen events will make Course Manual changes necessary. The professor reserves the right to make changes to the Course Manual as deemed necessary. Students will be notified in a timely manner of any Course Manual changes through LearningStudio’s Course Announcements. Please remember to check your Course Announcements at least daily during the Semester.

Class Schedule

March 21, 2011: Course Organization and Introduction

- Please read your Course Manual carefully. Ensure that you have access to the course website; familiarize yourself with its contents; and confirm your ability to open and read course materials (lectures are posted in PowerPoint). Review the following websites.

  1. ASU Student Code of Conduct (http://students.asu.edu/srr/students);
  2. ASU Academic Integrity Policy (http://provost.asu.edu/academicintegrity/policy);
  3. ASU Student Academic Integrity Policy (http://provost.asu.edu/academicintegrity/policy/StudentObligations);
  4. ASU Computer, Internet and Electronic Communications (http://www.asu.edu/aad/manuals/acd/acad125.html);

- Read your Welcome Lecture in the Course Lecture section of the Course website.
- Send me a brief email (sdmoya@asu.edu) from your ASU email account. Please provide information on your major, explain the reason(s) you are taking this class, and describe what you are most anxious about with respect to the class (if anything). Please also confirm that you have read and understood the Course Manual, or please include
confirmation that you have read the Course Manual with your questions about the Course or its Manual.

- You will receive ten extra-credit points for emailing your introduction by Monday, March 28, 2011 at 10 AM.
- You will receive five extra-credit points for confirming that you have read and understood the Course Manual or for confirming that you had read the Course Manual and asking your questions about the Course or the Course Manual by Monday, March 28, 2011 at 10 AM.

- If you would like to introduce yourself to your classmates, post an introduction of yourself to the “Introductions” Discussion Board.
- Spend some time navigating the course website so that you are familiar with all of the components.
- Take the LearningStudio student tutorial by 10 AM, March 28, 2011. The Learning Studio student tutorial is a requirement of STS 401. However, if you complete the LearningStudio student tutorial requirement by 10 AM, March 28, 2011, you will receive 15 extra-credit points.
- Take the Course Manual Quiz by 10 AM, March 28, 2011 for 25 possible extra-credit points.

Unit 1: Thursday, March 24, 2011: How We Reason

- Read Chapter 1 in Sirkin (2006).
- Read Lecture 1 in the Course Documents section.
- Take Quiz 1 by 10 AM, March 31, 2011. Quiz 1 covers Units 1 and 2.
- Assignment 2 is due by March 31, 2011 at 10 AM. Assignment 2 (Hypotheses) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.

Unit 2: Monday, March 28, 2011: Levels of Measurement and Forms of Data

- Read Lecture 2 in the Course Documents section.
- Take Quiz 1 by 10 AM, March 31, 2011. Quiz 1 covers Units 1 and 2.

Unit 3: Thursday, March 31, 2011: Defining Variables

- Read Chapter 3 in Sirkin (2006).
- Read Lecture 3 in the Course Documents section.
- Take Quiz 2 by 10 AM, April 7, 2011. Quiz 2 covers Units 3 and 4.
- Assignment 3 is due by April 7, 2011 at 10 AM. Assignment 3 (Measuring and Defining Variables) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.
Unit 4: Monday, April 4, 2011: Measuring Central Tendency

- Read Chapter 4 in Sirkin (2006).
- Read Lecture 4 in the Course Documents section.
- Take Quiz 2 by 10 AM, April 7, 2011. Quiz 2 covers Units 3 and 4.
- Assignment 4 is due by April 7, 2011 at 10 AM. Assignment 4 (Central Tendency) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.

Unit 5: Thursday, April 7, 2011: Measuring Dispersion

- Read Lecture 5 in the Course Documents Section.
- Take Quiz 3 by 10 AM, April 14, 2011. Quiz 3 covers Units 5 and 6.

Unit 6: Monday, April 11, 2011: Constructing and Interpreting Contingency Tables

- Read Chapter 6 in Sirkin (2006).
- Read Lecture 6 in the Course Documents Section.
- Take Quiz 3 by 10 AM, April 14, 2011. Quiz 3 covers Units 5 and 6.
- Assignment 5 is due by April 14, 2011 at 10 AM. Assignment 5 (Cross Tabulations) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.

Unit 7: Thursday, April 14, 2011: Measuring Association in Contingency Tables

- Read Lecture 7 in the Course Documents Section.
- Take Quiz 4 by 10 AM, April 21, 2011. Quiz 4 covers Units 7 and 8.

Unit 8: Monday, April 18, 2011: Correlation and Regression Analysis

- Read Chapter 13 in Sirkin (2006).
- Read Lecture 8 in the Course Documents Section.
- Take Quiz 4 by 10 AM, April 21, 2011. Quiz 4 covers Units 7 and 8.
- Assignment 9 is due by April 21, 2011 at 10 AM. Assignment 9 (Correlation) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.
- Assignment 10 is due by April 21, 2011 at 10 AM. Assignment 10 (Regression) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.

Unit 9: Thursday, April 21, 2011: Introduction to Statistical Inference

- Read Chapter 7 in Sirkin (2006).
Read Lecture 9 in the Course Documents Section.

Take Quiz 5 by 10 AM, April 28, 2011. Quiz 5 covers Units 9 and 10.

Assignment 6 is due by April 28, 2011 at 10 AM. Assignment 6 (Statistical Inference) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.

Unit 10: Monday, April 25, 2011: Probability Distribution and the “Normal Curve”

- Read Chapter 8 in Sirkin (2006).
- Read Lecture 10 in the Course Documents Section.
- Take Quiz 5 by 10 AM, April 28, 2011. Quiz 5 covers Units 9 and 10.

Unit 11: Thursday, April 28, 2011: Tests of Significance: z test and t test

- Read Chapters 8 and 9 in Sirkin (2006).
- Read Lecture 11 in the Course Documents Section.
- Assignment 9 is due by May 5, 2011 at 10 AM. Assignment 9 (Significance) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.

Unit 12: Monday, May 2, 2011: The Chi-Square Test

- Read Chapter 12 in Sirkin (2006).
- Read Lecture 12 in the Course Documents Section.
- Assignment 8 is due by May 5, 2011 at 10 AM. Assignment 8 (Chi Square) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.

Unit 13: Thursday, May 5, 2011: Review

- Read Lecture 13 in the Course Documents Section.
- Review for your Final.
- Take both parts of your Final Exam by 5 PM, Friday, May 6, 2011. The final covers the entire course.
- Assignment 11 is due by May 6, 2011 at 10 AM. Assignment 11 (Review) is available by following the link under this unit. Post your response to the Dropbox in the Course Toolbar at the top of the screen, right side.
- Complete Final by 5 PM, FRIDAY, May 6, 2011. Your Final has two parts. Please be sure to complete both parts.

Final: Due Friday, May 6, 2011, 5 PM. (Both parts.)
Quizzes, assignments, and the final can be accessed through the link provided in each week’s schedule.

The Course Calendar is found in the Course Calendar of your Course Manual, in the Calendar area of the Course website, and in each week’s schedule.

**ASU Calendar for Spring 2011**

Drop deadline: March 22, 2011  
If you drop this class on or before this date, it will be retained on your academic record but will not display on your transcript.

Course withdrawal deadline: April 10, 2011  
If you drop this class on or before this date, it will appear on your transcript and a grade of 'W' will be assigned to the class.

Complete withdrawal deadline: May 6, 2011

You may withdraw from all classes in this session on or before this date. Classes will appear on your transcript with an assigned grade of 'W'.

**Key Concepts You Should Know After Completing Statistics in Science and Technology Studies** (Listed Alphabetically)

- Causality
- Central tendency
- Chi square
- Correlation coefficient
- Cross tabulation (contingency tables)
- Degrees of freedom
- Dependent variable
- Descriptive statistics
- Ecological fallacy
- Goodness of fit
- Hypothesis
- Independent variable
- Indices
- Inferential statistics
- Level of measurement
- Level of significance
- Logic
- Measures of variability
- Measures of association
- Measures of dispersion
- Normal distribution
- Null Hypothesis
• Pearson r
• Probability
• Relationship between regression and correlation
• Reliability of a measure
• Sampling
• Sampling bias
• Sampling error
• Scales
• Spearman’s rho
• Standard deviation
• Statistical tests by level of data
• t-test
• Type I error
• Type II error
• Validity of a measure
• Z-score
• z test

Finally, the behavior standards established by ASU will guide our conduct throughout our Statistics class. Please refer to the websites listed above under the first day of class:

ASU Student Code of Conduct (http://students.asu.edu/srr/students);

ASU Academic Integrity Policy (http://provost.asu.edu/academicintegrity/policy);

ASU Student Academic Integrity Policy (http://provost.asu.edu/academicintegrity/policy/StudentObligations);

ASU Computer, Internet and Electronic Communications (http://www.asu.edu/aad/manuals/acd/acd125.html);


Have a good Semester!
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