

WSAS Major & Tier III Minor Learning Goals

AMERICAN STUDIES PROGRAM

A student completing a **minor in American Studies** should be able:

- to give a cogent oral or written presentation of a topic, theme, development, or event in at least two subject-areas of American Studies
- to write a cogent analytical essay, appropriately researched in accordance with the specific topic, on a major question in the study of American culture, politics, or society
- to acquire an articulate understanding of some major methodological issue in American Studies

Outcomes Assessment:

As currently organized, the American Studies minor offers students an array of electives on several topics in every discipline of arts and sciences; consequently, there is no specific body of knowledge in common among students who complete the minor.

The learning goals outlined above can therefore best be assessed by the instructor of the capstone AMS 4900. In that course, students would be asked (1) to summarize, in a short paper or oral report, the two American Studies electives they have taken; (2) write one or several essays on the interdisciplinary topic of the capstone course itself; and (3) give an oral presentation on one of the methodological issues covered in the capstone.

At the end of the semester, the instructor of AMS 4900 would submit a brief written report to the American Studies Program assessing the degree and range of achievement of the learning goals by the students in the course and making any curricular or pedagogic suggestions that would be fruitful for the Program faculty to discuss.

BLACK & HISPANIC STUDIES:

Students who minor in Black & Hispanic Studies will be able:

- to recount major events in the history and contemporary experience of Black and/or Hispanic/Latino persons in the Americas and/or around the globe;
- to analyze and evaluate theories of racism, xenophobia, prejudice, discrimination, or hate;
- to describe and detail the legacies of imperialism, colonialism and racial slavery left among black and Hispanic/Latino nations and communities;
- to demonstrate through writing, media, or performance their acquired knowledge about the Black and/or Hispanic experience.

COMMUNICATION STUDIES:

After completing the major in Corporate Communication, students will be able:

- to demonstrate empirical knowledge of the history, development, and contributions of the communication disciplines;
- to identify, analyze and apply major theoretical approaches in the communication disciplines for use in business and professional venues;
- to interpret communication texts, artifacts, and performances;

- to demonstrate ethical awareness of issues related to the communication disciplines;
- to demonstrate competency in research strategies and methods common to the communication disciplines;
- to exhibit proficiency in communication technology;
- to apply the theory and practice of intercultural and global communication; and
- to construct and communicate logically sound, effectively evidenced, well-organized, stylistically felicitous arguments that are appropriately tailored to a given audience.

ECONOMICS & FINANCE:

BA in Economics - The purpose here is to outline learning goals for the general population of students majoring in economics. They are designed only for the students in Weissman. Hence, they omit goals or topics that are too advanced for the generality of our student population.

These goals are established in an attempt to accomplish three objectives:

- 1) **Comparability:** the goals are comparable to that of a mainstream economic program in similar institutions in the U.S.
- 2) **Compatibility with careers of our students:** the goals equip our students with the knowledge and analytical skills to perform in a typical career of a student with an undergraduate major in economics.
- 3) **Preparation for future academic work:** the goals also provide the basic academic tools for graduate work in economics.

Goals by areas in Economics:

After completing the major program, students will be able to:

a) **Microeconomics:**

- Describe the behavior/objectives of the consumers and the firms.
- Discuss different types of markets in the economy and their outcomes.
- Use the concepts of demand and supply to explain changes in equilibrium prices and quantities across different markets in U.S. and the world.
- Apply game theory to analyze the outcome in various areas in economics: micro economic theory, industrial organization, and public economics.
- Explain the concept of externalities, environmental impact, public goods and market failures and how it is related to various government policies and interventions.

b) **Macroeconomics:**

- Describe national income accounting, concepts and definitions of money supply, fiscal and monetary policies and their effects on national income and general price level.
- Explain the concepts of comparative advantage in international trade, balance of payment and exchange rate determination, and monetary policies in an open economy.

- Explain the process by which the Federal Reserve’s Open Market Committee establishes the “Fed Funds” target interest rate and the New York Federal Reserve Bank as agent administers the achievement of that target interest rate.
- Explain the generally accepted economic and political preconditions for the achievement of economic growth, environmental sustainability and improvement of living standards.

c) **Economic Theory and History:**

- Explain the evolution of American economic thought in the context of the general trends of economic thought of the European tradition.
- Explain the development of the American economy from its colonial roots through its emergence as the world’s major industrial economy in the early 20th century, in the context of comparative economies.. Further, recount the major economic transitions in the American economy in the 20th century including the Great Depression, the industrial mobilization for World War II and the abandonment of the Gold Standard.
- Estimate and test relationships among economic policies of the major political parties. A student should be able to explain the underlying assumptions of the relative policies, and be able to interpret and present the results of an empirical analysis verbally and in writing.

Assessment of Goal Achievement

It is expected that Weissman economics major will take one or more of the following courses: Econ 4100 Advanced Microeconomics, Econ 4200 Advanced Macroeconomics, Econ 4201 Monetary Economics and Econ 4400 Contemporary Economic Thought. These courses will serve as the “Capstone” course for economics majors. Therein they will be tested prior to graduation as to their achievement of these goals.

Tier III Minor in Economics – The purpose of this statement is to outline learning goals for the general population of students fulfilling their Tier III minor requirement in Economics. In particular, it is designed for all students in Baruch. Hence, we omit goals or topics that are too advanced for the general population.

The goals are established in an attempt to accomplish three objectives:

- 1) Comparability: the goals are comparable to that of a mainstream economic program in similar institutions in the U.S.
- 2) Compatibility with careers of our students: the goals equip our students with the analytical skills to perform in a typical career of a student with an undergraduate minor in economics.
- 3) Preparation for future academic work: the goals also provide the basic academic tools for communications skills in economics.

Goals by areas in Economics:

After completing the minor program, students will be able to:

a) **Microeconomics:**

- Describe the behavior/objectives of the consumers and the firms.
- Discuss different types of markets in the economy and their outcomes.
- Use the concepts of demand and supply to explain changes in equilibrium prices and quantities across different markets in U.S. and the world.
- Explain the concept of externalities, public goods and market failures and how it is related to various government policies and interventions.

b) Macroeconomics:

- Describe national income accounting, concepts and definitions of money supply, fiscal and monetary policies and their effects on national income and general price level.
- Explain the concepts of comparative advantage in international trade, balance of payment and exchange rate determination, and monetary policies in an open economy.
- Explain the process by which the Federal Reserve's Open Market Committee establishes the "Fed Funds" target interest rate and the New York Federal Reserve Bank as agent administers the achievement of that target interest rate.
- Explain the generally accepted economic and political preconditions for the achievement of economic growth and improvement of living standards.

Assessment of Goal Achievement

It is expected that Zicklin Tier III Economics minor will take one of the following courses: Econ 4100 Advanced Microeconomics, Econ 4200 Advanced Macroeconomics, Economics 4400 Contemporary Economic Thought These courses will serve as the "Capstone" course for the Tier III Economics minors. Therein they will be tested prior to graduation as to their achievement of these goals.

ENGLISH:

Students completing a major in English should be able:

- to read a variety of works in the major literary genres (narrative, poetry, drama, essay) from several historical periods and comprehend individual works' themes, formal organization, and stylistic features;
- to write a cogent essay developing a persuasive interpretation of a literary work and making a case for that interpretation through some combination of close commentary on the text, formal, thematic, or stylistic analysis; and contextualization in terms of literary, cultural, political, or intellectual history;
- to comprehend the broad outlines of British and American literature, including traditional periodizations (like Elizabethan, Restoration, Romantic, American Renaissance, modernism, and so on) and some major historical events corresponding to these periods;
- to find critical works on specific texts or topics through library and internet research and make cogent comparisons between competing interpretations of a text;

- to become acquainted with one or more interdisciplinary projects in literary studies in which literature is studied in relation to cultural studies, film, gender studies, psychology and psychoanalysis, social history, anthropology, sociolinguistics, philosophy and aesthetics, and so on).

Approach to outcomes assessment.

For the learning goals proposed above, we would keep the focus, as we do in courses, on qualitative rather than quantitative assessment. We might set up a committee to read annually papers that senior English majors have written for classes. The papers would be read without identifying the students. Our procedure could be to require all seniors to submit two papers from their coursework representing two different genres or two different periods. Or we could devise a way for faculty to furnish the committee with a paper from each of the senior majors in their classes. Some such assessment process would allow us to determine whether in the aggregate our majors were attaining the various goals. The third goal is directly related to our four survey courses of British and American literature; since each major is required to take three of the four, we might devise a means of assessing this goal within each course.

*Students completing a **minor** in English should be able:*

- to read a variety of literary works and recognize distinctive themes, formal organization, and/or stylistic features in individual works;
- to write a cogent essay developing a persuasive interpretation of a literary work and making a case for that interpretation through specific references to the text;
- to demonstrate an awareness of the time-period within which the literary work under discussion was written.

FILM STUDIES PROGRAM – (*minor effective Spring 2010*)

Students who complete the Tier III Film Minor will be able:

- to discuss films in relation to historical, socio-cultural and institutional contexts;
- to identify major characteristics of national and global film movements and industries;
- to describe the development of mainstream and alternative filmmaking practices;
- to differentiate filmic genres, methods and theoretical trends;
- to demonstrate command of film language and terminology in written assignments, group discussions, and oral presentations;
- to evaluate and respond critically to a range of film criticism;
- to apply theoretical and cultural readings as well as a variety of film methods to the analysis of specific films;
- to write critical analyses of films focusing on the formal aspects.

DEPARTMENT OF FINE & PERFORMING ARTS:

Learning Goals for Majors

Graphic Communications

1. To foster visual literacy and analysis in order to become more aware of the influences of visual imagery on society and culture.
2. To cultivate critical and analytical thinking skills, and to become more discerning and critical of our visual world.
3. To explore the creation of successful visual communication using image and word.
4. To give students the artistic skills necessary to succeed in careers in the graphic arts.
5. To give students familiarity with computer systems and software used in graphic-arts professions.
6. To prepare students for the professional demands and expectations typical of careers in the graphic arts.

Music Management

1. To understand the history and cultural contexts of musical composition and performance.
2. To hold well-developed critical and analytical thinking skills.
3. To give students familiarity with music in a variety of styles from throughout history and from various cultural perspectives.
4. To give students communication skills necessary to succeed in careers in the music industry.
5. To give students familiarity with, and experience in, careers in the music industry.
6. To prepare students for the professional demands and expectations typical of careers in the music industry.

Theatre Arts Administration

1. To understand the history of theatre and its cultural contexts.
2. To understand the structure and content of dramatic works and their theatrical realizations.
3. To hold well-developed critical and analytical thinking skills.
4. To give students communication skills necessary to succeed in careers in Theatre Administration.
5. To give students familiarity with, and experience in, careers in Theatre Administration.
6. To prepare students for the professional demands and expectations typical of careers in Theatre Administration.

Visual Arts Administration

1. To understand the history of art and its cultural contexts.
2. To understand the structure and content of great works of art.
3. To hold well-developed critical and analytical thinking skills.
4. To give students communication skills necessary to succeed in careers in Visual Arts Administration.
5. To give students familiarity with, and experience in, careers in Visual Arts Administration.
6. To prepare students for the professional demands and expectations typical of careers in Visual Arts Administration.

Learning Goals for Tier II

General

1. To explore the roots of artistic creation and the nature of artistic expression.
2. To understand the history of artistic endeavors.
3. To understand the structure and content of artistic endeavors.
4. To become familiar with particular “great works” in a variety of media and from different cultures.
5. To cultivate critical and analytical thinking skills.

Art

1. To explore the roots of artistic creation and the nature of artistic expression.
2. To understand the history of art and its cultural contexts.
3. To understand the form and meaning of works of art.
4. To foster visual literacy and analysis in order to become more aware of the influences of visual imagery on society and culture.
5. To cultivate critical and analytical thinking skills, and to become more discerning and critical of our visual world.
6. To explore the creation of successful visual communication using image and word.

Music

1. To explore the roots of musical creation and the nature of musical expression.
2. To understand the history and cultural contexts of musical composition and performance.
3. To understand the structure and content of music.
4. To become familiar with particular “great works” of music in a variety of styles and genres, and from different cultures.
5. To cultivate critical and analytical thinking skills.

Theatre

1. To explore the roots of dramatic expression and the nature of theatrical performance.
2. To understand the history of theatre and its cultural contexts.
3. To understand the structure and content of dramatic works and their theatrical realizations.
4. To become familiar with particular “great works” of drama in various genres and from different cultures.
5. To cultivate critical and analytical thinking skills.

Learning Goals for Tier III

Art History and Theatre (FPA 4900)

1. To continue the exploration of the roots of artistic creation and the nature of artistic expression.
2. To gain a deeper understanding of the history and cultural contexts of the arts.
3. To explore the intersection of art, music, and theatre within the context of landmark cultural institutions in New York City.

4. To explore socioeconomic forces underlying issues of production and performance in the arts.
5. To become familiar with particular “great works” in the arts.
6. To cultivate critical and analytical thinking skills.

Design and Photography (ART 4900)

1. To explore the contemporary social environment via work in design or photography.
2. To create a personal portfolio reflecting the student’s perspective on, and understanding of, a particular social issue.
3. To explore the issue in a manner that requires intense visual analysis and advanced visual literacy.
4. To become familiar with theoretical, historical, and contemporary perspectives pertaining to the chosen issue.
5. To continue the cultivation of critical and analytical thinking skills.
6. To gain a greater understanding of the world at large.

Music (MSC 4900)

1. To continue the exploration of the roots of musical creation and the nature of musical expression.
2. To gain a deeper understanding of the history and cultural contexts of musical composition and performance.
3. To explore the structure and content of all kinds of music.
4. To achieve a deep familiarity with particular “great works” of music in a variety of styles and genres, and from different cultures.
5. To continue the cultivation of critical and analytical thinking skills.
6. To gain a broad understanding of music in today’s society, including the role of music in culture and education, and the production of music for public distribution and financial profit.

HISTORY:

Students who successfully complete the **minor in Asian and Asian American Studies** will be able:

- to explain the role of Asian history, art, cultures, and/or political systems in the ancient and modern world;
- to describe major trends in Asian history, art, cultures, and/or political systems;
- to compare Asian history, art, cultures, and/or political systems to those of other regions;
- to explain the significance of Asian diasporas and countries to other regions of the world;
- to analyze the major arguments, strengths, and weaknesses of written and oral sources.

Tier III Minor in Women’s Studies *(from 11/04 UCC proposal)*

Learning Goals of the Program:

- For students to deepen their understanding of the diversity of women and gender relations in global societies.
- To study women's experiences and their impact in the world over time and in various contexts using the tools from diverse disciplines including history, sociology, anthropology, psychology, philosophy, law, journalism, political science, comparative, literature, and the arts.
- To build knowledge through courses within the women's minor including a capstone course, which will allow students to gain a basic level of mastery over the central themes within the field of women's studies.
- To allow students to become experts in a particular arena of women's studies through an individually designed research project developed in conjunction with a women's studies professor within the capstone course.
- To enhance the student's skills in critical thinking by analyzing the construction of gender roles in historical settings and the present.
- To allow the student to complete the minor filed empowered with the sense of how women have influences society, how gender works in various life contexts including their own, and how they might use this knowledge in future careers.

Learning Goals for History Majors

After successfully completing the major, the student will be able:

- to explain causality in history or how and why change occurs;
- to identify and explain differing schools of historical interpretations;
- to identify and explain the thesis, major arguments, strengths, and weaknesses of scholarly books and journal articles;
- to use primary and secondary evidence in support of observations and claims;
- to present research outcomes orally and in formal written papers;
- to identify and explain significant historical issues and trends in three areas of the globe;
- to describe the factors that caused the major transformations in any epoch, be they social, economic, political, or cultural;
- to think historically: place people and events within their historical contexts and explain relationships in terms of causality and chronological development.

Learning Goals for History Minors

After successfully completing the major, the student will be able:

- to explain causality in history or how and why change occurs;
- to identify primary sources and other types of historical evidence;
- to describe and identify the thesis, major arguments, strengths and weaknesses of a scholarly book or journal article;
- to analyze the people and events of the past in their historical context;
- to present research outcomes orally and in formal written papers

Assessment Instrument

Since summer term 2008, the History Department has been administering an assessment instrument in randomly selected history courses to measure student progress toward learning goals. Students in the courses are assessed anonymously at the beginning of the term and at the end of the term.

The department has developed a number of essay questions to allow students to show their grasp of the way historical study handles sources and context. While these are not the only goals of our teaching, they seem most characteristic of historical study for this measuring process. Some redundancy was built into the questions to allow us to eliminate weak questions later if needed and to diminish the chance of a student getting the same question when examined more than once (in pre- and post- testing in one class, in different courses, and in different semesters). Employing a large number of questions (rather than just one or two) also guards against any given section being coached in writing that question.

Of necessity the questions are generic rather than tied to any particular course or group of courses. Furthermore, while they may be framed as an invitation for a personal opinion, the scoring was based on the quality of argument and on the presence of the expected skills, not on the legitimacy of the opinion.

Sample questions

What does the following mean to you? "To understand an event, it should be placed in its historical context." (You may discuss this notion in general or illustrate it with one or more examples.)

Historians usually see actions and events in the past as the outcome of several forces. Pick one decision, action, or event that you have studied and indicate the most important aspects of the surrounding situation, especially some constraints or pressures that helped to shape the outcome. Begin your essay with a sentence or two clearly describing the event you will place into historical context.

What did your courses or courses in history teach you about evaluating primary sources (e.g. letters, diaries, newspapers, declarations, speeches, autobiographies, government documents, paintings and other images, etc.)? Also briefly describe one primary source that you find interesting.

First indicate briefly one original historical source you have studied or are familiar with (e.g. letters, diaries, newspapers, declarations, speeches, autobiographies, government documents, paintings and other images, etc.). Then indicate what kinds of outside information you would use to interpret its historical significance.

Historians create our knowledge of the past from primary sources that were written at time of important events. Historians always "respect" their sources, but they don't regard them as simply "true" without interpretation. Pick any original source that you have studied and show there is more than one way of "reading" that source. (Primary sources include letters, diaries, newspapers, declarations, speeches, autobiographies, government documents, paintings and other images, etc.)

Primary sources are used by historians not only to learn what the document "says" but what other things a careful reading can reveal about the time and context of its origin. Pick any original source that you have studied and show the kinds of information a careful reading can reveal about its context. (Primary sources include letters, diaries, newspapers, declarations, speeches, autobiographies, government documents, paintings and other images, etc.)

Scoring

Scoring was based on five criteria that seemed applicable to all questions. It seemed desirable to develop a group of criteria that could be summed up for a score, rather than just asking a scorer to give a single grade, since this seems likely to produce more consistency among graders and to make graders more self-conscious about the process. For future use, the scoring criteria are as open to revision as the questions themselves. For each of these criteria, the paper received zero, one, or two points (producing a range of grades from zero to ten). It was not intended for these scores to be associated with grades of A, B, C, etc. The value of the scores will be in indicating the range of achievement levels and allowing us to determine the average grade for a section as a whole.

	<u>zero</u>	<u>1 point</u>	<u>2 pts</u>
Does the essay show understanding of the question ?	no	yes/OK/sort of	good
Does it have an organization ?	no	yes/OK/sort of	good
Does it use specific historical information ?	no	yes/OK/sort of	good
Does it exhibit critical perspective and/or historical interpretation ?	no	yes/OK/sort of	good
Does it show engagement and/or originality ?	no	yes/OK/sort of	good

JOURNALISM & THE WRITING PROFESSIONS:

Journalism Major – Journalism and Creative Writing Specialization

Upon completion of the major, students will be able:

- to write clear and well-organized prose.
- to distinguish between credible and less credible news and information sources.
- to report on issues, institutions, ideas, and trends in society, using reliable and varied sources.
- to identify and interview individuals and incorporate quotations, anecdotes, experiences and insights into meaningful writing projects.
- to experiment with various styles of writing and demonstrate competency in multiple forms of writing.

Journalism Major – Business Journalism Specialization

Upon completion of the major, students will be able:

- to find, read and incorporate into articles the data from economic reports.
- to track the financial markets, follow both daily action and longer trends, write clearly about the numbers and identify experts to help interpret them.
- to retrieve and analyze the documents that companies are required to file with the Securities and Exchange Commission and explain them to readers in conversational English, as well as being able to mine them for story ideas and sources for articles.

- to evaluate corporate earnings and write about them clearly and accurately.
- to incorporate into their articles anecdotes about and quotations from people, because the best business and financial stories are about people and how they are affected by all the data.

Journalism Minor

Upon completion of the minor, students will be able:

- to write and speak about the news media's critical role in a democratic society.
- to research and write news and feature articles in a range of journalism formats with fairness, accuracy and balance.
- to find and retrieve online information and data and evaluate it.
- to experiment with various styles of writing and demonstrate competency in multiple forms of writing.
- to locate a wide range of information from various sources on local, regional, national and global issues, drawing on print, broadcast and Web archives. .

Business Communication Major – Business Writing Specialization

Upon completion of the business writing specialization within the business communication major, students will be able:

- to report, research and write reports and articles in a range of formats with accuracy and context.
- to find and retrieve online information and data and evaluate it.
- to employ the fundamentals of clear business writing to produce effective communications and to begin to develop a personal writing style.
- to locate a wide range of information from various sources on local, regional, national and global issues, drawing on print, broadcast and Web archives.
- to write effectively in at least two specialties within the world of business writing, including marketing-related writing, Internet communications, legal writing, journalistic writing and financial writing.

Business Writing minor (*effective Spring 2010*)

Upon completion of the minor, students will be able:

- to report, research and write reports and articles in a range of formats with accuracy and context.
- to find and retrieve online information and data and evaluate it.
- to employ the fundamentals of clear business writing to produce effective communications and to begin to develop a personal writing style.
- to locate a wide range of information from various sources on local, regional, national and global issues, drawing on print, broadcast and Web archives.

LAW:

Upon completion of the **Tier III Minor in Law & Policy**, students will be able:

- to describe the purposes and methods of various forms of legal, social science and humanities scholarship;

- to explain and justify the allocation of decision-making authority among policy-makers in the U.S. legal system;
- to analyze critically sources of law and evaluate the operation of legal institutions from a variety of scholarly perspectives;
- to communicate one's perspective in writing suitable for an academic audience;
- to identify ethical and moral considerations that relate to legal decision-making and the operation of legal institutions such as courts and legislatures;
- to distinguish the various social and historical contexts in which major legal decisions have been rendered and assess how cultural, political and economic factors have affected the legal process;
- to perform basic online and library research related to the U.S. legal system.

LIBRARY:

Students pursuing a **Tier III Minor in Information Studies** will:

- develop higher level skills in information literacy, including the ability to identify information needs; formulate precision searches for efficient information retrieval; evaluate information and reformulate searches for greater precision; employ retrieved information in the creation of new information products (research papers, presentations, web pages); and the ethical and legal use of information.
- gain an understanding of the guiding principles of the production, organization and dissemination of information, including the production of knowledge; the information publication cycle; and the construction and design of information storage and retrieval systems.
- gain a theoretical understanding of key information policy issues in a rapidly evolving information environment, including governance of the World Wide Web, digital divide, censorship, privacy, plagiarism, intellectual property, and e-commerce

MATHEMATICS:

Learning Goals for the Major in Mathematics

Upon completion of the major in mathematics, students will be able:

- to apply the procedures of calculus, including differentiation of algebraic, trigonometric, logarithmic, and exponential functions, to solve optimization, related-rates, and distance problems;
- to solve problems that call for an understanding of several fundamental kinds of limits: the limit of a function, the limit of a sequence, the limit of an infinite series, the limiting value of a sum of products that leads to an integral;
- to use techniques of integration, both exact and approximate, to solve problems in econometrics, elementary physics, and geometry (e.g., area in Cartesian and polar form, arc length in Cartesian and parametric form);
- to apply multivariate analysis to three-dimensional objects;
- to perform operations, including inversion, on matrices and to use matrices in the solution of systems of equations;

- to apply the abstract ideas of general vector spaces to a wide variety of concrete examples: matrices, Euclidean n -dimensional spaces, spaces of various kinds of functions studied in calculus classes (e.g., continuous, real-valued, differentiable);
- to distinguish various kinds of number systems—rational, real, etc.—and explain their defining and deduced properties;
- to solve problems in one or more elective areas, such as differential equations or uncertainty;
- to display a rational, logical approach to thinking and, specifically, to explain detailed computations and write logical, cogent, complete, and mathematically correct proofs of both standard theorems and novel problems;
- to assess the validity of an argument, to think dispassionately, to evaluate likelihood, to reach conclusions, and to make decisions based on logic and proof, accepting counterintuitive results pursuant to demonstration.

Learning Goals for the Major in Actuarial Science

Upon completion of the major in actuarial science, students will be able:

- to solve problems requiring elements of calculus: differentiation, infinite processes, and integration for the study of actuarial science;
- to model real situations that involve questions of probability in mathematical form and to identify and apply such techniques as are adapted to solving the resulting mathematical problems;
- to solve problems in mathematical statistics involving quantitative approaches to inference: to structure tests of hypotheses, to determine confidence levels for the results, and to assess distributions of values;
- to compute interest for bonds, various kinds of annuities, and installment buying;
- to solve problems involving elements of the mathematics of finance: finite difference methods, simulation, pricing of different kinds of options, and arbitrage pricing theory;
- to solve problems requiring a knowledge of one or more elective areas, such as computer programming; stochastic processes; the application of principles of probability to fire, automobile, disability, and other kinds of insurance; the application of probability theory and the theory of interest to the pricing of insurance; and approaches to multiple life functions, multiple decrement modes, valuation of pension plans, non-forfeiture benefits, and dividends.
- to make decisions when confronted by uncertainty and incomplete knowledge by analyzing individual and collective risk in various time frames.

Learning Goals for the Tier III Minor in Mathematics

Upon completion of the Tier III minor in mathematics, students will be able:

- to explain in writing what a limit is and to compute the limits of determinate and indeterminate algebraic and transcendental functions, including limits that lead to derivatives.
- to apply the techniques of differentiation to problems in rates of change and optimization in mathematics, economics, and science.
- to solve problems requiring facility in integration of various forms and to solve certain elementary differential equations.

- to discuss approaches to problems and to write proofs that evince factual knowledge and clear, valid thinking.
- to solve problems requiring knowledge of an elective field covered in a capstone course.

MODERN LANGUAGES:

Students who successfully complete the **Spanish major** will be able:

- to demonstrate an advanced capacity to use both the oral and written language;
- to analyze literary, linguistic, cultural, and historical issues related to Spanish language or Spanish and Latin American and Caribbean societies;
- to debate diverse linguistic, social, and cultural aspects of Spanish or Latin American contexts;
- to establish connections between the scholarly study of Spanish, Latin American and Caribbean literature and language and social issues in the Hispanic world;
- to conduct research (literary, cultural, historical, and linguistic analysis) using specific guidelines like MLA

Minors in Chinese, French, Hebrew, Italian, Japanese, and Spanish

Students who complete a minor in Chinese, French, Hebrew, Italian, Japanese, or Spanish will be able:

- to communicate, comprehend, read, and write in the target language in every day and business settings;
- to demonstrate a certain degree of knowledge of the history, literature, and/or culture of the places that speak the target language;
- to establish connections between the scholarly study of the target language and issues in the communities where the language is spoken;
- to conduct research (literary, cultural, historical, and linguistic analysis – as appropriate) using specific guidelines like MLA.

Tier III Minor in Latin American & Caribbean Studies

Students who successfully complete the LACS minor will be able:

- to analyze Latin American and Caribbean cultures and societies from an interdisciplinary perspective;
- to discuss specific historical, social, and literary issues related to Latin American and Caribbean societies;
- to write critical essays employing a strong thesis statement, appropriate textual citations, and contextual and intertextual evidence for their ideas;
- to debate important issues of Latin American and Caribbean politics, economy and culture.

Tier III Minor – Literature in Translation

Students who successfully complete the LTT minor will be able:

- to identify literary texts from cultures that are relatively unknown in the Western world (Africa, Asia, the Middle East and Latin America), in addition to the great works of Western literature;

- to discuss the relationship between different genres of literary texts and the multicultural environments from which they spring;
- to analyze language, style, and themes in important works;
- to analyze the formal aspects of the texts (language, narrator, point of view, style, conventions of each literary genre,);
- to discuss issues related to literary translation;
- to write critical essays employing a strong thesis statement, appropriate textual citations, and contextual and intertextual evidence for their ideas.

NATURAL SCIENCES: *(Draft from 12/2005)*

Learning Goals for Ad Hoc Majors within Natural Sciences

1. Students should be well grounded in a variety of content areas so that they have a base from which to master new material and concepts in the rapidly changing scientific landscape.
2. Students should be acquainted with a basic set of laboratory methodologies such as microscopy, dissection, spectroscopy, chromatography, culturing organisms, titration, etc.
3. Students should have opportunities to participate in original laboratory research
 - a. in laboratory experiments in major courses
 - b. in laboratories with faculty members
 - c. in off campus laboratories
4. Students should appreciate the importance of integrity in carrying out experiments and reporting experimental results.
5. Students should be able to read original literature in several content areas.
6. Students should be able to present research orally and in writing.
7. The curriculum should provide students with the body of knowledge needed for standardized tests, such as MCATS, DATS, or GRE, required for entry into professional or graduate schools. Use of certain standardized exams, such as the American Chemical Society Organic Chemistry (a nationally normed exam) may be part of the preparation.

Biological Sciences Major *(Passed @ 12/11/08 WSAS Faculty Meeting)*

Upon completing the biology major a student will be able:

1. to design and carry out a laboratory and/or field experiment or theoretical project;
2. to analyze data and explain appropriateness of the analytical method to the particular study;
3. to read and critically evaluate primary literature;
4. to give an oral presentation;
5. to write a report based on an experiment or theoretical project following the standard composition guidelines for scientific articles;
6. to state fundamental scientific theories and explain the observations and experimental evidence on which they are based;
7. to explain the inter-relationships within and among organisms in the context of basic chemical and physical laws;
8. to describe the ethical implications of biological research for test organisms, the environment, and society in general; and

9. to develop the skills and experience required to pursue a career that includes graduate programs in health care or biological research.

Tier III Interdisciplinary Minor: Environmental Sustainability

Students who complete the Environmental Sustainability Tier III Interdisciplinary Minor will be able:

- to demonstrate a working knowledge of social, economic, and ecological issues of sustainability on a local and global scale;
- to describe the complex interactions among society and the biological, chemical, ecological and physical processes that structure and maintain ecosystems;
- to collect and analyze quantitative and qualitative data in any aspect of social, economic and environmental sustainability;
- to critically analyze sources of conflict over unsustainable use of environmental resources and evaluate alternative resolutions;
- to communicate one's analytical valuations and conclusions both orally and in writing for policy-making audiences;
- to synthesize and communicate complex concepts and scientific data to the general public;
- to give an account of the economic and ethical considerations that relate to environmental policy formulation.

PHILOSOPHY

Upon completion of the Philosophy **major**, the student will be able:

- to do proofs in propositional and predicate logic;
- to translate sentences of natural language into predicate logic;
- to analyze and evaluate the moral dimensions of a social or personal problem and apply the major philosophical theories of ethics in coming to a resolution of that problem;
- to demonstrate, in essays and in formal and informal oral presentations, a sophisticated awareness of salient trends in the history of philosophy; and,
- to identify clearly and analyze precisely the principal theses of the major schools of philosophy (including schools of metaphysics, ethics, and epistemology).

The student will also have executed a substantial research project in philosophy under the direction of a mentor, involving the use of databases and assessments of current research on the chosen problem.

Upon completion of the Philosophy **minor**, the student will be able:

- to analyze at least two important philosophical problems (such as, for instance, the problem of moral objectivity and the problem of other minds) in considerable depth;
- to demonstrate, in essays and in formal and informal oral presentations in a seminar on a contemporary philosophical issue, a detailed awareness of a range of philosophical thought regarding that issue; and
- to evolve and articulate, in a research paper, reasoned arguments relating to an important philosophical issue .

POLITICAL SCIENCE

Upon completion of the major in political science, students will be able, substantively,

- to write an essay or give an oral presentation in which they demonstrate an understanding of the development, function, and impact of political institutions, rules, and processes;
- to write an essay or give an oral presentation in which they demonstrate an understanding of the impact on politics and policy making of non-institutional factors, including the roles of attitudes, beliefs, and opinions; race, class, and gender; and religion, ethnicity, and tradition;
- to write an essay or give an oral presentation in which they demonstrate an understanding of major historical and conceptual debates surrounding political ideas, institutions, processes, and behaviors;
- to write an essay or give an oral presentation in which they demonstrate an understanding in this age of globalization of the interconnectedness of nations and peoples;
- to write an essay or give an oral presentation in which they recognize the diversity of human experiences and cultures, as expressed in politics;
- to write an essay or give an oral presentation in which they demonstrate an understanding of the complex and often subtle interaction of politics and markets, of government and business, of the public and private sectors;
- to write an essay or give an oral presentation in which they demonstrate an understanding of the use of interdisciplinary knowledge to the study of politics;
- to be provided with the opportunity through internships to experience politics directly; and
- to write an essay or give an oral presentation in which they demonstrate an understanding of the civic knowledge base to permit functioning as effective citizens of the democracy.

Majors will also be able, analytically,

- to write an essay or give an oral presentation in which they demonstrate that they can understand, apply, and critique political theories, both normative and empirical;
- to write an essay or give an oral presentation in which they demonstrate that they can evaluate political arguments, as to their logic, evidence, relevance, and importance;
- to write an essay or give an oral presentation in which they demonstrate that they can perform close textual analysis of major theoretical and legal works;
- to write an essay or give an oral presentation in which they demonstrate that they can avoid common pitfalls, such as seeing only one side of an issue, discounting disconfirming evidence, reflexively relying on familiar answers, or refusing to stake out positions;
- to write an essay or give an oral presentation in which they demonstrate that they can identify and diagnose normative and empirical political problems; and
- to demonstrate proficiency in the use of various tools of analysis, such as

library research, computer skills, and data analysis techniques.

Majors will also be able, as communicators

- to exhibit competent language skills and be able to write a paper with a clear thesis and organization;
- to effectively express their views orally; and
- to organize and critically evaluate relevant information of a quantitative and qualitative nature.

Upon completion of the minor, students will be able

- to write an essay or give an oral presentation in which they demonstrate an understanding of the development, function, and impact of political institutions, processes, and behavior;
- to write an essay or give an oral presentation in which they demonstrate an understanding of the civic knowledge base to permit functioning as effective citizens of the democracy;
- to evaluate political arguments as to their logic, evidence, relevance, and importance; and
- to exhibit competent language skills, written and oral.

PSYCHOLOGY:

Upon completion of a **major in Psychology**, students will be able:

- to compare and contrast the basic content areas and methodologies of psychology;
- to evaluate different theoretical approaches in psychology and explain why different approaches use different methodologies;
- to think critically about psychological issues, and be able to express those thoughts both in written and oral form;
- to design and interpret the results of a psychological study;
- to explain statistical methods of organizing and analyzing quantitative data, be able to conduct statistical analyses of data and interpret the results of those analyses;
- to articulate a historical perspective of different theories of psychology and how the field has evolved.

Tier III Minor in Psychology

Upon completion of a minor in Psychology, students will be able:

- to compare and contrast the basic content areas in certain fields of psychology;
- to think critically about psychological issues, and be able to express those thoughts both in written and oral form;
- to explain the scientific method in psychology;
- to articulate a historical perspective of different theories of psychology and how the field has evolved.

RELIGION & CULTURE:

Upon completion of the courses for the major or minor, students will be able:

- to speak and write with understanding about the world religious traditions—the Hindu, Buddhist, Judaic, Christian, Islamic, Shinto, Sikh, Jain, Zoroastrian, Bahai traditions, among others--their histories, teachings, rituals, ethics, expression in daily life;
- to identify those aspects of these traditions which are similar as well as those that are divergent, namely a comparative approach;
- to display analytical skills that will permit them to assess and evaluate the patterns distinct to a particular tradition within past and present historical periods and diverse cultural settings. E.g. to look at Islamic practice in Middle Eastern as well as Asian contexts, in the medieval period and down the centuries to the 21st century;
- to note the continuing contact among these traditions and the significance of these encounters, e.g. the indigenization of the Judaic, Christian and Buddhist traditions in a wide array of ethnic/cultural locations;
- to show awareness of the flourishing of traditions in situations of religious freedom and tolerance and the ability of these traditions to nurture common work toward social justice, humanitarian assistance and conservation of the natural world;
- to comprehend and assess the major arguments, strengths and weaknesses of major texts of these traditions, commentaries on these and the influence of these on social and political patterns;

*This is an interdisciplinary program, not a department, comprised of faculty from a number of departments and disciplines. The subject matter is the diverse major world religious traditions, rather than a single field or discipline.

**Historically, majors in the Program in Religion and Culture are few, rare. However since the establishment of the tier II minor, the number of students who choose this program for the minor has increased significantly.

SOCIOLOGY & ANTHROPOLOGY:

Upon completion of the **Sociology major** students will be able:

- to identify the historical development and major contributors to the discipline of sociology;
- to identify, analyze and apply the major theoretical approaches in the discipline of sociology;
- to demonstrate critical thinking skills that will allow them to assess and evaluate cultural patterns and social structures, both in their own culture and in cross-cultural settings;
- to describe of the relevance of sociological issues to the experience of the students' individual lives;
- to demonstrate competency carrying out both quantitative and qualitative sociological research;
- to assess the major arguments, strengths and weaknesses of scholarly articles in written form;
- to evaluate the pros and cons of qualitative and quantitative social data.

Tier Minor in Anthropology

Upon completion of the Minor students will be able:

- to demonstrate critical thinking skills that will allow them to assess and evaluate cultural patterns and social structures, both in their own culture and in cross-cultural settings;
- to describe and critically analyze the role of culture in society;
- to demonstrate competency analyzing diversity and stratification, in particular race, ethnicity, gender, and class;
- to demonstrate the ability to analyze cultural patterns through research and writing assignments

Tier III Minor in Sociology

Upon completion of the minor students will be able:

- to identify the historical development and major contributors to the discipline of sociology;
- to demonstrate critical thinking skills that will allow them to assess and evaluate cultural patterns and social structures, both in their own culture and in cross-cultural settings;
- to describe the relevance of sociological issues to the experience of the students' individual lives.

STATISTICS & COMPUTER INFORMATION SYSTEMS:

Interdisciplinary Minor in Information Technology and Social Responsibility

Students in the Social Responsibility and Information Technology Interdisciplinary concentration should gain

- an understanding of the principles and issues of social responsibility, including, but not limited to: a respect for the environment, cultural issues, access for individuals with disabilities, ethical issues.
- the ability to critically analyze published research papers
- an understanding of today's web-based new media technologies and the interconnected environment that supports them
- an understanding of the many ways in which social responsibility may be enhanced by information technology; and conversely, the ways in which information technology may contribute to the weakening of social responsibility.
- basic online and library research skills