



COURSE CATALOG

2018-2019 Academic Year



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1. Introduction

1.1. Purpose

This document is to catalog both core curriculum and elective courses offered by Sattler College, as well as to provide information about those courses, including course number, course name, credit hours, course description, pre-requisites and co-requisites.

1.2. Overview

The undergraduate degree program leads to a four-year Bachelor of Science or Bachelor of Arts degree. For all students, it requires 120 total credit hours, including 48 credit hours from core courses, and a combined 72 credit hours distributed between major program requirements and electives. All students are required to complete a core curriculum that provides a foundational academic experience of general education in the arts and sciences. Sattler College offers five majors that provide students the opportunity to pursue areas of particular interest in depth. The first semester of the senior year features a senior seminar which students will complete in their chosen program of study. In the second semester of the senior year, each student is required to work on a capstone project approved by a faculty advisor. This serves as a capstone project for the major (e.g. a business plan for business majors, a laboratory research project for biology major). This project contributes 12 credit hours.

2. Pedagogy

Sattler College is based on the classical education model of the liberal arts and sciences. “Liberal” derives from the Latin word *liber*, meaning free. The arts consist of the language arts (*trivium*) and the mathematical arts (*quadrivium*). While somewhat counterintuitive, the sciences historically have been understood to be theology and philosophy. Our goal is to produce graduates who are free thinkers, unconstrained by popular opinion or practice. Achieving this goal requires: first, training the mind in logic to determine what is true and necessary, irrespective of popularity; second, developing the character to practice and teach these conclusions.

At the core, this model can be described as:

- A well-defined set of subjects—the arts and sciences—of which mastery is expected. These subjects include logic, rhetoric, biblical languages, history, mathematics, and theology.
- The student cultivates skills of self-resourcefulness, initiative, and determination as he or she gains mastery over a given subject. These skills of focus and endurance are highly prized in the classical tradition.
- The instructor serves primarily as a resource for discussion, problem solving, and feedback—not as one who “spoon feeds” material.

For more information, classical Christian education has been described in more detail in other works.¹ At Sattler College, this practically means that we often implement the “inverted classroom” where students are assigned video lectures out of class. In class, ideas will then be reinforced, discussed, and critiqued. During class, there is a strong emphasis on problem solving, oral presentation, and working in groups. Classical education also informs our strong core curriculum which is rich in analytical subjects like logic and statistics, but also in classically important subjects such as biblical languages, history, theology, and apologetics.

¹ See, for example, Robert Littlejohn and Charles Evans, *Wisdom and Eloquence*, Crossway (2006).

3. Core Curriculum

3.1. Overview

All students are required to complete a core curriculum that provides a foundational academic experience of general education in the arts and sciences. Courses required in the core are designed to help students develop important intellectual skills in order to flourish in their majors and in their future careers.

3.2. Requirements

Each core course is mandatory for all students, irrespective of their choice of major. The core curriculum contributes 48 credit hours in total.

Each of the following courses counts for 3 credit hours (48 credits in total):

- BIO 101 The Biology of our World
- BRS 101 The Fundamental Texts of Christianity: The Old and New Testaments
- BRS 201 Theology
- BRS 203 Apologetics
- BUS 101 Introduction to Economics
- HUM 102 The History, Literature and Art of the Ancient and Medieval Worlds
- HUM 103 The History, Literature and Art of the Modern World
- HUM 104 The History, Literature and Art of the United States
- HUM 105 The History, Literature and Art of the Christian Church
- LNG 101 Expository Writing and Oral Communication
- LNG 102 Elementary Biblical Greek I
- LNG 103 Elementary Biblical Greek II
- LNG 104 Elementary Biblical Hebrew I
- LNG 105 Elementary Biblical Hebrew II
- MAT 102 Statistics and Data Science
- SOC 301 Global Poverty: Its Origins and Implications for World Change

With core courses and electives, a typical four-year schedule would be:

Year 1

Fall Semester	Spring Semester
Expository Writing and Oral Communication	The History, Literature and Art of the Ancient and Medieval Worlds
Elementary Biblical Greek I	Elementary Biblical Greek II
The Biology of our World	Apologetics
Introduction to Economics	Statistics and Data Science
The Fundamental Texts of Christianity: The Old and New Testaments	Courses in a major or Electives

Year 2

Fall Semester	Spring Semester
The History, Literature and Art of the Modern World	The History, Literature and Art of the United States
Elementary Biblical Hebrew I	Elementary Biblical Hebrew II
Theology	Courses in a major or Electives
Courses in a major or Electives	Courses in a major or Electives
Courses in a major or Electives	Courses in a major or Electives

Year 3

Fall Semester	Spring Semester
The History, Literature and Art of the Christian Church	Courses in a major or Electives
Courses in a major or Electives	Courses in a major or Electives
Courses in a major or Electives	Courses in a major or Electives
Courses in a major or Electives	Courses in a major or Electives
Courses in a major or Electives	Courses in a major or Electives

Year 4

Fall Semester	Spring Semester
Senior Seminar	Global Poverty: Its Origins and Implications for World Change
Independent Study	Capstone Project
Courses in a major or Electives	
Courses in a major or Electives	
Courses in a major or Electives	

4. Human Biology

4.1. Overview

The human biology major is designed to provide students with a rigorous foundation in biological sciences. This program prepares students to pursue advanced training in professional and graduate programs, including schools of medicine, dentistry, pharmacy, and biomedical research.

4.2. Requirements

The following are the requirements for those who are interested in general human biology.

Required Courses (50 Credit Hours):

- CHM 101 General Chemistry I
- CHM 101L General Chemistry I Laboratory
- CHM 102 General Chemistry II
- CHM 102L General Chemistry II Laboratory
- CHM 201 Organic Chemistry I
- CHM 201L Organic Chemistry I Laboratory
- CHM 202 Organic Chemistry II
- CHM 202L Organic Chemistry II Laboratory
- BIO 101L Biology of our World Laboratory
- BIO 201 Genetics and Genomics
- BIO 202 Microbiology
- BIO 203 Immunology
- BIO 204 Biochemistry
- BIO 301 Human Pathophysiology
- BIO 401 Human Biology Senior Seminar
- BIO 402 Independent Study
- BIO 403 Capstone Project

Electives (6 Credit Hours):

Students shall choose two courses from the following.

- BIO 302 Introduction to Neuroscience
- BIO 303 Bioethics
- BIO 304 Computational Biology
- BIO 305 Pharmacology and Drug Design

Students who choose a pre-medical track should also take:

- MAT 103 Introduction to Calculus
- PHY 101 Physics I
- PHY 102 Physics II

Laboratory classes in general chemistry, organic chemistry, and biology are offered at several approved local institutions. Credit will be granted through Sattler College. Note that a degree in human biology requires 122 credit hours, because of the laboratory requirements.

5. Computer Science

5.1. Overview

The computer science major provides students a theoretical foundation in programming, data structures and algorithms, theory of computation, and natural language processing, as well as opportunities to develop technical skills in areas such as software and web development, and database design. This program will prepare students for a career in information technology or business, or for graduate programs.

5.2. Requirements

Required Courses (56 Credit Hours):

- CS 101 Introduction to Computer Science
- CS 101L Lab for CS 101
- CS 102 Introduction to Algorithms
- CS 102L Lab for CS 102
- CS 103 Problem Solving and Software Design
- CS 201 Database Design
- CS 202 Object-Oriented Design
- CS 203 Computer Systems
- CS 204 Theory of Computation
- CS 301 Web Development
- CS 302 Introduction to Security
- CS 303 Programming Languages
- CS 304 Software Development
- CS 306 Natural Language Processing
- CS 401 Senior Seminar
- CS 402 Independent Study
- CS 403 Capstone Project

Electives (6 Credit Hours):

Students shall choose two courses from the following.

- CS 205 Networks and Distributed Systems
- CS 305 Business Information Systems Integration
- CS 307 Artificial Intelligence

Note that a degree in computer science requires 122 credit hours, because of the laboratory requirements.

6. Biblical and Religious Studies

6.1. Overview

The biblical and religious studies major offers students a foundation in biblical languages with emphasis in biblical languages, exegesis, theology, practical ministry skills and a broad understanding of other religions. It is designed for students who are pursuing pastoral work, Bible translation, church ministry, or graduate studies in biblical or theological studies.

6.2. Requirements

Required Courses (42 Credit Hours):

The requirements for LNG 101, 102, 103, 104 and 105 will be met through the core curriculum.

- BRS 102 Introduction to Music and Hymnology
- BRS 202 Discipleship
- BRS 204 Ecclesiology
- BRS 305 Preaching and Public Speaking
- BRS 401 Senior Seminar
- BRS 402 Independent Study
- BRS 403 Capstone Project
- LNG 201 Intermediate Biblical Greek I
- LNG 202 Intermediate Biblical Greek II
- LNG 203 Intermediate Biblical Hebrew
- LNG 304 Exegesis

Electives (15 Credit Hours):

Students shall choose five courses from the following.

- BRS 205 Lives of Selected Christians
- BRS 301 Hinduism
- BRS 302 Buddhism
- BRS 303 Islam
- BRS 304 Pastoral Care
- HIS 303 History of Christian Movements
- LNG 301 Introduction to Linguistics
- LNG 302 Advanced Koine Reading
- LNG 303 Greek Prose Composition
- SOC 101 Introduction to Sociology
- Any two History courses, with the permission of an advisor will also be counted.

7. History and Literature

7.1.Overview

The history major focuses on the study and interpretation of the past, including the gathering, recording, weighing, synthesizing of evidence and theories about past events and movements. The program includes instruction in historiography and historical research methods; studies of specific periods, issues and cultures. The implications of historical research for current policy decisions are included. Students trained in history are well-equipped for careers in historic preservation, teaching, journalism, or research.

7.2.Requirements

Required Courses (21 Credit Hours):

- HIS 101 Introduction to Historical Inquiry
- HIS 401 Senior Seminar
- HIS 402 Independent Study
- HIS 403 Capstone Project

Regional History Requirement (9 Credit Hours):

Students shall choose three courses from the following.

- HIS 106 East Asian History
- HIS 107 African History
- HIS 108 Middle Eastern History
- HIS 109 Latin American History
- HIS 110 South Asian History

Christian History Requirement (9 Credit Hours):

Students shall choose three courses from the following.

- HIS 201 Reformation History and Literature
- HIS 302 History of Christianity in the U.S.
- HIS 303 History of Christian Movements
- HIS 304 History of Christian Worship

Thematic History Requirement (9 Credit Hours):

Students shall choose three courses from the following.

- HIS 110 History of Modern China
- HIS 111 History of Modern India
- HIS 202 Industrial Revolution
- HIS 203 History of the City
- HIS 204 Human Trafficking
- HIS 301 Martin Luther King Jr.: His Life and Ideas

8. Business and Economics

8.1.Overview

The goal of the business major is to provide students with important theories and principles in economics, business administration/management, decision-making, human resources management, operations, marketing, accounting, and finance. This program places an emphasis on effective entrepreneurship and management. With a rigorous grounding in economics and finance, this major provides the tools and strategies to assess ideas for a new business and its potential, develop a business plan, and manage a company.

8.2.Requirements

Required Courses (57 Credit Hours):

- BUS 102 Introduction to Marketing
- BUS 103 Introduction to Entrepreneurship
- BUS 104 Introduction to Accounting
- BUS 105 Introduction to Finance
- BUS 106 Human Resource Management
- BUS 107 Principles of Microeconomics
- BUS 108 Economics and the Labor Market
- BUS 202 Advanced Accounting
- BUS 203 International Finance
- BUS 204 Organizational Behavior
- BUS 302 Information Technology and Business Strategy
- BUS 303 Operations and Process Mapping
- BUS 304 Conscious Capitalism
- BUS 401 Senior Seminar
- BUS 402 Independent Study
- BUS 403 Capstone Project

Electives (6 Credit Hours):

Students shall choose two courses from the following.

- BUS 201 Social Entrepreneurship
- BUS 301 Strategic Management
- BUS 305 International Entrepreneurship: Innovation and Microfinance in the Developing World
- CS 305 Business Information Systems Integration

9. Course Catalog

9.1. Human Biology

BIO 101 The Biology of our World

Pre-requisites: None

Credit Hours: 3

This course covers biology at the molecular and cellular levels, with an emphasis on experimental underpinnings. The first part of the course covers the central dogma of molecular biology, chemical properties of macromolecules (DNA, RNA, lipids, carbohydrates, and proteins), the cell cycle, DNA replication, transcriptional regulation, RNA processing, translational regulation, and signaling networks. The second part of the course covers cytoplasmic structure, membrane structure and function, cell motility, organelle function, and cell-cell recognition. The course concludes with basic applications to cancer and molecular medicine.

BIO 101L Lab for BIO 101

Pre-requisites: BIO 101

Credit Hours: 1

Accompanies BIO 101, to be taken at Northeastern University College of Professional Studies (or another approved, accredited institution). Offers students the opportunity to learn about proper experimental design in biology and the limits of an experiment. Includes observing and testing the structure and function of unicellular organisms and the characteristics of biological molecules such as DNA, RNA, and proteins (such as through gel electrophoresis including northern blots and western blots).

BIO 201 Genetics and Genomics

Pre-requisites: BIO 101

Credit Hours: 3

This course provides an introduction to modern eukaryotic genetics. Topics include Mendelian principles, linkage disequilibrium, inheritance of complex traits, developmental genetics, epigenetics, population genetics, copy-number variation, genome sequencing, higher-order genetic regulation (lncRNAs, miRNAs), and the genetic basis of cancer.

BIO 202 Microbiology

Pre-requisites: BIO 201

Credit Hours: 3

The course covers viruses, bacteria, and parasites, and their defense. This includes principles of pathogenesis, microbial genetics, antimicrobial therapy, microbe-habitat interactions, and relevance to human disease. The final two weeks of the course will focus on current challenges faced by the developing world.

BIO 203 Immunology

Pre-requisites: BIO 201

Credit Hours: 3

This course serves as a broad overview of the human immune system. Topics include the cells and tissues of the immune system, innate immunity, complement, antigen presentation, cytokine regulation, gene rearrangement during lymphocyte development, antibody generation, the major histocompatibility complex, CD4/8 differentiation and function, B-cell differentiation and function, immune tolerance, allergy, and tumor immunity. The course will include critical analysis of recent research papers, in areas such as cancer immunotherapy or host-pathogen interactions.

BIO 204 Biochemistry

Pre-requisites: BIO 101 and CHM 201

Credit Hours: 3

The course begins with a foundation of biomolecular structure, thermodynamics, and enzymology. Building on that foundation, the course focuses on metabolism and its regulation, including applications to human medicine. Assignments will include critically reading papers from modern research literature and presentations by students to the class on selected topics.

BIO 301 Human Pathophysiology

Pre-requisites: BIO 202, BIO 203, and BIO 204

Credit Hours: 3

The course teaches principles of human pathophysiology by examining several diseases across a range of organ systems. This includes sickle cell anemia, diabetes mellitus, Wolff-Parkinson-White, Duchenne's muscular dystrophy, breast cancer, HIV, asthma, and hypertensive heart failure.

BIO 302 Introduction to Neuroscience

Pre-requisites: Junior standing or above

Credit Hours: 3

This course is an introduction to the mammalian nervous system, with emphasis on the structure and function of the human brain. Topics include the function of nerve cells, sensory systems, control of movement, learning and memory, and diseases of the brain.

BIO 303 Bioethics

Pre-requisites: BIO 101, and Junior standing or above

Credit Hours: 3

This course explores ethical questions that arise in health care and the biological sciences. Issues to be covered include: the just allocation of health-care resources, the responsibilities of doctors to patients, euthanasia, medically-assisted suicide, abortion, and the use of technologies for genetic screening and manipulation. The course will center on moral questions related to decisions made in these spheres and on communication and education in a pluralistic society.

BIO 304 Computational Biology

Pre-requisites: Junior standing or above

Credit Hours: 3

This course focuses on the algorithmic and machine learning foundations of computational biology, combining theory with practice. We study the principles of algorithm design for biological datasets, and analyze influential problems and techniques. We use these to analyze real datasets from large-scale studies in genomics and proteomics. The topics covered include (1) Genomes: biological sequence analysis, hidden Markov models, gene finding, RNA folding, sequence alignment, genome assembly; (2) Networks: gene expression analysis, regulatory motifs, graph algorithms, scale-free networks, network motifs, and network evolution.

BIO 305 Pharmacology and Drug Design

Pre-requisites: Junior standing or above

Credit Hours: 3

This course focuses on the following: structure and physical properties of drugs; quantitative structure-activity and dose-response relationships; pharmacokinetics and pharmacodynamics, receptors as determinants of drug action; concepts, analysis and modeling of agonists, antagonists, and receptor mechanisms; signal amplification, selectivity, and regulation; drug absorption, distribution and metabolism; modern approaches to drug design.

BIO 401 Senior Seminar

Pre-requisites: Senior standing

Credit Hours: 3

The human biology seminar provides students the opportunity to engage in critical engagement of the literature from journals such as *Nature*, *Cell*, and *Science*. An emphasis will be placed on understanding the Materials and Methods section, reproducibility, and the interpretation of experimental data.

BIO 402 Independent Study

Pre-requisites: Senior standing

Credit Hours: 3

This course will involve carefully reviewing the literature in an area of the student's interest and formulating a question and hypothesis to be tested. Working carefully with a faculty advisor, the student will identify principal investigators in the Boston area in order to conduct a formal research project during the spring semester. This course requires weekly meetings with a faculty member.

BIO 403 Capstone Project

Pre-requisites: BIO 402, and Senior standing

Credit Hours: 12

This course is intended to be a laboratory experience in a research environment. The student will work in a research setting at a local university and work on a research team under the guidance of a faculty advisor. The student will present his or her results in a thesis format.

9.2. Biblical and Religious Studies

BRS 101 The Fundamental Texts of Christianity: The Old and New Testaments

Pre-requisites: None

Credit Hours: 3

This course is an introduction to the history, literature, interpretation, theology, and basic content of both the Old and New Testaments. The overview of the Old Testament (Hebrew Bible) provides students with an appreciation for and cohesive understanding of the major figures, events, and themes of the Old Testament and its foundational relationship to the New Testament. Time will be spent on issues of canonicity, textual criticism, and biblical theology. Moreover, attention will be given to the character, background, and central themes of the New Testament as a whole, and to the authorship, date, setting, theme, purpose, structure, and general content of its individual books.

BRS 102 Introduction to Music and Hymnology

Pre-requisites: None

Credit Hours: 3

This course introduces students to aspects of the foundational elements of music including harmony, key, melody, musical instruments and voice. The course develops students' abilities to listen effectively, read music notation, sight-read music, and describe materials and processes of music presented in the format of a score. To further enhance the capacity to understand music theory, students will engage in focused listening and study of works by Beethoven, Mozart, Bach, Chopin, Haydn, Brahms, etc. The second half of the course encompasses theological and biographical hymnology, which will enhance the proficiency of learning the language of music, including hearing and notating chords, intervals, meter, pitch, rhythm and scales and keys.

BRS 201 Theology

Pre-requisites: BRS 101

Credit Hours: 3

There are two fundamental approaches to theology: biblical and systematic. The first-half of the course is an overview of biblical theology; the second-half is an overview of systematic theology. The biblical theology portion draws on the work of Vos, Schreiner, and Beale. The systematic portion builds on the first half to provide an understanding of important topics: the canon, inspiration, the Trinity, hamartiology, justification, eschatology, the Calvinist-Arminian debate, atonement doctrines, baptism, nonresistance, and the Lord's supper.

BRS 202 Discipleship

Pre-requisites: BRS 101

Credit Hours: 3

This course examines the concept of Christian discipleship as introduced in the New Testament and practiced over the centuries. The objective of discipleship is considered, specifically the spiritual formation in the life of a person proceeding toward Christian maturity. Classic examples from the early Church and the Middle Ages will be encountered. The course will conclude with a critical evaluation of discipleship methods that have been employed by twentieth-century Protestant churches within the United States.

BRS 203 Apologetics

Pre-requisites: BRS 101

Credit Hours: 3

This course equips students with basic Christian apologetics skills. Topics include the Kalam argument, the anthropic principle, epistemological models of apologetics (classical, evidential, presuppositional, and cumulative), the problem of miracles, the authority of Scripture, biblical harmonization, and responses to objections toward the faith. Special attention will be given to the work of Alvin Plantinga (University of Notre Dame) and William Lane Craig (Talbot Seminary).

BRS 204 Ecclesiology

Pre-requisites: BRS 201

Credit Hours: 3

Ecclesiology is a study of the origin, nature, purpose, mission, polity, traditions, and ministry of the church. The course consists of an historical survey of ecclesiology from the ante-Nicene period through modern times. A Christocentric development of several themes will be stressed including theological foundations of discipline, unity, governance, the regulative principle, and the expansion of the church.

BRS 205 Lives of Selected Christians

Pre-requisites: BRS 201

Credit Hours: 3

This course exposes students to the lives of over twenty prominent Christians throughout the centuries, spanning from Justin Martyr in the second century to C. S. Lewis in the twentieth. The course examines five of these in greater depth. The objective of this class is to become familiar with the formation and contributions of a diverse group of Christians who have made a significant impact on the world.

BRS 301 Hinduism

Pre-requisites: Junior standing or above

Credit Hours: 3

This course is a comprehensive introduction to Hinduism. The course will be grounded in the historical development of Hinduism from the Vedic period through classical Hinduism into modern Hinduism. Building from this historical foundation, the course surveys the beliefs, rites, and impacts on Asian cultures and societies including the impact of concepts like *moksha* and *dharma* onto daily life. The survey includes Vaishnavism, Shaivism, Shaktism, and Smartism. Students will read primary Hindu texts, including the Rigveda.

BRS 302 Buddhism

Pre-requisites: Junior standing or above

Credit Hours: 3

This course is a comprehensive introduction to Buddhism, beginning with a survey of India at the time of the Buddha. The course will review basic tenets of Buddhism such as the four noble truths, bodhisattvas, and eastern monastic traditions. Major schools of Buddhism such as Theravada, Mahayana, Tibetan, Chinese, and Japanese Buddhism will be surveyed. The impact of Buddhism in America will occupy the final portion of the course.

BRS 303 Islam

Pre-requisites: Junior standing or above

Credit Hours: 3

This course is a comprehensive introduction to Islam, beginning with an understanding of the life and environment of Mohammed. Students will read primary Islamic texts such as the Qur'an and Hadith (Sahih al-Bukhari). The course emphasizes a historical survey of the growth of Islam, including the development and impact of its major schools (Sunni, Shia and Sufi).

BRS 304 Pastoral Care

Pre-requisites: Junior standing or above

Credit Hours: 3

This course prepares students for the tasks of pastoral care and counseling. The course includes both theoretical and practical portions, with an emphasis on cognitive-behavioral methods. The course will cover counseling in both large and small groups, with training on serving diverse individuals.

BRS 305 Preaching and Public Speaking

Pre-requisites: Junior standing or above

Credit Hours: 3

This course prepares students for preaching in a congregational setting and the practice of speaking before an audience. Important principles of preaching and public speaking are introduced including: preparation of relevant biblical sermons, preaching methods, and techniques of engaging public speaking. It offers students opportunities to preach or speak in public with critiques from the instructor and fellow students.

BRS 401 Senior Seminar

Pre-requisites: Senior standing

Credit Hours: 3

This seminar focuses on the area of patristics, which includes the lives, writings and doctrines of these early church theologians. Special attention will be given to characteristics of Christian practice in antiquity and the resulting theological and moral implications. Primary and secondary source materials will be examined and discussed at length and small groups will participate in discourse about specific church fathers to include: Origen, Clement, Tertullian, Irenaeus, Ignatius, Justin Martyr, John Chrysostom and Cyprian among others. A final presentation will consist of each student conducting research and writing an essay on one of the three patristic periods: Apostolic, Ante-Nicene church, and Post-Nicene. These findings will be presented at the conclusion of the term. Bi-weekly seminar.

BRS 402 Independent Study

Pre-requisites: Senior standing

Credit Hours: 3

This course is a preparation for the senior project. The student will have a weekly meeting with his or her advisor to formulate a plan and collect resources in preparation of the capstone project. For a service project, this will entail the identification of a specific region and problem to be addressed. For a thesis, this will entail the formulation of a question and the identification of critical resources to answer the question.

BRS 403 **Capstone Project**

Pre-requisites: BRS 402, and senior standing

Credit Hours: 12

The student will select one of two projects: (1) *The Service Project in the Developing World* will lead students through an effective, goal-oriented, socially relevant development project from inception to realization within a developing country. Students work closely with a faculty advisor to form a needs assessment, identify a project concept, and establish strategies in order to achieve effective implementation. As an example, a service project may include helping a community in the developing world face the challenge of inadequate access to clean water; (2) *The Biblical Thesis* has students work closely with an advisor to create an original work. Students are expected to address a particular research topic within the disciplines of ecclesiastical history, biblical languages or they may articulate an exegetical or theological argument through a position paper. For instance, a research question to be addressed might be, “what is the meaning of the *stoicheia tou kosmou* in the Pauline corpus?”

9.3.Business and Economics

BUS 101 **Introduction to Economics**

Pre-requisites: None

Credit Hours: 3

This course introduces the principles of micro- and macroeconomics as well as fundamentals of economic analysis and reasoning. The first part of the course emphasizes the basic principles of microeconomics: markets, the theory of consumer behavior, the theory of the firm, factors market, and coordination and welfare. The second part is focused on macroeconomics: aggregation, the open and closed economy, the goods market, money and banking, sovereign debt, general equilibrium, exchange rate determination and money, prices, inflation and unemployment.

BUS 102 **Introduction to Marketing**

Pre-requisites: None

Credit Hours: 3

This course is an introduction to the fundamental principles and practices in the marketing process. Students are provided with a detailed study of each marketing mix tool (product, price, place, promotion) along with an introduction to marketing research and consumer behavior. Finally, the course will cover the relationship of marketing to other business and social science disciplines.

BUS 103 **Introduction to Entrepreneurship**

Pre-requisites: BUS 101

Credit Hours: 3

This course offers a framework for understanding the entrepreneurial process and challenges faced by entrepreneurs who start new businesses. The course provides students with the tools and strategies to assess ideas for a new business and determine its potential; to understand the key elements of and develop a detailed business plan; to secure essential resources, such as funding and human capital. Principles of launch, scaling dynamics and business management are also covered.

BUS 104 Introduction to Accounting

Pre-requisites: None

Credit Hours: 3

This course introduces both basic and complex systems of financial and managerial accounting, which will be an introduction to preparation and interpretation of financial information for investors and managers, and to the use of financial instruments to support system and project creation. The goal is to help students develop a framework for understanding financial and managerial accounting and tax reports.

BUS 105 Introduction to Finance

Pre-requisites: BUS 101 and MAT 101

Credit Hours: 3

This course provides the conceptual foundation and tools for analyzing financial decisions. Drawing upon modern financial theory, the course covers the computation of net present value, CAPM, risk measurement, corporate capital budgeting and valuation; the use of financial statements in decision making; and the valuation of stocks and bonds.

BUS 106 Human Resource Management

Pre-requisites: None

Credit Hours: 3

This course provides an in-depth exploration of the challenges of managing through people. Topics covered include human resource planning, personnel selection, interviewing, résumé construction, and performance management. In addition, the course will address compensation systems, human evaluation, alignment of human capital with the mission, and business model of the enterprise. The course utilizes text, lectures, case studies, films, and experiential exercises.

BUS 107 Principles of Microeconomics

Pre-requisites: BUS 101

Credit Hours: 3

This course introduces the fundamentals of microeconomics. This includes microeconomic concepts and analysis, supply and demand analysis, theories of the firm and individual behavior, competition and monopoly, and welfare economics. Students will also be introduced to the use of microeconomic applications to address problems in current economic policy throughout the course.

BUS 108 Economics and the Labor Market

Pre-requisites: BUS 101 and BUS 107

Credit Hours: 3

Labor is the key factor of production for virtually all firms. Households' sale of their labor provides most household income, driving the U.S. economy and economies around the globe. The theoretical foundations for analyzing labor supply and demand will be the starting point for analyzing a range of labor market topics to include: Human capital investment, wage determination and inequality, the choice between work and household production, labor mobility and migration, labor market discrimination, and the effects of taxation, regulation, unemployment insurance and other government policies on labor market outcomes.

BUS 201 Social Entrepreneurship

Pre-requisites: BUS 101 and BUS 103

Credit Hours: 3

This course is designed to provide students with an in-depth exposure to entrepreneurship in the social sector, and to explore potential opportunities to create social change. It uses case studies, class discussions and project assignments to examine how to develop and implement business models to solve social problems, such as abject poverty or preventable diseases.

BUS 202 Advanced Accounting

Pre-requisites: BUS 104

Credit Hours: 3

The course covers the theory and problem-solving in special accounting areas, including partnerships, foreign operations, consolidations, accounting for nonprofit institutions, and government units. Additional topics include business mergers; the meaning, usefulness and methodology of consolidated financial statements; investments in non-subsidiary affiliates and corporate joint ventures; consolidated financial statements for overseas units of U.S.-based multinational companies; translations of foreign currencies, and derivatives.

BUS 203 International Finance

Pre-requisites: BUS 101 and BUS 105

Credit Hours: 3

This course provides significant exposure to the global financial institutions and markets; quantitative and analytical tools, which are valuable for firms operating in the global marketplace, and the costs and benefits of living in an increasingly interdependent world. Major topics to be covered include international portfolio diversification, multinational capital budgeting, import-export financing, direct foreign investment, and international banking.

BUS 204 Organizational Behavior

Pre-requisites: None

Credit Hours: 3

This course provides an overview of the behaviors of individuals in organizations, and combines theory and practice so as to help students better understand how individuals, groups and organizations function. The course uses case studies, lectures, videos, class exercises and discussions to understand topics such as personality, perception and motivation, groups and teams, leadership, stress, organizational change, organizational culture and structure, conflict resolution and negotiation, and communication and decision-making.

BUS 301 Strategic Management

Pre-requisites: Junior standing or above

Credit Hours: 3

This course provides an overview of business strategy, especially with respect to models such as the net promoter score (Fred Reicheld). Topics include sustainable businesses, competitive dynamics, plan execution, and optimal governance structure. The course has a global perspective and is intended to impart highly practical skills. Several historical case studies will be discussed.

BUS 302 Information Technology and Business Strategy

Pre-requisites: BUS 301 and CS 101

Credit Hours: 3

This course introduces the basics on the interplay between information technology and business strategies. The course begins with the general topic of strategic use of information technology in business using examples from a variety of industries, followed by detailed coverage of the information technology strategy in individual industries including e-logistics and e-marketing. The course also covers basics on the business information technology infrastructure and environments (Internet, Web, service-oriented computing, and security and risks). Finally, the course discusses the role of information technology in the global economy, business value of the explosively growing digital social networks, and other emerging trends and new technology opportunities.

BUS 303 Operations and Process Mapping

Pre-requisites: Junior standing or above

Credit Hours: 3

This course presents a functional view of the application of analytical methods to resolve business problems. For example, maintaining an excess supply is costly; but maintaining overly lean inventories can lead to order fulfillment disruption. The course covers how to thoroughly convert these problems into tractable solutions. Topics include project management, supply chain management, customer satisfaction, quality, productivity, enabling technologies (such as CRM and ERP systems), and decision support.

BUS 304 Conscious Capitalism

Pre-requisites: BUS 103, and junior standing or above

Credit Hours: 3

A new form of business is evolving around the world, sometimes titled conscious capitalism. These businesses examine their impact not merely on profits, but on people and the planet (the so-called triple bottom line). This course offers a survey of models of conscious capitalism. Topics covered include stakeholder theory, leadership models, human resources, and socially responsible investing.

BUS 305 International Entrepreneurship, Innovation and Microfinance in the Developing World

Pre-requisites: BUS 201

Credit Hours: 3

From an international perspective, this course covers entrepreneurial opportunity identification and evaluation; market analysis; joint ventures and partnerships; agents, value-added resellers, and representatives; regulations, laws, and customs; regional and cultural issues; financing foreign ventures; and the selection of domestic versus international legal entities. This course offers an opportunity to understand the complexities faced by entrepreneurs doing business in a global environment. The course also covers the fields of microfinance, microcredit, and microenterprise development.

BUS 401 Senior Seminar

Pre-requisites: Senior standing

Credit Hours: 3

The business seminar runs in case-study format, similar to that of most business schools today. One of the components of the seminar is to assess an identified company's strategic goals and provide detailed recommendations to enhance the organization's business position. Feedback and discussion groups will foster student collaboration. The seminar covers current points in managerial administration and incorporates the functions of organizational theory and behavior, marketing, finance, production, information systems and accounting to examine interdisciplinary examples and simulated management cases. Students apply key business and economic concepts in the analysis of a business and are encouraged to think creatively and operate effectively as a member of a management team. Bi-weekly seminar.

BUS 402 Independent Study

Pre-requisites: Senior standing

Credit Hours: 3

This course is a preparation for the senior capstone project of developing a novel business plan. This semester will entail the gathering of market information, identifying areas of unmet need, and interviewing business executives who have worked in the field. By the end of the semester, the student should have a high degree of understanding of the current landscape and key businesses in the target area. The student will have a weekly meeting with his or her advisor.

BUS 403 Capstone Project

Pre-requisites: BUS 402, and senior standing

Credit Hours: 12

The Business Plan Development objectives are to: learn how to develop and present a business plan; understand the various methodical processes required to produce such a plan; further develop written and oral presentation skills; analyze and critique the business plans of other ventures; and for students to effectively present their business plan to an audience of prospective investors.

9.4. Chemistry

CHM 101 General Chemistry I

Pre-requisites: None

Credit Hours: 3

This course covers the electronic structure of atoms, bonding, periodic properties, ionic substances, covalent bonding, Lewis representations of molecules and ions, shapes of molecules, Lewis acids and bases, Brønsted acids and bases, hybridization and resonance, bonding in solids.

CHM 101L Lab for CHM 101

Pre-requisites: CHM 101

Credit Hours: 1

Accompanies CHM 101. The course allows students to gain familiarity with laboratory techniques and equipment, and to apply their knowledge of concepts from General Chemistry I in a hands-on laboratory situation.

CHM 102 General Chemistry II

Pre-requisites: CHM 101

Credit Hours: 3

This course covers chemical equilibria, acid/base dynamics, oxidation and reduction, thermodynamics, phases, and kinetics.

CHM 102L Lab for CHM 102

Pre-requisites: CHM 102

Credit Hours: 1

Accompanies CHM 102. This laboratory course allows students to gain familiarity with laboratory techniques and apparatus, and to apply their knowledge of concepts from General Chemistry II in a hands-on laboratory situation.

CHM 201 Organic Chemistry I

Pre-requisites: CHM 102

Credit Hours: 3

This course covers Lewis bonding theory, resonance, alkanes, stereochemistry, substitution of alkyl halides, $S_N1/2$, alkenes, alcohols, aromatic compounds, and elementary carbonyl chemistry.

CHM 201L Lab for CHM 201

Pre-requisites: CHM 201

Credit Hours: 1

Accompanies CHM 201, to be taken at Northeastern University College of Professional Studies. Studies crystallization, simple and fractional distillation, extraction techniques, thin-layer chromatography, properties of hydrocarbons, and the synthesis of alkenes from alcohols.

CHM 202 Organic Chemistry II

Pre-requisites: CHM 201

Credit Hours: 3

This course covers pericyclic reactions, the Woodward-Hoffman rules, the chemistry of diverse functional groups (ethers, epoxides, amines, heterocycles, and enolates), and the chemistry of reactive intermediates (carbocations and radicals). Concepts of retrosynthetic analysis are also covered.

CHM 202L Lab for CHM 202

Pre-requisites: CHM 202

Credit Hours: 1

Accompanies CHM 202, to be taken at Northeastern University College of Professional Studies. Studies UV and IR, steam distillation, column and gas chromatography on unknowns, nitration, and the properties of amines.

9.5.Computer Science

CS 101 Introduction to Computer Science

Pre-requisites: None

Co-requisites: CS 101L

Credit Hours: 3

This course focuses on computer programming emphasizing the program design process and pragmatic programming skills. No previous programming experience is required. This course covers Python, simple algorithms and data structures, documentation, and testing and debugging.

CS 101L Lab for CS 101

Pre-requisites: None

Co-requisites: CS 101

Credit Hours: 1

Accompanies CS 101. Covers topics from the course through a variety of programming exercises.

CS 102 Introduction to Algorithms

Pre-requisites: CS 101

Co-requisites: CS 102L

Credit Hours: 3

This course introduces techniques for the design and analysis of diverse algorithms. Topics include sorting, data structures, dynamic programming, B-trees, Fibonacci heaps, graph algorithms, multithreading, string matching, and NP-completeness. The course additionally covers basic performance measures and analysis techniques.

CS 102L Lab for CS 102

Pre-requisites: CS 101

Co-requisites: CS 102

Credit Hours: 1

Accompanies CS 102. This lab covers topics from the course through a variety of programming exercises.

CS 103 Problem Solving and Software Design

Pre-requisites: CS 101

Credit Hours: 3

This course introduces assorted techniques and strategies to identify, approach and solve problems in business and personal settings. Students also learn how to program a computer in order to offer efficient solutions for certain types of problems. These solutions are created with tools, such as Visual Basic and C++, commonly used in industry. Students complete a capstone project to demonstrate their learning, create something of value, and add to their personal portfolio.

CS 201 Database Design

Pre-requisites: CS 101

Credit Hours: 3

This course covers the theory and usage of relational database systems, as well the design of a database for use in a relational database management system. Relation data model, relational algebra and then the SQL (structured query language) are presented. This course also covers database schema design, the entity-relationship model and normalization. Advanced topics include triggers, stored procedures, indexing, elementary query optimization, and fundamentals of concurrency and recovery. At the end of this course, students will be able to implement a database schema and short application programs on one or more relational database management systems.

CS 202 Object-Oriented Design

Pre-requisites: CS 102

Credit Hours: 3

This course presents a comparative approach to object-oriented programming and design. It covers the concepts of object, class, meta-class, message, method, inheritance, generosity, and polymorphism, as well as the use of inheritance and composition as dual techniques for software reuse. This course aids students in the development of a deeper understanding of the principles of object-oriented programming and design, including software components and object-oriented design patterns.

CS 203 Computer Systems

Pre-requisites: CS 102

Credit Hours: 3

This course introduces the basics of computing systems, including hardware-software interface, computer architecture, and operating systems. The following aspects of computer systems are explored: Concurrency and processes, resources management, memory management, device management, and networks and distributed systems.

CS 204 Theory of Computation

Pre-requisites: CS 102

Credit Hours: 3

This course introduces the theory of computation with a goal to understand the capabilities and limitations of computers. It covers automata theory, computability, and complexity, which includes circuits, finite automata, Turing machines and computability, efficient algorithms and reducibility, the P vs. NP problem, NP-completeness, the power of randomness, cryptography, and computational learning theory.

CS 205 Networks and Distributed Systems

Pre-requisites: CS 203

Credit Hours: 3

This course introduces the fundamentals of computer networks, including network architectures, network topologies, network protocols, layering concepts (for example, ISO/OSI, TCP/IP reference models), communication paradigms (point-to-point vs. multicast/broadcast, connectionless vs. connection oriented), and networking APIs (sockets). Students examine the construction of distributed programs, including the corresponding systems of high-level protocols and distributed state sharing. Topics include design patterns, transactions, performance trade-offs, security implications, and reliability. This course uses examples from real networks and distributed systems to reinforce concepts.

CS 301 Web Development

Pre-requisites: CS 201

Credit Hours: 3

This course focuses on the web development issues of integrating multiple languages, assorted data technologies, and Web interaction. It will briefly cover commonly used technology, such as ASP.NET, C#, HTTP, HTML, CSS, XML, XSLT, JavaScript, AJAX, RSS/Atom, SQL, and web services. This course is project-oriented, and students are required to deploy at least one major integrative website project.

CS 302 Introduction to Security

Pre-requisites: CS 204

Credit Hours: 3

This course introduces the fundamental principles of designing and implementing secure software and systems. It introduces students to the basics of computer security and applied cryptography, as well as various techniques including software vulnerability analysis, defense and exploitation, reverse engineering, and networking security. It also offers opportunities for hands-on practice of real-world attack and defense in several domains.

CS 303 Programming Languages

Pre-requisites: CS 202 and CS 204

Credit Hours: 3

This course introduces a systematic approach to understanding the design and implementation of programming languages. The course touches on a wide variety of languages and covers the following topics: abstraction, encapsulation, information hiding, modularity, notions of formal specifications, semantics, syntax, parameter-passing mechanisms, state, interpreters and compilers, and functions and recursion.

CS 304 Software Development

Pre-requisites: CS 202

Credit Hours: 3

This course introduces software development as a systematic process involving specification (or requirements), design, documentation, implementation, testing, and maintenance. It covers software process models; methods for software specification; modularity, abstraction, and software reuse; optimizations; and issues of software quality. Students work in collaboration to design, document, implement, test, and modify software projects.

CS 305 Business Information Systems Integration

Pre-requisites: CS 102 or an advanced business course

Credit Hours: 3

This course examines the significant improvements to business performance, which can be achieved through sharing information within the enterprise and with customers and suppliers, as well as implementation information technology. Achieving the full business benefits of shared information requires changing processes, organizational structures, and utilizing technology. This project-based course offers students an opportunity, working in teams, to design strategies and implement business systems as well as to examine significant improvements to business performance.

CS 306 Natural Language Processing

Pre-requisites: CS 201

Credit Hours: 3

This course introduces the computational and mathematical modeling of human language. Topics include word and sentence tokenization, text classification and sentiment analysis, information extraction, computational models of grammar and automatic parsing, statistical language models and the analysis of large text corpora, natural language semantics and programs that understand language, models of discourse structure, and language use by intelligent agents.

CS 307 Artificial Intelligence

Pre-requisites: CS 203 and CS 204

Credit Hours: 3

This course introduces the computational and mathematical modeling of human language. Topics include word and sentence tokenization, text classification and sentiment analysis, information extraction, computational models of grammar and automatic parsing, statistical language models and the analysis of large text corpora, natural language semantics and programs that understand language, models of discourse structure, and language use by intelligent agents.

CS 401 Senior Seminar

Pre-requisites: Senior standing

Credit Hours: 3

The focus of the computer science seminar is the study of various methodologies in scientific computing, examination of their confluence and computational efficiency, and their integration to specific applications. With the assistance of the instructor, the goal of the student is to participate in actively leading the class and engage in collaborative projects both theoretical and applied. Areas of project development within this sphere will range from computer program development, which includes the creation and execution of data structures and algorithms to analysis and visualization of compound data sets, operations and other associations in a lab environment. The general objective is to prepare students to embark on scientific discovery using computers. Bi-weekly seminar.

CS 402 Independent Study

Pre-requisites: Senior standing

Credit Hours: 3

This course is a preparation for the senior project. The student will explore a particular area in software development, such as an application in natural language processing, and meet with those in industry working on the problem. The goal is to identify an area of unmet need to address in the senior thesis. The student will have a weekly meeting with his or her advisor to review progress and determine reasonable goals.

CS 403

Capstone Project

Pre-requisites: CS 402, and Senior standing

Credit Hours: 12

In this course, students work in small design and engineering teams to build a complex programming application. The objectives include skill-building in the following areas: current practices in software engineering, collaborative project management, code documentation, producing descriptions of technical work, and public presentation of the final application. The course concludes with all class participants demonstrating their projects to an audience that includes college staff, students, and industry representatives.

9.6. History and Literature

HIS 101 Introduction to Historical Inquiry

Pre-requisites: LNG 101

Credit Hours: 3

This course introduces methods, techniques and principles for historical scholarship and historiography. Students explore various types of historical narrations and records to develop historical thinking, literacy, research, and communication skills, with an emphasis on examining the methods and principles of famous historians including Herodotus and Thucydides.

HUM 102 The History, Literature and Art of the Ancient and Medieval Worlds

Pre-requisites: None

Credit Hours: 3

Starting with the emergence of the first cities around 3500-3000 B.C., this historical journey will survey classical literature, philosophy, politics, religions, laws, wars, and major empires of the ancient civilizations, including Rome, Greece, China, Persia, India, and the Maya. This course includes study of the ancient world in roughly the 9th century establishment of the first true European empire under Charlemagne, the Golden Age of the caliphate in Baghdad, and the Tang dynasty in China. The course concludes with investigation of the history of Europe and the Near East from the breakup of the Roman Empire to the dawn of the Renaissance. It will explore the political, economic, social, and cultural development of Byzantium, Islam and Western Christendom. Topics include the conversion of Europe to Christianity, the fall of the Roman Empire, the rise of Islam, the "Dark Ages," Charlemagne and the Carolingian renaissance, and the Viking and Hungarian invasions. This course is focused on helping students develop a broad perspective to critically analyze history as well as skills to evaluate and interpret primary sources so as to better understand the ancient and medieval world.

HUM 103 The History, Literature and Art of the Modern World

Pre-requisites: None

Credit Hours: 3

This course covers the history, literature, and art of the modern world from the Age of Enlightenment to today. Students will develop an understanding of current world issues and relate them to their historical, geographic, political, economic, and cultural contexts, as well as a global perspective to understand international relations. Topics include the Renaissance, Reformation, Absolutism, the French Revolutions, the Industrial Revolution, democracy and progress in the 19th Century, imperialism, World War I and II, the Cold War, and global interdependence.

HUM 104 The History, Literature and Art of the United States

Pre-requisites: None

Credit Hours: 3

This course examines the history, literature, and art of American history, beginning with the Puritans, American Revolution, the origins of the constitution, reform movements of the nineteenth century, Manifest Destiny, the Civil War and Reconstruction, the impact of the frontier, the changing nature of business and government, World War I, the Great Depression, World War II, the growth of the United States as a world power, the Cold War and the struggle to achieve class, ethnic, racial, and gender equality. The course extends to the modern day. Contemporary world issues such as immigration, globalization, economic interdependence, and terrorism are addressed.

HUM 105 The History, Literature and Art of the Christian Church

Pre-requisites: None

Credit Hours: 3

Christianity is a religion with a rich tradition of literature and art. This course explores the development of the Christian church from Pentecost to the present day. It covers the major figures and events during church history, including the Ante-Nicene fathers, the Council of Nicaea, Post-Nicene development, the Monastic Movement, the Great Schism, the Crusades, the Reformation (including Lutheran, Anglican and Swiss developments), Anabaptism, the Methodists, and the modern decline of Christianity in the West.

HIS 106 East Asian History

Pre-requisites: HIS 101

Credit Hours: 3

This course provides an understanding of the history and cultural development of the East Asian countries, with emphasis on China, Korea and Japan, from their ancient period to the modern period. It also examines the relations among the East Asian countries, and the relations between East Asia and the West.

HIS 107 African History

Pre-requisites: HIS 101

Credit Hours: 3

This course explores the history of the African continent from the ancient era to the present era. Topics include ancient Egypt; medieval kingdoms such as Ghana, Mali, Songhai, and Zimbabwe; slave trades; the European colonial influences; the decolonization process; the impacts of Islam and Christianity; and contemporary African society.

HIS 108 Middle Eastern History

Pre-requisites: HIS 101

Credit Hours: 3

This course surveys the history of the Near East and North Africa from the rise of Islam in the 7th century to the present era. It examines various historical events and figures, including Muhammad and his community, the Arab conquests, the Umayyads and Abbasids, sectarian movements, government and religious institutions, relations with Byzantium and the Latin West, the Crusades, the Mongol conquests, and the present social, religious and political trends.

HIS 109 Latin American History

Pre-requisites: HIS 101

Credit Hours: 3

This course surveys major themes in Latin American history with emphasis on the era from 1500. It examines the social, cultural, political, and economic transformations that shaped Latin America during this period, including analysis of the impact of the European/indigenous encounter, of US/Latin American relations, and of the challenges of modernization.

HIS 110 South Asian History

Pre-requisites: HIS 101

Credit Hours: 3

This course investigates the history of the south Asian subcontinent from the ancient period to the modern era. It examines major political events and economic, social and cultural developments in this region. Topics include the Mughal dynasties, the British Raj, the Indian nationalist movement, the influence of Mahatma Gandhi, independence, the partition of India into the new states of India and Pakistan, and the effects of globalization and development initiatives in the Indian subcontinent. It also emphasizes the development and impact of major religions including Christianity, Hinduism, Buddhism, Jainism and Islam in this region.

HIS 111 History of Modern China

Pre-requisites: HUM 103 and HIS 106

Credit Hours: 3

This course covers the history of modern China from 1912 to the present. Topics include the end of the Qing Dynasty and the birth of the Republic of China in 1912, the conflicts between the Nationalist Party (or Kuomintang) and the Communist Party of China, the Sino-Japanese War, the Chinese Civil War, the founding of the People's Republic of China, China's role in the Korean War and Vietnam War, the Great Leap Forward, the Cultural Revolution, economic reforms starting in 1978, the Tiananmen Square protests of 1989, and the political, economic, and foreign policies of China.

HIS 112 History of Modern India

Pre-requisites: HUM 103 and HIS 110

Credit Hours: 3

Beginning with the colonization of India by the British starting in 1612, this course explores the independence movement in the 19th century and Partition of India in 1947, as well as India in the post-independence era. It will emphasize the emergence of non-violent protests led by Gandhi; religious and regional identities; foreign policies, especially, the military conflicts between India and Pakistan; the emergence of nationalism; and social reforms.

HIS 201 Reformation History and Literature

Pre-requisites: HUM 103 and BRS 204

Credit Hours: 3

This course covers the social, political, economic, cultural and religious transformation of Europe in the Reformation period. It will cover the Renaissance in the 14th century as the background of the Reformation; the key figures and events in the 16th century, including Luther, Calvin, Zwingli, the birth of Anglicanism, and the rise of Anabaptism; the major wars, including the religious wars among Germany, France and the Netherlands, and the English Civil War.

HIS 202 Industrial Revolution

Pre-requisites: HIS 101 and HUM 103

Credit Hours: 3

This course covers the origin and development of the Industrial Revolution and its impacts on the world with emphasis on Europe, the US, Russia, Japan, China and India. Topics include the technological achievements, prominent figures and events, and the economic, social and political impacts of this period.

HIS 203 History of the City

Pre-requisites: HIS 101 and HUM 103

Credit Hours: 3

This course introduces the history of the city from prehistoric origins to medieval towns to modern metropolises. It will examine a wide array of evidence, including archeological discoveries, arts, historic narratives and records, and photographs, to explore the transformations of the city as well as its impact on human civilization.

HIS 204 Human Trafficking

Pre-requisites: HIS 101 and HUM 103

Credit Hours: 3

This course examines the extent and complexity of the global phenomenon of human trafficking, especially for exploitation of labor and sex. It provides a thorough discussion of domestic and international human trafficking from human rights and social perspectives. Students are introduced to the forms, severity and extent of various types of trafficking, and the social, economic, political and legal factors that contribute to this phenomenon. Students will also analyze the existing domestic and international regulations and policy frameworks to address these issues, and evaluate the viability, practicality and effectiveness of these policies and their implementations.

HIS 301 Martin Luther King Jr.: His Life and Ideas

Pre-requisites: HIS 101, HUM 104 and HUM 105

Credit Hours: 3

This course examines the life of Martin Luther King Jr., his religious and political ideology, and his leadership in the nonviolent civil disobedience movements as well as the African-American Civil Rights Movement. Students will study major events led by Dr. King, including the Montgomery Bus Boycott; Southern Christian Leadership Conferences; the March on Washington; Selma Voting Rights Movement and "Bloody Sunday"; his assassination; and his legacy and impact on the modern political landscape, especially his contributions to civil rights and equality for African-Americans.

HIS 302 History of Christianity in the United States

Pre-requisites: BRS 204 and HUM 105

Credit Hours: 3

This course surveys the development of Christianity in the United States, beginning with the arrival of the Puritans in the seventeenth century into the present era. Attention will be given to the writings of Jonathan Edwards and other early writers who played an important role in the theology of early America. The course looks at the impact of Christianity on social movements such as abolition, women's suffrage, and antiwar protests. Finally, the course covers the origins of major Christian denominations and current trends.

HIS 303 History of Christian Movements

Pre-requisites: BRS 204 or HUM 105

Credit Hours: 3

This course covers several major reform and revival Christian movements throughout history, such as the rise of the Waldensians, Wycliffites, Anabaptists, Methodists, the Great Awakening, the Restoration Movement, and the Pentecostal movements. The course covers the background, motivation, outcome, and prominent figures of these movements. Controversies such as the iconoclast and Regulative Principle will also be addressed.

HIS 304 History of Christian Worship

Pre-requisites: Junior standing or higher

Credit Hours: 3

This course covers a range of theological principles and expressions in various styles of worship including Old and New Testament, the early church, Orthodox, Medieval, Reformation, Anabaptist, Puritan, African-American, revival, evangelical, international, seeker-sensitive, and charismatic forms.

HIS 401 Senior Seminar

Pre-requisites: Senior standing

Credit Hours: 3

The history seminar provides a thorough examination of influential historical investigative methods and research pathways. One focus of this seminar is an analysis of the Puritan culture and its distinctives throughout the seventeenth century and the resulting effects on the New England colonies. It encompasses careful reading of primary and secondary source materials, open class discussion, comprehensive writings on subjects relating to historical literary texts and a research paper with the topic mutually agreed upon by the student and instructor. In addition, there is the opportunity to take field trips to locations of historical note in the greater Boston area. Bi-weekly seminar.

HIS 402 Independent Study

Pre-requisites: Senior standing

Credit Hours: 3

This course is a preparation for the senior history thesis. The student will have a weekly meeting with his or her advisor to formulate an appropriate question and identify the best materials to address the question.

HIS 403 Capstone Project

Pre-requisites: HIS 402, and senior standing

Credit Hours: 12

This course is designed for students to work closely with a faculty advisor to develop a historical thesis. The thesis must be a substantive piece of scholarship involving primary and secondary research in an area of controversy or where there has been little inquiry to date. The thesis will be presented to selected faculty members for discussion and evaluation.

9.7. Language and Linguistics

LNG 101 Expository Writing and Oral Communication

Pre-requisites: None

Credit Hours: 3

In his *Autobiography*, Benjamin Franklin describes how he taught himself to write by reading, rereading, and imitating the writing of Joseph Addison in his *Spectator*. This method was not new to him, but a staple of Greek and Roman education. In this course, we will explore this method for ourselves. Each week students will read the work of a celebrated essayist, analyze it together in class, and for homework craft an imitation of the writer's style. Ultimately, students will write again in their own voice, incorporating strengths and strategies gleaned from these acts of literary imitation.

LNG 102 Elementary Biblical Greek I

Pre-requisites: None

Credit Hours: 3

This course covers basic grammar, syntax and vocabulary of Koine Greek, through both inductive and deductive methods. At the end of this course, students will acquire basic oral communication skills, the four cases of nouns, first and second declension of nouns and adjectives, prepositions, present, future and imperfect indicative verb forms, aorist active verbs and basic patterns of third declension nouns and adjectives as well as the imperative verb form.

LNG 103 Elementary Biblical Greek II

Pre-requisites: LNG 102

Credit Hours: 3

This course continues LNG 102, and reviews and continues the study of grammar and basic language skills. It offers progressively more intensive practice in oral and written communication. Students will acquire demonstrative pronouns, relative pronouns, third declension nouns and adjectives, and the rest of the tenses and aspects in the indicative verb system.

LNG 104 Elementary Biblical Hebrew I

Pre-requisites: None

Credit Hours: 3

This course covers basic grammar, syntax and vocabulary of Biblical Hebrew, through both inductive and deductive methods. Students will acquire basic written and oral communication skills, basic nouns and adjectives, pronouns and prepositions and numbers, Qal perfect and imperfect verbs.

LNG 105 Elementary Biblical Hebrew II

Pre-requisites: LNG 104

Credit Hours: 3

This course continues LNG 104, and reviews and continues the study of grammar and basic language skills. It offers progressively more intensive practice in oral and written communication. Topics include pronominal suffixes, construct chain, Waw consecutive, the Qal imperative, cohortative, jussive, infinitive and participle.

LNG 201 Intermediate Biblical Greek I

Pre-requisites: LNG 103

Credit Hours: 3

This course begins with an intensive study of intermediate grammar, syntax, and vocabulary. Grammar topics include participles, non-indicative moods of verbs, verbal aspect, and advanced vocabulary from the New Testament. Students are expected to read selections from Koine Greek authors, including more difficult authors of the New Testament such as Luke or Paul.

LNG 202 Intermediate Biblical Greek II

Pre-requisites: LNG 201

Credit Hours: 3

This course covers intermediate grammar, syntax and vocabulary. While students are expected to improve their oral and written communication skills in Koine Greek, they will also be improving their reading proficiency by reading selections from various Greek authors, including advanced writing in the New Testament, as well as extra-biblical writers such as Philo, Plutarch, Josephus, etc.

LNG 203 Intermediate Biblical Hebrew

Pre-requisites: LNG 105

Credit Hours: 3

This course reviews grammar and syntax with an introduction to the Masoretic text of the Old Testament, and intensive reading from selected Old Testament texts will be required in the course. Students will acquire all the tenses and aspects of the rest of the Binyanim (Niphal, Piel, Pual, Hiphil, Hophal, Hithpael), as well as more advanced vocabulary.

LNG 301 Introduction to Linguistics

Pre-requisites: LNG 101

Credit Hours: 3

This course introduces the concepts of linguistics and methods of analysis of modern language. Topics include phonetics, phonology, morphology, syntax, and semantics. This knowledge will provide the basis for students to explore different dimensions of language, such as language families, dialects, language acquisition, etc.

LNG 302 Advanced Koine Reading

Pre-requisites: LNG 202

Credit Hours: 3

This course focuses on advanced Koine Greek reading skills. Students will read from Hebrews (the most difficult Koine of the New Testament), selections from the Septuagint, and the early church fathers. The course will cover advanced vocabulary, grammar, and exegesis.

LNG 303 Greek Prose Composition

Pre-requisites: LNG 202

Credit Hours: 3

This course begins with an advanced review of Greek morphology and syntax. Students will both write intensively in Koine Greek as well as critique their peers' writings. Students will be expected to compose Koine Greek with few grammatical and syntactic mistakes. The final project involves an oral presentation to the class of an original work written by the student.

LNG 304 Exegesis

Pre-requisites: LNG 202

Credit Hours: 3

This course covers exegesis of the Greek Bible. Students will be reading from the Septuagint and Greek New Testament instead of the English translations, with a view towards a disciplined understanding of proper exegesis and exegetical pitfalls. Advanced students will have the opportunity to investigate the translation methods behind the Septuagint through comparisons with the Hebrew Bible.

9.8. Mathematics

MAT 101 Logic and Critical Thinking

Pre-requisites: None

Credit Hours: 3

This course is designed to develop logic and critical thinking skills to systematize and analyze steps in reasoning. It covers fundamental principles of sentential logic (also called propositional logic), predicate logic and critical reasoning. Common fallacies and errors will be highlighted.

MAT 102 Statistics and Data Science

Pre-requisites: None

Credit Hours: 3

How does one appropriately gain insights from a data set without being misled? This course covers the elementary principles of data description, hypothesis testing, and regression. The course begins with an introduction to probability and random variables. It then moves into statistics, having students run practical analyses on data sets from medicine, elections, and business.

MAT 103 **Introduction to Calculus**

Pre-requisites: None

Credit Hours: 3

The basic objective of Calculus is to relate small-scale (differential) quantities to large-scale (integrated) quantities. This is accomplished by means of the Fundamental Theorem of Calculus. Students should demonstrate an understanding of the integral as a cumulative sum, of the derivative as a rate of change, and of the inverse relationship between integration and differentiation. Students completing this course can: 1) Use both the definition of derivative as a limit and the rules of differentiation to differentiate functions. 2) Sketch the graph of a function using asymptotes, critical points, and the derivative test for increasing/decreasing and concavity properties. 3) Set up max/min problems and use differentiation to solve them. 4) Set up related rates problems and use differentiation to solve them. 5) Evaluate integrals by using the Fundamental Theorem of Calculus. 6) Apply integration to compute areas and volumes by slicing, volumes of revolution, arc length, and surface areas of revolution. 7) Evaluate integrals using techniques of integration, such as substitution, inverse substitution, partial fractions and integration by parts. 8) Set up and solve first order differential equations using separation of variables. 9) Use L'Hospital's rule. 10) Determine convergence/divergence of improper integrals, and evaluate convergent improper integrals. 11) Estimate and compare series and integrals to determine convergence. 12) Find the Taylor series expansion of a function near a point, with emphasis on the first two or three terms. (This course is based on the MIT OpenCourseWare course, 18.02.)

9.9. Physics

PHY 101 **Physics I**

Pre-requisites: None

Credit Hours: 3

This course introduces classical mechanics. This includes kinematics, dynamics, motion in higher dimensions, Newton's laws, rotational dynamics, and gravitation.

PHY 102 **Physics II**

Pre-requisites: PHY 101

Credit Hours: 3

This course introduces wave mechanics, thermodynamics, and electromagnetism. This includes modal analysis, the laws of thermodynamics, statistical mechanics, the kinetic theory of gases, Gauss' law, and basic circuits.

9.10.Sociology

SOC 101 Introduction to Sociology

Pre-requisites: None

Credit Hours: 3

This course provides an introduction to sociology, “the scientific study of social behavior and human groups.” Topics include research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations.

SOC 301 Global Poverty: Its Origins and Implications for World Change

Pre-requisites: Senior standing

Credit Hours: 3

The course builds on a model of culture and world change proposed by James Davison Hunter (*To Change the World*, Oxford University Press, 2010). Building on that model, several additional models of world change will be explored. This course presents ideas from some the world’s most creative entrepreneurs, writers, and political leaders to discuss ways innovative thinking, entrepreneurship, service, and technology can address pressing global issues. The emphasis of this course is on global poverty in its historical, political, economic and social contexts, and possible solutions to address this problem.



Sattler College believes that Scripture’s command to “love your neighbor as yourself” should govern all interpersonal interactions. Thus the College vigorously rejects all forms of harassment and disrespect, especially to groups and individuals that have historically been vulnerable to discrimination. The College strives to foster a respectful, welcoming environment for all students, faculty, and staff. Moreover, Sattler College believes that diversity among its student body, faculty, and staff makes an invaluable contribution to a student’s education.

Thus it is the policy of Sattler College--while reserving its lawful rights where appropriate to promote the historic Christian faith in accordance with its mission and founding precepts--to comply with state and federal laws prohibiting discrimination in admissions, employment and in its educational programs on the basis of a person’s race, color, national and ethnic origin, sex, religion, disability, age, marital or parental status, sexual orientation, genetic information or family medical history, or military status.

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