Course Descriptions

ACC4205 Corporate and Partnership Income Taxation 2 cr

(PQ: C or better in ACC2102 or consent of instructor) Review of

the federal income tax laws as they apply to corporations and

partnerships, including the advantages and disadvantages of each

Course Description Legend	
Course Code/Course Title Number of Credits	
OCE Oral Communication PQ U suffix. WCE Written Communication Emphasis of * * * * * * * * * * * * *	Credit(s) Emphasis course: COM1075 or COM1825 as prerequisite (see page 50)
Accounting	
ACC2015 Foundations of Accouting & Finance	business structure. Corporate will focus on tax law creating permanent and temporary book/tax differences and accounting for net operating losses, net capital losses, deductions, and distributions. Partnership will focus on formation, partnership interest, and allocating gains and losses to partners. S corporations are highlighted, including the
ACC2101 Principles of Financial Accounting#	unique advantages to the tax-paying partners. ACC4305 Auditing
ACC2102 Principles of Managerial Accounting ° 4 cr (PQ: C or better in ACC2101 and C- or better in MAT1035; BUS1115 recommended or may be taken concurrently) An introductory study of managerial accounting concepts, including costing methods, analysis of financial performance, budgeting, and decision making.	ACC4306 Individual Income Taxation
ACC3201 Intermediate Accounting I	compensation. Focus will also highlight the tax advantages of home ownership, 401(k) investment plans, IRA plans, and Roth accounts.
to revenue recognition, asset and liability valuation, and financial reporting.	ACC4307 Advanced Accounting
ACC3202 Intermediate Accounting II	and partnerships. ACC4308 Governmental and Non-Profit Accounting2 cr (PQ: C or better in ACC2101 and ACC2102) A study of financial
ACC3206 Cost Accounting	accounting and reporting requirements for governmental and not- for-profit entities and the unique challenges and opportunities faced by each.
and strategic planning. ACC3235 Accounting Information Systems	ACC4845 Senior Accounting Project
the function of accounting systems—both manual and electronic—development and analysis of systems, security, internal control, ethics, and emerging issues.	ACC4995 Accounting Internship

major. Students may enroll for this course at various times as their

schedules permit. Note: This course is designated as repeatable and

may be repeated three times after the original taking of the course.

See page 25 for note regarding internships.

Ancient & Classical Languages ACL2001 Elementary Greek I**	ACL3201 Intermediate Greek I*
The first course in a year-long sequence introducing elements of Classical (biblical) Hebrew morphology, syntax and vocabulary. Elements of conversational Modern Hebrew are also included.	long sequence devoted to extended reading of Classical and Koine Greek authors and/or detailed exegesis of biblical texts, according to student needs. This course can be taken as a directed study.
ACL2012 Classical Hebrew II*	ACL4302 Advanced Greek II**
ACL2021 Classical Latin I*** The first course in a year-long sequence introducing the elements of Classical Latin morphology, syntax and vocabulary. Students read portions of Cicero, Horace and other Latin authors. ACL2022 Classical Latin II*** (PQ: ACL2021 or consent of instructor) The second course in a year-long sequence introducing the elements of Classical Latin morphology, syntax and vocabulary. Students read portions of Cicero, Horace and other Latin authors.	ACL5201U Greek for Biblical Exegesis*
Animation & Illustration ANI1005 Animation Principles and Trends ^{\$}	ANI3106 Motion Design ⁵
ANI1105 Animation I ⁵	ANI3201 Advanced Animation & Illustration I

techniques. Weekly workshops with different techniques will guide students towards a deeper understanding of the various methods of animation and their processes. A \$100 course fee required. (PQ: ANI1105 or consent of instructor) Exploration of the basic

principles of movement for the animator, working with the very basic movements to the complex. A \$100 course fee required.

This is an intermediate course that allows the student to examine and create illustrations focused on character development for animation. Students are encouraged to experiment with a wide variety of software, media, and techniques through concept-driven coursework. A \$100 course fee required.

(PQ: ART1011) Course content explores human and animal anatomy through gesture studies and finished renderings. Topics include proportion, exaggeration and perspective. A \$100 course fee required. (PQ: ANI1105, ANI2201) This course is designed to give students the chance to explore specializations within the pipeline of animated short film production. Working in teams, students will be given different roles as illustrators, animators, 3D modelers and more in order to work through all the processes necessary to make a fully rendered animation from a script. A \$100 course fee required.

ANI3303 3D Modeling^{\$}4 cr The objective of this course is to expand the knowledge of hard-

and soft-bodied surfaces. Students will learn good edgeflow and topology for animation and will improve the rendering skills needed to showcase their models. Students will learn best practices for 3D modeling as used in animation, films and print. A \$100 course fee required.

ANI3305 Character Design^{\$}......2 cr (PQ: ART1011) This course continues material introduced in Drawing I (ART1011) while concentrating on developing aesthetically appealing

characters. Complex designs are developed in conjunction with story, animation and cinematic concepts. A \$100 course fee required.

will be the main focus however color theory and ink mixing will be

introduced as well. A \$100 course fee required.

COURSE DESCRIPTIONS

ANI4302 Advanced Animation & Illustration II	ANI4855 Senior Capstone course to prepare for the realities of the professional world. This capstone experience is designed to employ all aspects of preparation for a career in digital media animation. The student will create an original animated sequence using the fundamentals of digital media and work within a collaborative team to finalize their demonstration Freel. A \$100 course fee required. ANI4995 Animation & Illustration Internship
Art	
ART1005 Principles of Art	ART2031 Painting I ⁵
ART1006 Creative Explorations of Art	ART2048 Ceramics I ^s
ART1007 Art Appreciation**	ART2081 Photography I ⁵
requirement in the core curriculum. Equivalent to ART1005. Only offered through Dual Enrollment. ART1011 Drawing I ⁵	sculptural techniques, materials and strategies. Emphasis is placed on understanding the history of and current trends within contemporary sculpture, as well as applying that knowledge in the creation of a variety of sculptural forms. A \$100 course fee required.
A foundational-level drawing class focusing on landscape, still life	
and the figure, using traditional materials and techniques. Emphasis is placed on visual sensitivity and basic technique, with specific studies in anatomy. A \$100 course fee required.	ART3112 Drawing II ^s
ART1035 Design Concepts ⁵	techniques, and content. Experimentation and development of a personal visual language are encouraged. The course culminates in the production of a series of works that relate thematically. Critical thinking and discussion skills are emphasized. Note : This course is designated as repeatable and may be repeated two times for credit
ART1825 Honors Topics: Art Appreciation	after the original taking of the course. A \$100 course fee required.
above, or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) An in-depth study of a particular historical period or geographic location of visual art. Focus of the course is on descriptive, interpretive and evaluative analysis of art.	ART3162 19th and 20th Century Art History
ART1825 may be taken in the place of ART1005 and ART1006.	ART3223 Print II, III, IV ^s
ART2021 Print I ⁵	techniques to provide deeper understanding of artistic processes and possibilities of expression. Note: This course is designated as repeatable and may be repeated three times after the original taking of the course. A \$100 course fee required.

media. Emphasis is placed on exploring ideas and concepts integrated with personal expression and critical judgments about art. **Note**: This course is designated as repeatable and may be repeated three times after the original taking of the course. A \$100 course fee required.

ART3243 Ceramics II^{\$}......3 cr ART3322 Photography II^{\$}3 cr (PQ: ART2048) A continuation of ceramics exploring wheel thrown (PQ: ART2081) An advanced photography experience with an functional objects, clay forming, handbuilding, and firing techniques. emphasis placed on exploring ideas and concepts integrated with The history of ceramics, glaze formulation, and firing processes also personal expression as well as an understanding of the historical and receive attention. A \$150 course fee required. critical context of photography. A \$100 course fee required. ART3253 Sculpture II, III, IV\$......3 cr (PQ: ART2251) An advanced, studio-intensive course exploring (PQ: junior standing or consent of instructor) A survey of the history sculptural expression through a variety of techniques to develop an of Aesthetics and the philosophy of art. A variety of current and understanding of the core concerns of sculpture while producing a historical topics in the theory and philosophy of art will be explored body of related work from concept to final presentation. The history through studying the works of important artists and philosophers. of sculpture and its current trends is also incorporated into the making ART4855 Senior Seminar in Art^{\$ OCE}......3 cr process. Note: This course is designated as repeatable and may be repeated three times after the original taking of the course. A \$100 (PQ: COM1075 or COM1825, and senior standing in art major) This capstone course is a directed study with a member of the Art course fee required. & Design faculty. It is designed to address production and content issues particular to each student. The primary focus of this seminar A survey of contemporary fine art since WWII. Emphasis is placed is to build professional practices related to portfolio creation, thesis on learning key artists and art movements, as well as understanding exhibition, artist statement, and artist talks-skills that are necessary their impact on the history of art and the broader culture. A variety of to apply for grants, graduate school, professional exhibitions, and images and films will be discussed. academic jobs. A \$100 course fee required. ART3267 Themes in Art History WCE......4 cr (PQ: ENG1107, ENG2205, or ENG2825, and sophomore standing) A (PQ: COM1075 or COM1825, consent of faculty supervisor, and course focusing on the themes and developments of art and culture internship registration form) Supervised work experience in a realwith a primary focus on western art traditions but will include themes world setting requiring organizational, administrative, technical, and/ from Asia. India. Africa and South America. or artistic skills in an arts or arts management setting. Forty hours of on-site work is required per credit. Note: This course is designated as repeatable. See page 25 for note regarding internships. Athletics - Intercollegiate Note: Courses in this section are designated as repeatable. ATH2000 Intercollegiate Cross-Country-Men 0-1 cr ATH2050 Intercollegiate Basketball-Men 0-1 cr ATH2005 Intercollegiate Cross-Country-Women 0-1 cr ATH2055 Intercollegiate Basketball-Women 0-1 cr ATH2010 Intercollegiate Football-Men.....0-1 cr ATH2060 Intercollegiate Baseball-Men 0-1 cr Intercollegiate Softball-Women 0-1 cr ATH2020 Intercollegiate Golf-Men 0-1 cr ATH2065 Intercollegiate Golf-Women 0-1 cr Intercollegiate Tennis-Men 0-1 cr ATH2025 ATH2070 ATH2030 Intercollegiate Soccer-Men.....0-1 cr ATH2075 Intercollegiate Tennis-Women 0-1 cr ATH2035 Intercollegiate Soccer-Women.....0-1 cr ATH2080 Intercollegiate Track-Men 0-1 cr ATH2045 Intercollegiate Volleyball-Women 0-1 cr ATH2085 Intercollegiate Track-Women 0-1 cr **Bible** BIB2005 Survey of the Old Testament**4 cr BIB2827 Honors Survey of the Old Testament.....4 cr A survey of the 39 books of the Old Testament with emphasis on (PQ: ACT Composite score of 27 or above [SAT score of 1280 or historical setting and literary features. Credit for the course may be above, or CLT score of 85 or above], or high school cum GPA of 3.7 or achieved through a locally prepared examination. higher or consent of instructor) A survey of the 39 books of the Old Testament with emphasis on historical setting and literary features. BIB2827 may be taken in the place of BIB2005. A survey of the 27-books of the New Testament with emphasis on historical setting and literary features. Credit for the course may be BIB3015 Matthew**4 cr An exposition of the Gospel of Matthew, examining the authorship, achieved through a locally prepared examination. date, setting, argument and theology of the book. BIB2826 Honors Survey of the New Testament......2 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above, BIB3016 Mark......2 cr or CLT score of 85 or above], or high school cum GPA of 3.7 or higher An exposition of the Gospel of Mark, examining the authorship, date, or consent of instructor) A study of the socio-historical setting, literary setting, argument and theology of the book.

genres and theological message of the New Testament. Students

study the process by which the New Testament was established, the relationship of the Old Testament to the New Testament and critical

methods of New Testament scholarship. BIB2826 may be taken in the

place of BIB2008.

BIB3018 John**......4 cr An exposition of the Gospel of John, examining the authorship, date, setting, argument and theology of the book.

BIB3017 Luke**......4 cr

An exposition of the Gospel of Luke, examining the authorship, date,

setting, argument and theology of the book.

BIB3020 Life of Christ*	BIB3228 Pastoral Letters**
BIB3045 Theology for Social Engagement	BIB3231 Pentateuch*
BIB3115 Romans	BIB3234 Minor Prophets
An exposition of Galatians with an emphasis on Paul's theological message. BIB3155 The Holy Spirit in the Christian Life	BIB3235 Genesis
BIB3216 1-2 Corinthians**	difficulties and messianic significance. BIB3237 Isaiah**
BIB3218 Revelation	An exposition of the book of Daniel, including its authorship, date historical setting, literary genre, prophetic message and authenticity. BIB3245 Proverbs and Song of Solomon
BIB3219 Prison Letters	application of these books. BIB3246 Old Testament Historical Writings**
An exposition of the four gospels which emphasizes the theological message as discovered in the unfolding of the narrative within its historical context.	BIB3825 Honors Topics in Old Testament Exposition**2-4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 o
BIB3223 Pauline Epistles**	higher, or consent of instructor) Each of the offerings of this course focuses on an Old Testament book or grouping of books; specifically addresses its more specialized, technical and problematic issues and interacts with the work of scholars who have made special contributions to the field of study.
An expositional study of the book of Acts, emphasizing the birth and growth of the Church as the gospel message spread through Asia and Europe. Particular attention is devoted to applying principles gleaned from biblical, historical narrative to contemporary Christianity.	BIB3826 Honors Topics in New Testament Exposition**2-4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher or consent of instructor) Each of the offerings of this course focuses
BIB3227 1-2 Thessalonians**	on a New Testament book or grouping of books; specifically addresses its more specialized, technical and problematic issues; and interacts with the work of scholars who have made special contributions to the field of study.

BIB3827 Honors Topics in Old/New Testament Exposition** 2-4 cr PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or nigher, or consent of instructor) Each of the offerings of this course focuses on Old and New Testament books or grouping of books as specified in the class schedule. Each course offering moves quickly chrough the basic content of the biblical book(s) to focus on more specialized, technical, and problematic issues. Some of the issues that are examined critically include introductory matters (authorship, date,	BIB4835 Seminar in Theological Method* OCE
provenance, purpose, and literary background), structure, theology, and use in the Old or New Testament. Emphasis is given to interaction with the work of Old or New Testament scholars who have made special contributions to the book(s) studied.	(PQ: acceptance into an accelerated graduate program) An exposition of the first five books of the Old Testament, emphasizing the historical setting and theological message.
BIB4360 Systematic Theology*	BIB6214U Interpreting the Gospels
BIB4365 Historical Theology#	BIB6215U Interpreting Acts**
nistory of the church. BIB4460 Biblical Theology*	(PQ: acceptance into an accelerated graduate program) A study of the historical, theological, and exegetical issues in each of Paul's letters. Special attention is given to interpretive problems and contemporary discussions related to the study of Pauline literature.
Bible and explains their contribution to the progress of divine revelation. BiB4825 Honors Systematic Theology*4 cr	BIB6312U Biblical Theology of the Old and New Testaments 4 cr (PQ: acceptance into an accelerated graduate program) A study of current methods and issues in the field of biblical theology, with emphasis on application to Old and New Testament books. Students
PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or UNW cum GPA of 3.6 or higher, or consent of instructor) The study of Evangelical Christian beliefs and their relationship to other belief systems as well as their relevance to contemporary discussions both inside and outside of the church. 31B4825 may be taken in the place of BIB4360.	will develop theological categories from the text and identify the variety and unity of theological themes.
Biblical Arts BIA1007 Christian Thinking & Living*	BIA3236 Biblical Customs and Geography*4 cr
A study of basic Christian teachings to cultivate a distinctively Christian mindset and godly character including biblical principles of Christian discipleship and moral decision-making.	A study of the geography of the Fertile Crescent with special emphasis on Israel and Judah. Selected customs of the ancient Hebrews and surrounding peoples are studied for the light that they shed on Scripture.

BIA1007 Christian Thinking & Living#2 cr	BIA3236 Biblical Customs and Geography*
A study of basic Christian teachings to cultivate a distinctively	A study of the geography of the Fertile Crescent with special e
Christian mindset and godly character including biblical principles of	on Israel and Judah. Selected customs of the ancient Hebre
Christian discipleship and moral decision-making.	surrounding peoples are studied for the light that they s Scripture.
BIA1015 Interpreting Scripture#2 cr	·
A study of the Bible as the Word of God and of the proper methods of	BIA4837 Seminar in Exegetical Method* WCE

BIA1826 Honors Christian Thinking & Living2 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) A study of basic Christian beliefs and values in the cultivation of a Christian mindset and character. This includes principles for spiritual growth and moral decision-making.

interpretation for spiritual transformation.

BIA1826 may be taken in the place of BIA1007. BIA1827 Honors Interpreting Scripture 2 cr

(PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) A study of the Bible as the Word of God and of the proper methods of interpretation for spiritual transformation. BIA1827 may be taken in the place of BIA1015.

BIA3235 Second Temple Judaism*......4 cr A study of Jewish civilization from 538 B.C. to A.D. 135 as an aid to understanding both the formation of the Old Testament and the rise of Christianity. Primary emphasis is on political and social history, with considerable attention to the literary materials of the period.

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BIA4837 Seminar in Exegetical Method* WCE4 cr (PQ: ENG1107, ENG2205, or ENG2825; ACL2002; 4-credit Bible exposition course) A senior-level course in exegetical method for Biblical & Theological Studies majors helping them refine their exegetical skills by having them apply those skills to the study of passages from several genre of biblical literature. Students work through the process of exegesis on the assigned passages of Scripture and present the results of their exegesis in exegetical papers.

BIA5015U Biblical Hermeneutics* WCE4 cr (PQ: ENG1107, ENG2205, or ENG2825, and acceptance into an accelerated graduate program) An advanced course in hermeneutics in which students will learn about the formation of the Bible, the history of biblical interpretation, modern critical methods, and current challenges to biblical interpretation.

(PQ: acceptance into an accelerated graduate program) A rational defense of the Christian faith, with emphasis on critical thinking, theistic arguments, the problem of evil, and other challenges to Christian belief.

Biology	Bio	lo	gy
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Directed studies are available. See pages 26-27.

work, hands-on activities and laboratory experiments.

science, economics, and other disciplines to give a well-rounded view of the current research and debate on whether our climate is changing, and if so, what are the possible causes. This course is intended to disentangle the complex web of climate change science for informed decision making.

(PQ: C- or better in BIO1011) This course is designed to introduce the student to major concepts of the life sciences with an emphasis in botany, environmental science and ecology. The course includes discussion of basic ecological principle such as the role of natural and sexual selection, discussion on the different theories on the origins of species from various perspectives, species interactions, population dynamics and landscape and community processes. Introduction of plant structure and function, human impact on biodiversity and environmental stewardship are also discussed. Three hours of lecture, one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

This summer course will use time in the field (outdoors) to study the biology, ecology, diversity, behavior and field identification of birds. Laboratory will be integrated into class time. Special attention will be paid to local species of the upper Midwest. Additionally, this course will explore how birds reveal lessons on Christianity and the nature of God. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

BIO3158/3158L Human Physiology ⁵ 4 cr
(PQ: C- or better in BIO1011) A study of the mechanisms and
interrelationships of the following body systems: nervous, endocrine,
muscle, circulatory, respiratory, renal, digestive, metabolic, immune
and reproductive. Special emphasis is given to those interactions
contributing most to homeostasis. Three lectures and one two-hour
lab per week. A \$200 laboratory fee required. Concurrent registration
required in lecture and lab.

BIO3159 Pathophysiology......3 cr

(PQ: C- or better in BIO3158) A focused course that introduces students to the physiology of disease in the human body. The course explores the patterns of disease in the body's major organ systems. Intended to fulfill the admission requirement for Nursing, Physician Assistant, Occupational Therapy and other health care professionals such as Medicine, Dentistry, Pharmacy, Chiropractic, etc.

(PQ: C- or better in BIO2113) Basic concepts of ecology of population, communities and ecosystems, Analysis and synthesis of the interrelatedness of the living and non-living factors in the environment. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture

(PQ: C- or better in BIO1011 and C- or better in CHE3101) Structural and integrated functions of carbohydrates, proteins, lipids and nucleic acids; biosynthesis, biodegradations, metabolic pathways and bioenergetics; quantitation of chemical equilibria. Three lectures and one three-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

BIO3236 Immunology*......4 cr

(PQ: C- or better in BIO1011 and C- or better in CHE3101; BIO3145 is recommended) Molecular and cellular bases for humoral immune responses: diversity of antibodies, their interactions with antigens and their measurement. Study includes cell-mediated immune responses, including histocompatibility systems, natural immunological tolerance and immune suppression. Three lectures per week.

BIO3246/3246L Genetics⁵......5 cr

(PQ: C- or better in BIO1011 and C- or better in CHE3101) A detailed study of molecular genetics and classical Mendelian inheritance. Molecular topics include DNA structure, prokaryotic and eukaryotic gene expression, mutation, recombinant DNA technology and genomics. Three lectures and one three-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

BIO3276/3276L Field Biology[§]...... 4 cr

Exploration of techniques and procedures to design field experiments to further study plant biology, animal biology and ecological concepts. Two lectures and two two-hour labs per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

BIO3277/3277L Conservation Biology* \$4 cr

(PQ: C- or better in BIO2113) A survey of the distribution and management of natural resources with special emphasis on developing critical thinking skills and developing new solutions to problems of resource scarcity. Topics include: energy, water, air, food and biodiversity and other selected components of the lithosphere and hydrosphere. Economics, demographic, religious and political issues are considered as they affect resources. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

BIO3335 Molecular Medicine......4 cr

(PQ: CHE3101; one semester of biochemistry is recommended) Builds upon Biochemistry to describe biochemical regulatory processes in greater breadth and depth with focused emphasis on therapeutic pharmaceutical agents and their mechanisms of action, development, regulatory approval, and laboratory synthesis. Trains students to critically evaluate data from a large variety of published sources covering experimental medicines, biological probes, and natural products.

BIO3347 Cell Physiology4 cr

(PQ: C- or better in BIO1011 and C- or better in CHE3101) Cell physiology is an in-depth study of the fundamentals of cell biology. This course will investigate the molecules involved in cell structure and function. Each organelle in the cell will be investigated on a physiological and ultrastructural level. Various types of plant and animal cells will be explored for unique functions based on the physiological needs of the organism. An emphasis on the different types of optics used in microscopy will be investigated as well as the primary techniques used in cell biology experiments. In addition, cellular metabolic pathways such as protein synthesis, cell signaling, protein folding, the cell cycle and membrane transport will be studied. This course intends to provide a comprehensive study of the physiological workings of cell and its structures.

(PQ: C- or better in BIO1011 and C- or better in CHE3101) Cell and organelle organization and function; cellular transport and communication; specialized cell formation. Three lectures and one three-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

BIO4355 Developmental Biology*......4 cr

(PQ: C- or better in the following: BIO1012 and BIO3145, BIO3235, BIO3246, or BIO3348) Vertebrate embryology including morphogenesis, differentiation and interactive biochemical control mechanisms. Three lectures per week.

(PQ: C- or better in the following: BIO3235 or BIO3246 or BIO3347 or BIO3348) A laboratory course providing practical experience in operating chemical instrumentation and performing molecular biology techniques that may include spectroscopy, chromatography, assays, and manipulation of nucleic acids. Two to three hours of lab per week. A \$200 laboratory fee required.

BIO4835 Senior Seminar^{OCE WCE}......2 cr

(PQ: ENG1107, ENG2205, or ENG2825, COM1075 or COM1825: and at least junior standing as a biochemistry or biology major) A capstone course designed to provide an integration of concepts in the biological sciences, biochemistry and the health professions with a discussion of the ethics of applied biology and the health sciences as they pertain to a global and culturally diverse society.

(PQ: completion of at least 24 credits in the biology major) Students work closely with research mentor to learn literature search, proposal preparation for a research project, experimental protocols, data acquisition, statistics, manuscript preparation. Students will sign a document including the University of Northwestern Policy on Original Research Data in order to register for all research courses. Note: This course is designated as repeatable and may be repeated for up to 8 total credits. Only 4 credits may be used toward completion of Biology Major credits. A \$200 research fee required.

BIO4995 Biology Internship1-4 cr

(PQ: completion of at least 24 credits in the biology major; consent of faculty supervisor, and internship registration form) Supervised work experience in a biology lab or area related to career choice. Note: This course is designated as repeatable. See page 25 for note regarding internships.

Business

BUS3331 Business Law – Contract and Agency.......3 cr A study of contracts and sales as the basic laws affecting business transactions. Also, law of principal and agency relationships.

 process and career development. This course should be completed in the semester immediately prior to taking ACC4995, BUS4995, BUS4996, FIN4995, or MKT4995. A \$50 course fee required.

BUS4332 Business Law – Partnerships and Corporations......2 cr (**PQ**: C or better in BUS3331 and MGT2271) A study of the legal aspects of business relationships pertaining to partnerships and corporations. Law pertaining to negotiable instruments, property and secured transactions.

Business Administration

and perspectives. Using industry case studies, students will engage in background research, alternative analyses comparisons, consequence evaluation, faith integration, and decision justifications. Additional topics include business and personal ethics integration, personal and business ethical leadership, biblical short/long-term consequences evaluations, profit/loss implications, and senior management implementation considerations.

BUA5720U Managerial Finance......2 cr

(PQ: C or better in FIN2221; or C or better in ACC2101, ACC2102, and ACC3201; and admission to the B.S./graduate degree program) This course is a study of the economic and financial structures of firms and their impact on the financial and operational requirements of firms. Topics include financial environment, stock and bond valuation, time value of money, capital budgeting, risk and rate of return, analysis of financial statements, project cash flows, cost of capital, financial planning, working capital policy, and managing short-term assets and liabilities.

Chemistry

Note: For all natural science courses, the student must earn a "C-" or better in all prerequisite courses.

CHE1006/1006L Concepts of Chemistry##5 cr

(PQ: One year of high school algebra or two years recommended. NOT available to students who have received a grade of C or better in any CHE course) A survey of chemistry and its applications, intended to promote understanding and literacy in the sciences in general and especially in the field of chemistry. Topics studied include the scientific method and its relationship to faith and reason; matter and energy; atomic and molecular structure; chemical bonding and intermolecular forces; chemical formulas and equations; water, acids and bases; oxidation-reduction reactions; and chemistry around the house. Students carry out the experiments at home using a small kit supplied by the campus store and readily available equipment, supplies and chemicals. This course fulfills the core curriculum Natural Science requirement within the Scientific & Quantitative Literacy section. Only offered through Dual Enrollment. Concurrent registration required in CHE1006 and CHE1006L.

CHE1021/1021L Principles of Chemistry I⁵4 cr

(PQ: One year of high school chemistry [or C- or better in CHE1006] and two years of high school algebra; course is intended for biochemistry, biology [major or minor], engineering, health sciences, kinesiology, mathematics, mathematics education and nursing majors only, or by consent of instructor) Fundamentals of measurement, the scientific method and its relationship to faith and reason, nuclear and electronic structure of the atom, chemical bonding, shapes and polarities of molecules, thermochemistry, stoichiometry and types of chemical reactions. The laboratory is integrated with the classroom sessions. Three lectures and one two-hour lab per week. Equivalent to CHE1121. A \$200 laboratory fee required. Concurrent registration required in lecture and lab. A \$75 CHE1021 course fee required.

CHE1022/1022L Principles of Chemistry II⁵......4 cr

(PQ: C- or better in CHE1021 or CHE1121) A continuation of CHE1021. Gases, liquids, solids, solutions, solubility, acid-base chemistry, equilibrium, kinetics, thermodynamics and electrochemistry. The laboratory is integrated with the classroom sessions. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab. A \$75 CHE1022 course fee required.

CHE1121/1121L General Chemistry I##........................5 cr

(PQ: One year of high school chemistry [or C- or better in CHE1006] and two years of high school algebra, or consent of instructor.) Fundamentals of measurement, the scientific method and its

relationship to faith and reason, nuclear and electronic structure of the atom, chemical bonding, thermochemistry, stoichiometry, types of chemical reactions, states of matter intermolecular forces. The hands-on exercises are integrated with the class topics. Equivalent to CHE1021. This course fulfills the core curriculum Natural Science requirement within the Scientific & Quantitative Literacy section. Only offered through Dual Enrollment. Concurrent registration required in CHE1121 and CHE1121L.

(PQ: C- or better in CHE1021) The focus of CHE3101, in one word, is structure. The structures and geometries of carbon-containing molecules, including the topics of isomerism and stereochemistry, are examined in great detail using models and spectroscopic techniques. It is the structure of molecules which enables one to understand chemical reactivity. Types of reactions and mechanisms studied include simple substitution, addition and elimination. Three lectures and one three-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

CHE3102/3102L Organic Chemistry II^s......5 cr

(PQ: C- or better in CHE3101) This course is a continuation of the fundamentals of organic chemistry theory and practice introduced in CHE3101. Topics include structure, representation, and reactivity of aromatics, Diels-Alder adducts, carbonyl derivatives, biomolecules, radicals, and others along with corresponding laboratory techniques for preparation, purification, and characterization of the aforementioned, concluding with an introduction to medicinal chemistry and the drug discovery process. Three lectures and one three-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

(PQ: completion of at least 24 credits in the biology or biochemistry major) Students work closely with research mentor to learn literature search, proposal preparation for a research project, experimental protocols, data acquisition, statistics, manuscript preparation. Students will sign a document including the University of Northwestern Policy on Original Research Data in order to register for all research courses. **Note**: This course is designated as repeatable and may be repeated for up to 8 total credits. Only 4 credits may be used toward completion of Biology Major or Biochemistry Major credits. A \$200 research fee required.

Chinese

CHN1001 Beginning Chinese I* **......4 cr

The first of a two-course sequence. An introduction to the Chinese language and culture. Practice in listening, speaking, reading and writing. Emphasis on the development of communicative skills; individual expression within structured groups. No previous study of Chinese required.

CHN1002 Beginning Chinese II* #+4 cr

(PQ: CHN1001) The second of a two-course sequence. A continuation of the study of Chinese language and culture. Practice in listening, speaking, reading and writing. Continued emphasis on the development of communicative skills; individual expression within structured groups.

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Directed studies are available. See pages 26-27.

Equivalent to COM2007. Only offered through Dual Enrollment.

COM3176 Advanced Public Speaking and Speech Writing.....4 cr (PQ: COM1075 or COM1825) Students build upon fundamental principles of effective speech preparation and delivery, applying them to professional contexts. Students learn how to write speeches for others considering the speaker's personality, style and the expectations created by the specific topic, audience, and occasion. Students view a number of great speeches of this century, critically analyzing the speeches and speakers.

(PQ: COM4308 or consent of instructor) With the goal of presenting findings at a conference or publishing in an academic journal, students work closely with a research mentor faculty member to learn literature search, proposal preparation for a research project, experimental protocols, Institutional Review Board process (as needed), data acquisition, statistics and/or manuscript preparation. Note: This course is designated as repeatable and may be repeated for up to 4 total credits.

Computer Science

This course provides the student with an introduction to computer hardware, development of computer programs for problem solving through the use of algorithms and pseudocode, data communications, fundamentals of computer security, and use of computer hardware.

COS2005 Python Programming#4 cr

This course uses a popular computer language for the development of many types of computer applications. Topics include program design, program structure, debugging programs, computer language syntax, computer commands, assignments and expressions, system inputs and outputs, variables, data types, loops and structured control. The course continues with additional topics such as object types, numerical types, strings, lists, using files, data analysis, functions, scope of variables, arguments, modules, object-oriented programming, exceptions, and developing larger applications for data analysis.

COS2015 Principles of Computing##......4 cr

This course provides the student with an introduction to computer hardware, development of computer programs for problem solving through the use of algorithms and pseudocode, data communications, fundamentals of computer security, and use of computer hardware. This course also provides the student with an introduction to data and databases, operating systems (Linux and Windows), and data analytics and data mining. Equivalent to COS1011 and COS2112. Only offered through Dual Enrollment.

COS2112 Principles of Computing II......2 cr

(PQ: COS1011) This course is a continuation of Principles of Computing I and provides the student with an introduction to data and databases, operating systems (Linux and Windows), and data analytics and data mining.

COS3001 C Programming Language 2 cr

Fundamental principles of programming in the "C" programming language for those with some programming experience. Programming techniques, language, and vocabulary. In addition, materials cover variables identification, loops, conditionals statements, data transformations, arrays, pointers, and programming functions.

COS3002 C++ Programming Language2 cr

Fundamental principles of programming in the "C++" programming language. Object-oriented programming, classes, inheritance, and polymorphism. Exploration of algorithms including searching, sorting and optimization. Exploration of libraries for desktop applications, computer graphics, and machine learning.

COS3267 Operating Systems Concepts*......4 cr

(PQ: CYS3065 or consent of instructor) This course provides the student with an overview of the principles upon which all operating systems are built. The concepts of file, processor, input/output and memory management are explored. In addition, higher-level concepts such as security, multiple processors, multitasking, concurrency and transaction processing are covered. Specific instances of popular operating systems are examined and put into context in light of the principles learned.

(PQ: COS2005) This course presents sequential, functional, and object-oriented programming using a popular computer language in the context of an open-source community. Topics include classes, objects, events, methods, properties, syntax, program structure, data types, functions, loops, and conditional statements. Investigations of applications in data analysis and artificial intelligence.

COS3272 Programming II - Mobile Application Development#..4 cr

(PQ: COS2005) This course focuses on the development of applications on mobile platforms. Emphasis is placed on the development of applications for current and emerging mobile computing devices. Students include the following factors into their development projects: platform capabilities, user characteristics and networking infrastructure. The course concludes with development of a major application for an off-campus organization.

(PQ: C- or better in CYS3065; COM1075 or COM1825; and ENG1107, ENG2205, or ENG2825) The presence of information systems has changed the manner in which business is conducted and affects the day-to-day activities of a majority of employees in the workplace. The management of those systems requires an understanding of issues that fall outside the standard realm of management. This course provides the student with an understanding of the key issues related to the management of information systems and those who design and implement them.

COS4995 Computer Science Internship......0-4 cr

(PQ: consent of faculty supervisor and internship registration form) Supervised work experience in computer science. Note: This course is designated as repeatable. See page 25 for note regarding internships.

Criminal Justice

CRJ2125 Criminology#4 cr

An examination of the extent and nature of crime in the United States. Attention is given to theories of crime causation and an analysis of the social processes leading to criminal behavior.

CRJ3225 Criminal Justice......4 cr

An examination of the philosophies, principles and social dynamics which have led to the current system of law and justice administration in the United States. Special attention is given to law enforcement, the court system, penal institutions and community corrections such as probation and parole.

CRJ3226 Corrections4 cr

(PQ: CRJ2125 or CRJ3225 [one required but both recommended]) An examination of the historical development, theories and institutions of punishment, rehabilitation and social control. Special attention is given to jails and prisons, probation and parole and institutional and community corrections in the United States.

CRJ3228 Deviance^{OCE WCE}4 cr

criminal justice system.

(PQ: CRJ2125 or CRJ3225 [one required but both recommended]; COM1075 or COM1825; and ENG1107, ENG2205, or ENG2825) An examination of the etiology of criminal behavior, with an emphasis on addictions and chemical abuse and how these relate to rehabilitation versus social control. Attention is also given to ways in which social inequality contributes to criminal behavior and its impact on the

CRJ4325 Juvenile Delinquency......2 cr

(PQ: CRJ2125 or CRJ3225 [one required but both recommended]) This course examines the extent and nature of juvenile crime in the United States. It includes an overview of the juvenile justice system, the social and institutional contributors to delinquency, the historical foundations of juvenile justice and criminal law as it applies to juveniles. Emphasis is given to crime causation, to the family and to the community in both prevention and treatment of juvenile delinguency.

(PQ: CRJ2125 or CRJ3225 [one required but both recommended]) This course addresses the historical, traditional and new order. Community policing, cultural and gender diversity, police ethics, mental illness issues and collaboration with community resources are all stressed as necessary for effective and efficient understanding of the role of law enforcement.

CRJ4425 Juvenile Procedures......2 cr

(PQ: CRJ4325) This course examines the process and the law of the juvenile justice system in the United States. It includes a brief overview of the causation theories and societal institutions that contribute to the dysfunction of the juvenile delinquent. The main focus is on the legal chronological sequencing of the process and differentiating the juvenile justice system from the adult justice system. It examines the history of juvenile law to the most recent U.S. Supreme Court Ruling on the death penalty for juveniles (March 1, 2005). This course also focuses on school violence and the rights of students. It provides an in depth study of the various phases and complex nuances of juvenile

CRJ4426 Minnesota Criminal and Traffic Code*......4 cr

(PQ: CRJ4327) This course is designed to give the student an understanding of the Minnesota Criminal and Traffic Codes. Emphasis is on the criteria established in the MNPOST learning objectives. Constitutional law, case law, state statutes and agency regulations will be integrated into lectures. Case studies, situational crises and legal situational dilemmas will be used in small group discussion and other problem solving exercises. The class is structured to help students interpret the law in both general and specific situations and to translate legal concepts into practical applications.

CRJ4435 Issues in Policing*......2 cr

(PQ: CRJ4335) This course is designed to bring a critical thinking approach to the current issues in law enforcement. Topics will be added and/or dropped at the discretion of the instructor. Because modern policing issues change rapidly and are often controversial, the focus will be on the "hot issues and trends." The class is an interactive experience with small group activities, role play, student presentations and guest speakers.

CRJ4995 Criminal Justice Internship...... 1-8 cr

(PQ: consent of faculty supervisor and internship registration form) Supervised work experience in criminal justice. Note: This course is designated as repeatable. See page 25 for note regarding internships.

Cybersecurity

CYS2081 Data Communications I*4 cr

This course provides the student with a comprehensive overview of the broad topic of data communications. The ISO OSI model for data communications is used as a framework. The ideas of LANs, WANs and the World Wide Web are discussed, as are the concepts of security, network architectures and network management and administration. Examples from modern computer networks are utilized.

CYS2269 Computer Security Fundamentals#4 cr

(PQ: CYS2081) This course covers an introduction to the concepts of security. These concepts are applied to areas such as programming, databases, networks, systems and applications. The course covers general concepts and specific instances of security related threats. In addition, compliance issues are discussed such as Sarbanes-Oxley reporting and the Health Insurance Portability and Accountability Act (HIPAA).

CYS3065 Systems Analysis and Design#......4 cr

This course presents an overview of the systems-development life cycle with emphasis on the analysis and design phases of software development. The student learns to use one of the popular analysis and design methodologies and a software tool supporting the methodology.

CYS3265 Tools and Techniques in Computer Science and Cybersecurity 54 cr

(PQ: CYS2269) This course will examine tools and techniques used in computer science for software development. The course includes an emphasis on applicability to cybersecurity. Topics include: DevOps (for example CI/CD pipelines and Jenkins), Containerization (for example Openshift, Kubernetes and Docker), and Cloud-deployment. Discussion of the use of the above methods to deploy in cloud environments, considerations unique to commercial clouds such as resiliency and scaling. We may also look at virtualization and orchestration tools (for example VMware, Chef, SaltStack, Puppet, and Ansible), and the differences between imperative and declarative approaches. The course includes a substantial lab and hands-on component, which investigates the use of course tools. A \$100 course fee required.

CYS4245 Cybersecurity: Current Practices and Trends 4 cr

(PQ: CYS2269) This course examines three broad areas related to cybersecurity: tools, trends, and risk. Exploration of tools will include current tools for: Data Loss Prevention (DLP), Proxy/Decrypt, DNS security, Web Application Firewalls (WAF), Threat Intelligence, and Sandboxing. Trends discussion will look at how enterprises are shifting their investment in security tools, from on-premises gear, towards cloud-based solutions including OpenSource, SASE (Secure Access Service Edge), CASB (Cloud Access Security Broker), and SWG (Secure Web Gateway). Exploration of risk will include tools and methods around security program management, audit, and legal issues.

CYS4369 Introduction to Cryptography......2 cr

(**PQ**: CYS2269) Introduction to Cryptography focuses on the need to provide secure communications through an insecure medium, namely the Internet. Firms and individuals now see the need for anonymity, non-repudiation, traceability, and authenticity. Each of these needs rely on security mechanisms. This course provides the learner with tools and techniques to create a foundation of secure transmissions. Different levels of security, various security objectives, and a variety of cryptographic techniques will be introduced in this course.

CYS4465 Computer Firewalls and Penetration Testing**2 cr

(PQ: CYS2269) This course presents the basics of VPN security and network firewalls. Basic installation techniques are covered along with how to make an intelligent choice of firewall technology. Basic firewall troubleshooting is also presented. This course aligns with the CheckPoint CCSA Certification outline.

CYS4466 Digital Forensics......2 cr

(PQ: CYS2269) An introductory course that provides the student with methods for conducting a computer forensics investigation including procedures, tools, ethics and analysis. This course maps to the objectives of the International Association of Computer Investigative Specialists (IACIS) certification.

(PQ: C- or better in MGT2271, CYS3065 or DAL2235; COM1075 or COM1825; and ENG1107, ENG2205, or ENG2825) The presence of information systems has changed the manner in which business is conducted and affects the day-to-day activities of a majority of employees in the workplace. The management of those systems requires an understanding of issues that fall outside the standard realm of management. This course provides the student with an understanding of the key issues related to the management of information systems and those who design and implement them.

CYS4995 Cybersecurity & Information Systems Internship . . 0-4 cr (PQ: consent of faculty supervisor and internship registration form) Supervised work experience in information systems. **Note**: See page 25 for note regarding internships.

Data Analytics

DAL2012 Introduction to Data Analysis#......2 cr

(PQ: BUS2011 or MAT2055) This course provides an introduction to simulation and optimization techniques that are foundational to data analysis and real-world decision making. Topics include time series analysis, linear and non-linear optimization, decision analysis and Monte Carlo simulation. Applications in business, sports, medical and other contexts will be included.

DAL2235 Principles of Data Analytics⁵......4 cr

(PQ: MAT2055) This course provides an introduction to the field of data analytics, and the development and use of data warehouses and data marts to support business analytics. The use of key performance indicators, dashboards and scorecards for performance management and opportunity assessment are addressed. Text and web mining are discussed, and the application of selected data mining techniques to business decision making situations is illustrated. A \$200 course fee required.

This course uses a popular data visualization system for developing data presentation skills. The material uses primarily dashboards for information monitoring, analyzes and providing a visual display of key performance indicators (KPIs). Topics include web-based data acquisition, text mining, using data dashboards, tracking important data (KPIs) for specific processes, storytelling, and using data to drive decisions.

DAL3255 Data Mining[§]......4 cr

(PQ: DAL2235) The data mining course presents methods and systems for mining varied data and discovering knowledge from data. After detailing a data mining system architecture and tasks, the course examines and compares specific methods in data mining, such as data preparation, classification, clustering, and text mining. Several applications are detailed, and tools to build new applications are provided. The task of knowledge discovery is then outlined as a higher-level goal of data mining. Familiarity with statistics, and database systems, in particular database design, is expected. A \$200 course fee required.

DAL4235 Big Data Analytics and Applications⁵.....4 cr

(PQ: DAL2235) This course is designed to expose participants to the core concepts and topics of Big Data, to teach the trends and evolution in the field, expose learners to visualization tools, and to give recommendations to software, relevant articles, and research material. A \$200 course fee required.

DAL4275 Business and Economic Forecasting[§]4 cr

(PQ: DAL2235) This course is designed to expose participants to the development and utilization of forecasts. Emphasis on statistical methods (time series, regression, Monte Carlo simulation etc.) and software applied to quantitative forecasting. Specific applications include forecasting sales, market prices, inventory, and macroeconomic factors. A \$200 course fee required.

DAL4855 Senior Capstone* OCE WCE......2 cr

(PQ: C- or better in MGT2271, CYS3065 or DAL2235; COM1075 or COM1825; and ENG1107, ENG2205, or ENG2825) The presence of information systems has changed the manner in which business is conducted and affects the day-to-day activities of a majority of employees in the workplace. The management of those systems requires an understanding of issues that fall outside the standard realm of management. This course provides the student with an understanding of the key issues related to the management of information systems and those who design and implement them.

DAL4995 Data Analytics Internship 0-4 cr

(PQ: consent of faculty supervisor, and internship registration form) Supervised work experience in data analytics. Note: This course is designated as repeatable. See page 25 for note regarding internships.

Design

DES1031 Introduction to Layout⁵2 cr

A course introducing and refining skills in design software. Practical applications are explored in the areas of page layout, design and typography. Through a series of structured projects, students gain depth in understanding and using InDesign. Emphasis is placed upon technical proficiency. A \$100 course fee required.

(PQ: DES1031 or consent of instructor) An introductory overview of the design field with an emphasis on conceptual thinking and problem solving. Students gain experience in understanding the principles, theories and skills of design. This course employs the computer as a link between design and technology. A \$100 course fee required.

DES2235 Digital Illustration⁵......2 cr

(PQ: DES1031 and DES2111, or ART1011 and ANI1005) Digital illustration focuses on the use of digital tools to produce images under the direct manipulation of the artist, usually through a pointing device such as a tablet or a mouse. It is distinguished from computergenerated art, which is produced by a computer using mathematical models created by the artist. It is also distinct from digital manipulation of photographs, in that it is an original construction "from scratch." (Photographic elements may be incorporated into such works, but they are not the primary basis or source for them.) A \$100 course fee reauired.

DES2236 Digital Imaging ⁵ 2 cr
(PQ: ART1011 or ART1035; DES1031 and DES2111) Digital imaging
focuses on the creation of digital images, typically using a camera,
scanner or other physical input device to capture from the analog
world. Course focuses on workflow, software and hardware, include
the processing, compression, storage, printing and display of such
images, A \$100 course fee required.

DES3069 Design History2 cr

This course provides a survey of the development of graphic and interface design, with particular attention focused on the relationship of design to other major art and cultural movements of the 19th through 21st centuries. These are viewed in the context of political, technological, scientific and cultural developments that occurred throughout modern history. Architecture, graphic design, industrial design, interior design, interface design, photography, painting, television, film, urban planning, web design and new technologies all affect each other in fluid and often unpredictable ways. We will observe and compare these relationships with respect to the growth of these disciplines and their roles in society and popular culture.

DES3106 Motion Design⁵......4 cr

(PQ: ANI1105 or DES2236) Course also listed as ANI3106. A course designed to explore the principles and processes of motion design through the use of digital compositing tools. Special attention is given to the design processes used to create and manipulate visual and typographic sequences. Emphasis is placed on the relationship between the production methods and software supporting traditional and digital animation pipelines. A \$100 course fee required.

DES3212 Graphic Design II^s4 cr

(PQ: DES2111, DES2235 and DES2236) An advanced course exploring new ways of combining words and images for effective communication. Students develop design solutions for specific projects by integrating images and text while exploring design history, the dynamics of typography and print production which are directly applicable to professional practice. A \$100 course fee required.

DES3215 Interactive Design⁵4 cr

(PQ: DES2235 and DES2236 or concurrently enrolled) A study of the process and principles driving web/app creation with time-based projects focusing on industry standard applications. A \$100 course fee required.

DES3271 Typography[§]2 cr

(PQ: DES2235) This course will explore both the history and contemporary practice of typography and type design from a designer's point of view. Emphasis will be placed on investigating the processes followed by noted designers in order to inform and illuminate student's personal work. A \$100 course fee required.

DES4313 Graphic Design III^{\$ OCE}.....4 cr

(**PQ**: DES3212, and DES3215 or concurrently enrolled; and COM1075 or COM1825) An advanced course designed to provide several research-based professional level projects. Emphasis is placed upon personal portfolio development, refinement and career preparation. A \$100 course fee required.

DES4845 Senior Project in Graphic Design⁵ 4 cr

(PQ: DES4313) As the second semester of a year-long capstone experience, this advanced course provides students with extended studio investigation in faculty-guided research in an area of the student's choosing. This course may be used in substitution of an internship. A \$100 course fee required.

DES4995 Graphic Design Internship......4 cr

(PQ: DES4313 and senior standing, consent of faculty supervisor, and internship registration form) A field-based learning opportunity for professional work experience outside the classroom. Students choose part- or full-time work in an area of specific interest as a link to the professional world of design. Required 160 hours. Note: See page 25 for note regarding internships.

Economics

Directed studies are available. See pages 26-27.

ECO2201 Principles of Economics I##4 cr

An introduction to macroeconomic concepts including demand, supply, full employment, money, fiscal policy and monetary policy. Economic history from Adam Smith through communism, socialism and the expansion of capitalism is also studied. The role of public policy is investigated. Equivalent to ECO2211 and ECO2212. Only offered through Dual Enrollment.

ECO2202 Principles of Economics II##......4 cr

An introduction to microeconomic concepts emphasizing marginal analysis, the role of the firm, pure competition, monopolies and the role of government. Also included are income distribution, investment, labor economics and a large section of international economics. This course will also include a section of "Personal Financial Responsibility" (PFR). Equivalent to ECO2213. Only offered through Dual Enrollment.

This is an introductory course highlighting economic thinking. This course includes learning about scarcity and tradeoffs, economization, incentives, marginal decision making, uncertainty, secondary effects, subjective value, and basic economic theory. Differentiating between positive and normative thinking is emphasized. The basic supply-demand model is introduced and evaluated. The economics of political action is also introduced. ECO2211 and ECO2212 together are equivalent to ECO2201.

ECO2212 Principles of Macroeconomics......2 cr

(PQ: ECO2211 or concurrently enrolled) This is an introductory course in Macroeconomics. This course includes learning about national income accounts, the business cycle, the aggregate supply-demand model, employment theory, economic growth, fiscal and monetary policy, money and banking, inflation and international trade. Policy issues are also discussed. ECO2211 and ECO2212 together are equivalent to ECO2201.

ECO2213 Principles of Microeconomics2 cr

(PQ: ECO2212 or concurrently enrolled) This is an introductory course in Microeconomics. This course includes learning about price and income elasticity, short run versus long run cost and revenues, economies of scale, price takers, price searchers, and profit maximization. The use of resources by households, firms, and industries is also discussed.

Education

Directed studies are available. See pages 26-27.

EDU2215 Educational Foundations......2 cr

(PQ: must be taken concurrently with EDU2215L) Study of the history, philosophy and sociology of American education; administration and organization of schools; teachers' organizations; teacher roles; rewards and frustrations of teaching; influences on instructional decisions; rights and responsibilities of students and teachers; research on teaching and resources for professional growth. Course is taught with a decision-making perspective which encourages self-reflection about the professional fit with teaching. Pre-student teaching required.

(PQ: must be taken concurrently with EDU2215) Pre-student teaching field experience consisting of 20 hours in a school classroom.

EDU3205 Instructional Technology......2 cr

(PQ: admission to a teacher education program) In this course, students will learn to use current and emerging technologies to improve personal productivity and professional practice. Students will develop knowledge and skills in applying instructional design principles to create innovative learning environments that engage and support learning; creating, adapting, and personalizing learning experiences that foster independent learning and accommodate learning differences and needs; advocating, modeling, and teaching safe, legal, and ethical use of information and technology; and seeking professional, community, and technological resources as support for continual professional growth.

EDU3209 Human Relations in a Cross-Culturally Diverse World ...2 cr

(PQ: admission to a teacher education program and must be taken concurrently with EDU3209L.) The course is structured with the assumption that pre-service teachers enter the course with a basic understanding of the concepts associated with a solid biblical worldview and prior assumptions based on personal cultural experiences. The course design supports the process of advancing the personal, professional, cultural, historical, spiritual and experiential journey of pre-service teachers as they move from cultural awareness to cultural competence. The course design further supports pre-service teachers in gaining an understanding of how faith applies to embracing cultural diversity and building an inclusive learning environment for all students. The structure of the course is to support deep personal understanding of how faith formation influences the application of best practices in the field of teaching. The goal of the course is to provide pre-service teachers with methods for approaching educational topics from a biblical worldview in ways that are culturally relevant and that contribute to self-esteem and relationship-building of all students, thereby, promoting and building positive interpersonal experiences while avoiding dehumanizing biases, discrimination, marginalization and systemic prejudices sometimes found in the American educational system. Concurrent registration with EDU3285 and EDU3285L is recommended. Prestudent teaching field experience required (20 hours classroom and 30 hours community-based).

EDU3209L Human Relations Lab................................. cr

(PQ: admission to a teacher education program or consent of the School of Education. Must be taken concurrently with EDU3209.) This lab experience consists of two field experience components that support the learning in EDU3209. Students complete a 20hour field experience in a diverse school setting. In addition, students complete a 30-hour field experience that includes direct involvement with an ethnic or cultural group other than the student's own within the continental United States. The service opportunities allow students to develop an understanding and respect for cultural differences. Concurrent registration with EDU3285 and EDU3285L is recommended.

EDU3215 Educational Psychology......2 cr

(PQ: admission to a teacher education program or consent of the School of Education, EDU2215 and PSY2108) This course is designed primarily for teacher education students to introduce them to research and theory from psychology that bears on the teaching discipline, including individual differences, intelligence, human growth and development, learning, cognition, motivation, and evaluation.

EDU3217 School Health and Drug Problems2 cr

(PQ: sophomore standing) A study of the basic principles of health with an emphasis upon safety, personal hygiene and the use and misuse of chemicals. The approach is from the standpoint of personal prevention, need and responsibility in transferring these principles and biblical values to the school and community health programs. Mandatory reporting laws related to child abuse and neglect and other health issues are addressed.

(PQ: admission to a teacher education program) This course supports the process of advancing the personal, professional, cultural, linguistic, spiritual and experiential journey of pre-service teachers as they move from linguistically proficient communicators to being able to support the development of multilingual student competencies. The course design further supports pre-service teachers in gaining an understanding of how faith applies to embracing language and building an inclusive language learning environment for all students. The structure of the course is to support deep personal understanding of how faith-based dispositions influence the application of best practices in the field of teaching. The goal of the course is to provide pre-service teachers with methods and resources for approaching educational topics with understandings of cognitive and metacognitive language required for strategic support of academic language success for all students, regardless of language proficiency level and prior academic experiences.

EDU3235 Instructional Foundations^{WCE}......3 cr

(PQ: admission to a teacher education program or consent of the School of Education; EDU2215; ENG1107, ENG2205, or ENG2825) A study of the foundations and trends in curriculum development in grades PK-12 including: organizational patterns; planning, implementing and evaluating of daily lessons and integrated units; foundations of instructional methodology; classroom management and conflict resolution; and use of technology as an instructional tool.

EDU3255 Content Area Reading2 cr

(PQ: admission to a teacher education program or consent of the School of Education) This course is designed to provide secondary education and K-12 education majors with an understanding of how to teach reading with and through content texts. The course introduces candidates to reading processes and instructional strategies that promote fluency, vocabulary development, comprehension of text and application of critical thinking skills. Candidates will apply course content by planning learning experiences that establish a purpose for reading, utilize appropriate reading strategies and extend and/or apply knowledge gained from reading.

(PQ: EDU2215 and admission to a teacher education program or consent of the School of Education. Must be taken concurrently with EDU3285L.) A foundational course for understanding the complex and diverse learning styles found within the PK-12 system of education with a focus on the PK-12 levels. Topics for the course include the nature of learning, the influence of culture on learning and teaching strategies identified as "best practices." An introduction to populations labeled at-risk, under-achiever and exceptional comprises a core segment of the course. Historical and contemporary perspectives on special populations within the PK-12 system are included, with an introduction to various types of formal and informal classroom assessments that can aid the classroom teacher in the intervention process. Ten hour field experience required.

EDU3285L Educating Diverse Learners0 cr

(PQ: Must be taken concurrently with EDU3285) This lab experience consists of 10 hours of observation and supervised assistance in a PK-12 setting that is designated to meet the needs of students receiving services under IDEA.

EDU4415 Education Ethics^{OCE}......2 cr

(PQ: admission to a teacher education program and COM1075 or COM1825) A study of legal and ethical issues confronted by teachers within public and private school settings. Emphasis is on the development of decision-making skills which are biblically based and consistent with ethical codes recognized within the profession. A case study approach is used throughout the course.

EDU4835 Seminar in Professional Issues......1 cr

(PQ: admission to student teaching. To be taken concurrently with student teaching.) A study of PK-12 teachers as professionals with an emphasis on the relationship between theory and practice. Topics include the development of effective home-school-community relationships, behavior management, conflict resolution, professional development and job search skills. Students meet weekly to discuss accomplishments, progress and challenges arising within the student teaching experience.

EDU4995 Education Internship**......1-8 cr

(PQ: admission to educational studies major and consent of the School of Education and faculty supervisor, and internship registration form) Supervised work experience in an education-related field outside of the traditional classroom. **Note**: See page 25 for note regarding internships (professional experiences).

Education - Child and Family Development

CFD3205 Child Development4 cr

An overview of the growth and development of children from birth through age twelve years. Topics covered include: current research and major theories of child development, personality and temperament. Special attention is given to physical, social, emotional, cognitive and spiritual development.

CFD3207 Adolescent Development and the Middle Level Learner. .2 cr

(PQ: sophomore standing) A study of the growth and development of adolescents (ages 11–18 years). Attention is given to physical, social, emotional, cognitive, and spiritual development. Topics covered include current issues faced by adolescents: social networks, peer relations, sexuality, identity formation, and cultural contexts. The course examines the varying models of middle level education and developmentally appropriate practice for fostering the growth and development of adolescents.

CFD3325 Learning and Development in Young Children.....2

(PQ: CFD3205 or may be taken concurrently, PSY2108, and sophomore standing. Must be taken concurrently with ECE4316, or consent of School of Education.) This course is an in-depth study of the growth and development of children 0-8 years with a focus on the following domains: physical, social and emotional, cognitive and literacy and language.

(PQ: CFD3205 or may be taken concurrently; must be enrolled in ECE 2216L or ECE 3306L. May also obtain consent from the School of Education to enroll with the expectation of independently arranging observation with young children) This course is an in-depth study of assessment practices and observation strategies for children birth thru age eight. Emphasis is on observational skills, play-based assessment, assessment tools and intervention strategies. With a focus on effective practice, students learn to conduct assessments, and select strategies to facilitate development and learning for infants, toddlers, pre-primary children, children in kindergarten and primary grades.

EDU49XX Student Teaching in Elementary Education (see specific numbers below)

(PQ: admission to student teaching; to be taken concurrently with EDU4835) Student teaching as a concentrated teaching experience in preparation for full-time employment.

Communication Arts & Literature Education (CALE)				
Course Number	Title	Credits	Major or Endorsement Field	
EDU4912I	Student Teaching in Communication Arts & Literature Education – Middle School	10	Communication Arts & Literature Major	
EDU4913I	U4913I Student Teaching in Communication Arts & Literature Education – High School		Communication Arts & Literature Major	
EDU4914I	Student Teaching in Communication Arts & Literature Education – International	4	Communication Arts & Literature Major	
EDU4914D	Student Teaching in Communication Arts & Literature Education – Dual Licensure	12	Communication Arts & Literature Major	
EDU4915E	Student Teaching in Communication Arts & Literature Education - Endorsement	5	Communication Arts & Literature Education (CALE) Endorsement for Grades 5-8	
EDU4916M	Student Teaching in Communication Arts & Literature Education - Middle School	14	Communication Arts & Literature Major	
EDU4916H	Student Teaching in Communication Arts & Literature Education - High School	14	Communication Arts & Literature Major	
EDU4916D	Student Teaching in Communication Arts & Literature Education - Dual Licensure	6	Dual Licensure ESL Education/ Communication Arts & Literature Education	

Early Childhood Education				
Course Number Title		Credits	Major or Endorsement Field	
EDU4973I	Student Teaching in Early Childhood Education	10	Early Childhood Major	
EDU4974I	Student Teaching in Early Childhood Education: International	4	Early Childhood Major	
EDU4976	Student Teaching in Early Childhood Education: Preprimary	7	Early Childhood Major	
EDU4976E	Student Teaching in Early Childhood Education: Preprimary Endorsement	5	Early Childhood Education Preprimary Endorsement	
EDU4977	Student Teaching in Early Childhood Education: Elementary K - 3	8	Early Childhood Major	

Elementary Education				
Course Number	Title	Credits	Major or Endorsement Field	
EDU4904I	Student Teaching in Elementary Education – International	4	Elementary Education Major	
EDU4904D	Student Teaching in Elementary Education – Dual Licensure	6	Elementary Education Major	
EDU4906I	Student Teaching in Elementary Education	10	Elementary Education Major	
EDU4906	Student Teaching in Elementary Education	14	Elementary Education Major with Emphasis	
EDU4907	Student Teaching in Kindergarten Education	5-7	Kindergarten Education Post-Baccalaureate Licensure - Only	
EDU4908	Student Teaching in Elementary Education	12	Elementary Education Major with Endorsement	
EDU4908D	Student Teaching in Elementary Education – Dual Licensure	12	Dual Licensure Programs Elementary/Spanish Education Elementary/ESL Education	

English as a Second Language Education				
Course Number	Title	Major or Endorsement Field		
EDU4917	Student Teaching in ESL - Elementary	7	English as a Second Language Major	
EDU4917D	Student Teaching in ESL – Dual Licensure	12	Dual Licensure ESL/Communication Arts & Literature Education ESL/Spanish Education	
EDU4918	Student Teaching in ESL – Secondary	7	English as a Second Language Major	
EDU4918D	Student Teaching in ESL – Dual Licensure	6	Dual Licensure Elementary/ESL Education	
EDU4919I	Student Teaching in ESL Education	10	English as a Second Language Major	
EDU4920I	Student Teaching in ESL Education – International	4	English as a Second Language Major	

Mathematics Education				
Course Number	Title	Credits	Major or Endorsement Field	
EDU4922I	Student Teaching in Mathematics Education – Middle School	10	Mathematics Education Major	
EDU4923I	Student Teaching in Mathematics Education – High School	10	Mathematics Education Major	
EDU4924I	Student Teaching in Mathematics Education – International	4	Mathematics Education Major	
EDU4925E	Student Teaching in Mathematics Education – Endorsement	5	Mathematics Education Endorsement for Grades 5–8	
EDU4926M	Student Teaching in Mathematics Education - Middle School	14	Mathematics Education Major	
EDU4926H	Student Teaching in Mathematics Education – High School	14	Mathematics Education Major	

Music Education				
Course Number	Title	Credits	Major or Endorsement Field	
EDU4932I	Student Teaching in Music Education - Vocal & Classroom	10	Music Education Major	
EDU4933I	Student Teaching in Music Education – Instrumental & Classroom	10	Music Education Major	
EDU4934I	Student Teaching in Music Education – International	4	Music Education Major	
EDU4935	Student Teaching in Music Education – Elementary – Vocal & Classroom	7	Music Education Major - Vocal & Classroom	
EDU4936	Student Teaching in Music Education – Secondary – Vocal & Classroom	7	Music Education Major - Vocal & Classroom	
EDU4937	Student Teaching in Music Education – Elementary – Instrumental & Classroom	7	Music Education Major - Instrumental & Classroom	
EDU4938	Student Teaching in Music Education – Secondary – Instrumental & Classroom	7	Music Education Major - Instrumental & Classroom	

Physical Education & Health Education				
Course Number	Title	Credits	Major or Endorsement Field	
EDU4943I	Student Teaching in Physical Education & Health Education	13	Physical Education & Health Major	
EDU4944I	Student Teaching in Physical Education & Health Education – International	4	Physical Education & Health Major	
EDU4945	Student Teaching in Physical Education – Elementary	7	Physical Education & Health Major	
EDU4946	Student Teaching in Physical Education – Secondary	5	Physical Education & Health Major	
EDU4946	Student Teaching in Secondary Health Education	5	Physical Education & Health Major	

Social Studies Education				
Course Number	Title	Credits	Major or Endorsement Field	
EDU4952I	Student Teaching in Social Studies Education - Middle School	10	Social Studies Education Major	
EDU4953I	Student Teaching in Social Studies Education - High School	10	Social Studies Education Major	
EDU4954I	Student Teaching in Social Studies Education – International	4	Social Studies Education Major	
EDU4955E	Student Teaching in Social Studies Education – Endorsement	5	Social Studies Education Endorsement for Grades 5-8	
EDU4956M	Student Teaching in Social Studies Education - Middle School	14	Social Studies Education Major	
EDU4956H	Student Teaching in Social Studies Education - High School	14	Social Studies Education Major	

Visual Arts Education				
Course Number	Title	Credits	Major or Endorsement Field	
EDU4963I	Student Teaching in Visual Arts Education	10	Visual Arts Education Major	
EDU4964I	Student Teaching in Visual Arts Education – International	4	Visual Arts Education Major	
EDU4965	Student Teaching in Visual Arts Education Elementary	7	Visual Arts Education Major	
EDU4966	Student Teaching in Visual Arts Education Secondary	7	Visual Arts Education Major	

World Languages & Cultures				
Course Number Title		Credits	Major or Endorsement Field	
EDU4983I	Student Teaching in World Languages & Cultures: Spanish Education	10	Spanish Education Major	
EDU4984I	Student Teaching in World Languages & Cultures: Spanish Education – International	4	Spanish Education Major	
EDU4984D	Student Teaching in World Languages & Cultures: Spanish Education – Dual Licensure	12	Spanish Education Major	
EDU4986	Student Teaching in World Languages and Cultures: Spanish Education – Elementary	7	Spanish Education Major	
EDU4987	Student Teaching in World Languages and Cultures: Spanish Education – Secondary	7	Spanish Education Major	
EDU4987D	Student Teaching in World Languages and Cultures: Spanish Education Secondary – Dual Licensure	6	Dual Licensure ESL/Spanish Education Elementary/Spanish Education	

Education - Communication Arts/Literature

Note: PQ for the following upper-level (3000-4999) education courses include admission to a teacher education program.

communication arts/literature education [grades 5–12] teacher education program. Must be taken concurrently with EDE4366 or EDE4367.) Observation and teaching in a grade 5–8 language arts classroom.

(**PQ**: EDU3235, COM1075 or COM1825 and admission to communication arts/literature education [grades 5–12] teacher education program. Must be taken concurrently with EDE4366 or EDE4367.) Observation and teaching in a grade 9–12 language arts classroom.

EDE4356 Teaching Language and Communication in Grades 5-8... 2 cr (PQ: EDU3235, COM1075 or COM1825 and admission to the communication arts/literature [grades 5-8] endorsement program.

Must be taken concurrently with EDE4356E.) A study of the purposes, methods, instructional materials and evaluation techniques for teaching middle school communication and language usage. Prestudent teaching required.

EDE4356E Teaching Language and Communication Grades 5–8 Lab..0 cr (**PQ**: EDU3235; COM1075 or COM1825; and admission to communication arts/literature [grades 5–8] endorsement teacher education program. Must be taken concurrently with EDE4356.) Observation and teaching in a middle school languages arts classroom.

EDE4366 Teaching Language and Communication in Grades 5–12^{oce}. **4 cr** (**PQ**: EDU3235; COM1075 or COM1825; and admission to the communication arts/literature [grades 5–12] teacher education program. Must be taken concurrently with EDE4100M or EDE4200H.) A study of the purposes, methods, instructional materials and evaluation techniques for teaching communication and language usage in grades 5–12. Pre-student teaching required.

EDE4367 Teaching Secondary Reading and Literature Methods^{oce} . . . 4 cr (PQ: EDU3235; COM1075 or COM1825; and admission to the communication arts/literature [grades 5–12] teacher education program. Must be taken concurrently with EDE4100M or EDE4200H.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of secondary reading and literature. The course provides theory, modeling and application of instructional strategies for enhancing students' ability to read various texts and for analyzing literature within middle school and high school classrooms. Pre-student teaching required.

Education - Early Childhood

Note: PQ for the following upper-level (3000–4999) Education courses include admission to a teacher education program. Students enrolling in Early Childhood Education courses requiring field experiences must have clearence from the Minnesota State Department of Human Services Background Study.

ECE2216L Foundations of Early Childhood Education Lab 0 cr (PQ: must be taken concurrently with ECE2216) Observation in an early childhood setting for a minimum of 20 hours.

Observation and teaching in infant classroom.

including the interrelatedness of learning environments, materials and

ECE4835 Early Childhood Seminar I 0-1 cr

(PQ: admission to the early childhood education teacher education program and concurrently enrolled in ECE4316 or ECE3306) This course is an opportunity to relate theory to practice; deal with issues arising from field placement experiences, discuss topics applicable to all curricular areas, discuss professionalism in the field of early childhood education, work on professional portfolio development, discuss issues and current trends in early childhood education and prepare for the Teacher Performance Assessment Early Childhood Education. To be taken concurrently with the enrollment in early childhood core courses and field experiences.

ECE4836 Early Childhood Seminar II......0-1 cr (PQ: admission to the early childhood education teacher education program and concurrently enrolled in ECE4316 or ECE3306) This course is an opportunity to relate theory to practice; deal with issues arising from field placement experiences, discuss topics applicable to all curricular areas, discuss professionalism in the field of early childhood education, work on professional portfolio development, discuss issues and current trends in early childhood education and prepare for the Teacher Performance Assessment Early Childhood Education. To be taken concurrently with the enrollment in early

childhood core courses and field experiences.

Education - Elementary

Note: (PQ for the following upper-level (3000-4999) Education courses include admission to a teacher education program.

EEL4317 Mathematics Methods and Strategies (K-3).....2 cr (PQ: Admission to the early childhood education teacher education program; or consent of the School of Education, PSY2108 and EDU3235. Minimum grade of C in MAT1006. Must be taken concurrently with EEL4318, EEL4319, EEL4835 and EEL4837L.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of mathematics at the K-3 level. The course provides theory, modeling and application of instructional strategies for developing mathematical literacy using developmentally appropriate practice with children in grades K-3. The development of instructional skills to support mathematical reasoning, communication and problem solving across the curriculum is emphasized. Pre-student teaching required.

EEL4318 Science and Social Studies Methods and Strategies (K-3). .2 cr (PQ: Admission to the early childhood education teacher education program; or consent of the School of Education, PSY2108 and EDU3235. Must be taken concurrently with EEL4317, EEL4319, EEL4835 and EEL4837L.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of physical, life and environmental sciences and social sciences using developmentally appropriate practices with children in grades K-3. Pre-student teaching is required.

EEL4319 Physical Education and Health Methods and

(PQ: Admission to the early childhood education teacher education program; or consent of the School of Education, PSY2108 and EDU3235. Must be taken concurrently with EEL4317, EEL4318 and EEL4835 and EEL4837L.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of physical education and health using developmentally appropriate practices with children in grades K-3. Pre-student teaching required.

EEL4327 Kindergarten Methods and the Primary Learner 2 cr (PQ: Admission to the early childhood or elementary education teacher education program; or consent of the School of Education, PSY2108, EDU3235. Must be concurrently enrolled in EEL4327L and Elementary Methods Block.) A study of developmentally appropriate practice for nurturing the growth and development of children ages five through nine years including the interrelatedness of learning environments, classroom community, classroom structure, familyschool partnerships and assessment. Strategies for the instruction of different curricular areas are included. Attention is given to the physical, social, emotional, cognitive and spiritual development of children. Field experience in conducting observations and making assessments of children ages five through nine years is an integral part of the course. Pre-student teaching is required.

EEL4327L Kindergarten Methods and the Primary Learner Lab ...0 cr (PQ: Admission to the early childhood or elementary education teacher education program; or consent of the School of Education, PSY2108, EDU3235. Must be concurrently enrolled in EEL4327.) Observation and teaching in a kindergarten classroom required.

EEL4335 Mathematics Methods for Elementary Teachers K-6....3 cr (PQ: PSY2108, EDU3235; admission to a teacher education program; and a minimum grade of C in MAT1006. Must be taken concurrently with EEL4336, EEL4337, EEL4338 and EEL4835/4835L or EEL4836/4836L.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of elementary mathematics. The course provides theory, modeling and application of instructional strategies for developing mathematical literacy with elementary learners. The development of instructional skills to support mathematical reasoning, communication and problem solving across the mathematics curriculum is emphasized. Pre-student teaching required.

EEL4336 Physical Education and Health Methods for Elementary Teachers K-6......2 cr

(PQ: PSY2108; EDU3235; and admission to the elementary education teacher education program. Must be taken concurrently with EEL4335, EEL4337, EEL4338 and EEL4835/4835L or EEL4836/4836L.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of elementary physical education and health in grades K-6. The course provides theory, modeling and application of instructional strategies to support the healthful living and physical development of elementary students. Content related to basic movement education, games, rhythms, sport skills and decision-making for health are included. Pre-student teaching required.

EEL4337 Social Studies Methods for Elementary Teachers K-6....2 cr (PQ: PSY2108; EDU3235; and admission to a teacher education program. Must be taken concurrently with EEL4335, EEL4336, EEL4338 and EEL4835/4835L or EEL4836/4836L.) Study of the purposes, methods, instructional materials and evaluation techniques in the teaching of social studies in the elementary school. The course provides theory, modeling and application of instructional strategies to support social studies teaching and learning at the elementary level. The course emphasizes the process skills of gathering, organizing, reporting and interpreting social studies data. Pre-student teaching required.

EEL4338 Science Methods for Elementary Teachers K-6......3 cr (PQ: PSY2108; EDU3235; and admission to the elementary education teacher education program. Must be taken concurrently with EEL4335, EEL4336, EEL4337 and EEL4835/4835L or EEL4836/4836L.) Study of purposes, methods, instructional materials and evaluation techniques in teaching physical, life and environmental sciences at the elementary level. Emphasis on process skills. Pre-student teaching required.

EEL4345 Language Arts Content and Teaching Strategies K-6 ...4 cr (PQ: PSY2108; EDU3235; and admission to the elementary education teacher education program. Must be taken concurrently with EEL4346, EEL4347, and EEL4835/4835L or EEL4836/4836L.) A course designed to help students understand how and why the elementary language arts (listening, speaking, reading, writing, thinking, acting, etc.) should be naturally integrated into all aspects of the school curriculum. The focus is on language as a tool for communicating, for sharing, for exploring knowledge and ideas and for self-expression. The course is structured to demonstrate the purposes, methods, instructional resources and evaluation strategies for teaching the language arts in the elementary classroom. Prestudent teaching required.

 good quality literature throughout the elementary curriculum and criteria for the selection of literature for the classroom are included. Emphasis is placed on encouraging students to appreciate literature and the contributions it can make to the culture. Pre-student teaching required.

EEL4837L Elementary Methods Lab for ECE.................0 cr Observation and teaching in a primary (Grades K-3) classroom. **Note:** This course is designated as repeatable and may be repeated one time after the original taking of the course.

Education - English as a Second Language (ESL)

Note: PQ for the following upper-level (3000-4999) Education courses include admission to a teacher education program.

EDL4326 Curriculum and Assessment for Language Learning 2 cr (PQ: ENG3125, LIN2226 and admission to the ESL or Spanish teacher education program. Must be taken concurrently with EDL4461, EDL4461L, EDL4462 and EDL4462L or WLE4415/L, or WLE4416, or WLE4417/L.) Study and practice of language curriculum development. Study and practice of formal and informal second language assessment techniques to determine appropriate placement and to evaluate the progress of ESL students in K-12 school settings.

school math classroom.

Education - Mathematics

Note: PQ for the following upper-level (3000-4999) Education courses include admission to a teacher education program.

MAE4100M Math Methods Lab II (Grades 5-12) - Middle School . . 0 cr (PQ: admission to the mathematics education [grades 5-12] teacher education program or consent of the School of Education. Must be taken concurrently with MAE4467) Observation and teaching in a middle school math classroom.

MAE4200H Math Methods Lab II (Grades 5-12) - High School . . 0 cr (PQ: admission to the mathematics education [grades 5–12] teacher education program or consent of the School of Education. Must be taken concurrently with MAE4467) Observation and teaching in a high school math classroom.

MAE4456 Methods of Teaching Mathematics in the

Middle School (Grades 5-8)......2 cr (PQ: EDU3235, MAT3255, and admission to the elementary or mathematics education teacher education program. Must be taken concurrently with MAE4456E, MAE4100M or MAE4200H.) A study of the principles, methods, instructional materials and assessment techniques in the teaching of middle school mathematics. The course provides theory, modeling and application in instructional strategies for developing mathematical literacy with middle school learners. An introduction to mathematics resources, including technology appropriate for grades 5-8, is included. Pre-student teaching required.

(PQ: admission to the mathematics teacher education endorsement program or consent of the School of Education. Must be taken concurrently with MAE4456) Observation and teaching in a middle

MAE4467 Methods of Teaching Mathematics in the High School (Grades 9-12)......2 cr

(PQ: EDU3235, MAT3265, and admission to the mathematics education teacher education program. Must be taken concurrently with MAE4100M or MAE4200H.) A study of the principles, methods, instructional materials and assessment techniques in the teaching of high school mathematics. The course provides theory, modeling and application of instructional strategies for developing mathematical literacy with learners in grades 9–12. An introduction to mathematics resources, including technology appropriate for grades 9-12, is included. Pre-student teaching required.

Education - Music

Note: PQ for the following upper-level (3000-4999) Education courses include admission to a teacher education program.

MUE3601I Music Education Field Experience - Elementary Instrumental......0 cr

(PQ: admission to the music teacher education program and completion of or concurrently enrolled in MUE4355 or permission of the School of Education) Supervised school-based field experience in preparation for student teaching.

MUE3601V Music Education Field Experience - Elementary Vocal . . 0 cr (PQ: admission to the music teacher education program and completion of or concurrently enrolled in MUE4355 or permission of the School of Education) Supervised school-based field experience in preparation for student teaching.

MUE3602I Music Education Field Experience - Secondary Instrumental......0 cr (PQ: admission to the music teacher education program and completion of or concurrently enrolled in MUE4385, or permission of the School of Education) Supervised school-based field experience in preparation for student teaching.

MUE3602V Music Education Field Experience - Secondary Vocal .. 0 cr (PQ: admission to the music teacher education program and completion of or concurrently enrolled in MUE4385, or permission of the School of Education) Supervised school-based field experience in preparation for student teaching.

MUE4345 Music Methods for Elementary Teachers (Grades K-6)...2 cr (PQ: MUH3105 and EDU3235 and admission to the elementary education teacher education program. Must be taken concurrently with EEL4345, EEL4346, EEL4347, EAR4345 and EEL4835/4835L or EEL4836/4836L.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of elementary music. The course is designed to provide basic skills for teaching classroom music. Instructional methods for teaching individuals and classes are included, as well as skills and strategies for listening, singing and participation in rhythmic movement. Emphasis is placed on how to play and utilize classroom instruments. Pre-student teaching required.

MUE4355 Elementary and Middle School Music Methods (Grades K-8)*4 cr

(PQ: admission to the music education program and concurrent registration in MUE3601) A practical exposure to elementary and junior high/middle school music through study, observation and participation. Students become involved as aides and instructors in the classroom. Emphasis is placed on the application of these teaching skills to vocal and general music teaching situations. Prestudent teaching required.

MUE4375 Woodwind Methods* 1 cr

(PQ: admission to the music education program or consent of instructor) A course designed to assist the student in the development of pedagogical skills and proficiency on woodwind instruments. Application of foundational principles to teaching materials and performance situations is included. Meets two hours per week.

MUE4376 Brass Methods*1 cr

(PQ: admission to the music education program or consent of instructor) A course designed to assist the student in the development of pedagogical skills and proficiency on brass instruments. Application of foundational principles to teaching materials and performance situations is included. Meets two hours per week.

MUE4377 Percussion Methods*1 cr

(PQ: admission to the music education program or consent of instructor) A course designed to assist the student in the development of pedagogical skills and proficiency on percussion instruments. Application of foundational principles to teaching materials and performance situations is included. Meets two hours per week.

MUE4378 String Methods*.....1 cr

(PQ: admission to the music education program or consent of instructor) A course designed to assist the student in the development of pedagogical skills and proficiency on stringed instruments. Application of foundational principles to teaching materials and performance situations is included. Meets two hours per week.

(PQ: MUS3277; admission to the music education program; concurrent registration in MUS3602I or MUE3602V.) A course designed to acquaint students with the role of ensemble leadership in secondary education and to provide a foundation for teaching

secondary music ensembles. This course provides a study of essential musical and extra-musical aspects of administering the secondary ensemble music program. Methods and repertoire for secondary music ensembles are included.

Education - Physical

Note: PQ for the following upper-level (3000-4999) Education courses include admission to a teacher education program.

EPH4345 Methods of Teaching Elementary Physical Education . . 2 cr (**PQ**: EDU3235 and admission to the physical education teacher education program. Must be taken concurrently with EPH4345L.) A course designed to cover the organization, content and teaching techniques of physical education programs in the elementary school. Pre-student teaching required.

EPH4345L Methods of Elementary Physical Education Lab.....0 cr (PQ: EDU3235 and admission to the physical education teacher education program. Must be taken concurrently with EPH4345.) Observation and teaching in an elementary physical education classroom.

EPH4365 Methods of Teaching Secondary Physical Education . . 2 cr (**PQ**: EDU3235 and admission to the physical education teacher education program. Must be taken concurrently with EPH4365L.) A course designed to cover advanced teaching techniques of physical education at the secondary (6–12) school level. Includes methods of presentation and state curriculum requirements for secondary physical education. Pre-student teaching required.

EPH4365L Methods of Secondary Physical Education Lab.....0 cr (PQ: EDU3235 and admission to the physical education teacher education program. Must be taken concurrently with EPH4365.) Observation and teaching in a secondary physical education classroom.

Education - Social Studies

Note: PQ for the following upper-level (3000-4999) Education courses include admission to a teacher education program.

SSE4100M Methods of Teaching Social Studies II Lab - Middle School. .0 cr (PQ: EDU3235 and admission to the social studies education [grades 5–12] teacher education program or consent of the School of Education. Must be taken concurrently with SSE4458) Observation and teaching in a middle school social studies classroom.

SSE4200H Methods of Teaching Social Studies II Lab - High School .0 cr (PQ: EDU3235 and admission to the social studies education [grades 5–12] teacher education program or consent of the School of Education. Must be taken concurrently with SSE4468) Observation and teaching in a high school social studies classroom.

SSE4458 Methods of Teaching Social Studies I (Grades 5-8) 4 cr (PQ: EDU3235 and admission to the elementary education or social studies teacher education program. Must be taken concurrently with SSE4100M or SSE4458E.) A study of the purposes and practices of middle school social studies with an emphasis on adapting curriculum to the specific needs of middle school learners. The course investigates the following topics: the ten themes of social studies and how to incorporate them into instruction; instructional planning and assessment; the theory and practice of classroom management; instructional techniques within the social studies including constructivist theory, questioning, effective reading skills, leading discussions, inquiry, teaching to a diverse group of learners and cooperative learning; learning styles; creating portfolios; and self-reflection as a means of improving pedagogy. The course also explores the social science disciplines and the content and curriculum pertinent to middle school classrooms. Pre-student teaching required.

SSE4458E Methods of Teaching Social Studies I Lab–Endorsement . . 0 cr (PQ: EDU3235 and admission to the social studies teacher education endorsement program or consent of the School of Education. Must be taken concurrently with SSE4458) Observation and teaching in a middle school social studies classroom.

SSE4468 Methods of Teaching Social Studies II (Grades 9-12)...4 cr (PQ: EDU3235 and admission to the social studies education [grades 5-12] teacher education program. Must be taken concurrently with SSE4200H.) A study of the purposes and practices of high school social studies with an emphasis on adapting curriculum to the specific needs of high school learners. The course investigates the following topics: content and curricula of high school social studies areas; the integration of social studies with other subjects; current issues and

research in the social studies; the use of technology in the classroom; development of teaching effective reading skills in high school social studies; classroom management; current trends in brain research and the implications for pedagogy; instructional planning; instructing students with special needs; multiple intelligences; leading class and small group discussions; instructional techniques like role playing and simulations; becoming a reflective teacher; and creating portfolio entries. Pre-student teaching required.

Education - Special

Note: PQ for the following upper-level (3000-4999) Education courses include admission to a teacher education program.

SPD2215 Introduction to Special Education......2 cr (PQ: concurrently enrolled in SPD2215L.) An overview of the history of special education in America with a focus on how special education is supported by federal, state and local governance. An in-depth look will be given to the cascade of PK-12 educational programs designed to meet the needs of students labeled with special needs. The need for support services within the educational system will be reviewed in relationship to how such services impact the total educational programming for students, families, schools and society. A ten hour field observation placement in special education is required.

SPD2215L Introduction to Special Education Lab...... 0 cr (PQ: concurrently enrolled in SPD2215.) Pre-student teaching field experience consisting of 10 hours in a special education classroom.

SPD3215 Children and Families with Special Needs*4 cr A foundational course for understanding collaborative strategies that teachers can use to support the educational needs of students and families involved with special education services provided under the guidelines of IDEA. Emphasis is on learning how to identify and access multiple levels of resources (family, school and community) in order to facilitate the educational process in a manner that will benefit the student labeled with special needs.

SPD3218 Special Education: Due Process, Trends and Problems*..2 cr An examination of the legal responsibilities of schools as prescribed by federal and state mandates. Specific issues related to due process for special education under IDEA are addressed. A review of current best practices and policies that impact due process through the use of case studies is presented and students work directly with the IEP process.

SPD4315 Measurement and Assessment in Special Education* . . 4 cr A survey of basic concepts and principles of measurement in special education, including factors influencing validity and reliability. Studentsbecome acquainted with the administration and interpretation of educational tests used in the special education field.

SPD4415 Behavioral Analysis: Classroom Methods/Interventions for Students Labeled EBD and LD6 cr (PQ: admission to a teacher education program or consent of the School of Education; SPD2215/2215L, SPD3218, SPD4315, concurrent registration in SPD4415L) Multi-frameworks for classroom interventions are used as the foundation for the course. Learners interact with specific models that address classroom interventions specific to meeting the needs of populations receiving support services under the labels of SLD and EBD. Hands-on application will be used to help learners use the interventions effectively. Concurrent registration in SPD4415L is required.

SPD4415L Special Education Field Experience cr (PQ: admission to a teacher education program or consent of the School of Education; SPD2215/2215L, SPD3218, SPD4315 and concurrent registration in SPD4415) Students participate in a twenty hour field experience focused on working with students receiving special education services in the areas of EBD and SLD.

Education - Visual Arts

Note: PQ for the following upper-level (3000-4999) Education courses include admission to a teacher education program.

(PQ: ART1005 or ART1825, EDU3235 and admission to the elementary or visual arts education teacher education program. Elementary education majors must be concurrently enrolled in EEL4345, EEL4346, EEL4347, MUE4345 and EEL4835/4835L or EEL4836/4836L. Visual Arts majors must be concurrently enrolled in EAR4345L.) A basic course in art education with emphasis on a comprehensive approach to practices and appreciation of art experiences for elementary school children. Pre-student teaching required.

EAR4345L Art Methods for Elementary Teachers Lab0 cr (PQ: ART1005 or ART1825, EDU3235 and admission to visual arts education teacher education program. Must be taken concurrently with EAR4345.) Observation and teaching in an elementary visual arts classroom.

EAR4465 Art Methods for Secondary Art Teachers2 cr (PQ: senior status, EAR4345/4345L and admission to the visual arts education teacher education program. Must be taken concurrently with EAR4465L.) An advanced course in theories and practice for art instruction with emphasis on curriculum development for middle school and high school art students. The course underscores the inclusion of 3-D Fiber arts through the study of fibers/yarns, surface design and structural design within the secondary art curriculum. Prestudent teaching required.

EAR4465L Art Methods for Secondary Art Teachers Lab......0 cr (PQ: senior status, EAR4345/4345L and admission to the visual arts education teacher education program. Must be taken concurrently with EAR4465.) Observation and teaching in a secondary visual arts classroom.

Education - World Language

WLE4415 Methods and Materials for Language Teaching4 cr (PQ: LIN2226 or 2227, SPA3201, 3202, senior standing and admission to the Spanish education program. Must be taken concurrently with WLE4415L. Spanish Education majors must also be concurrently enrolled in WLE4417L.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of world languages. The course provides theory, modeling and application of instructional strategies for developing language skills

WLE4416 Methods and Materials for ESL/World Language1 cr (PQ: senior standing and admission to teacher education programs in ESL Education and World Language Education. Must be taken concurrently with EDL4461, EDL4461L and EDL4462.) A study of the purposes, methods, instructional materials and evaluation techniques in the teaching of world languages that is designed for the teacher candidate completing dual licensure preparation in ESL and world language teaching. the course provides theory, modeling and application of instructional strategies specific to the world language.

Engineering

EGR2107 Introduction to Electronics and Electrical Circuits⁵ ...3 cr (PQ: C- or better in PHY1202 and successfully passed or concurrently enrolled in EGR2108) Introduction to modeling, analysis, and design of linear circuits using lumped models for various sources and passive elements. Topics include the application of Ohm's and Kirchhoff's laws, transient and steady state analyses of reactive circuits, and use of ideal diode, BJT, FET, and operational amplifier models in the design of practical applications. A \$200 course fee required.

EGR2108 Electronics and Electrical Circuits Laboratory⁵2 cr (PQ: C- or better in PHY1202 and successfully passed or concurrently enrolled in EGR2107) Laboratory experiences spanning the use of standard electrical test and measurement equipment in the design of various first and second order linear circuits. Student team members support one another on documentation of findings. A \$200 course fee required.

EGR3236 Digital Electronics Laboratory ⁵
(PQ: MAT3226) The fundamentals of digital systems are introduced
and applied in a laboratory setting. Topics include the use of a hardware
descriptive language for the design of combinational and sequential
logic circuits. Various programmable devices, including programmable
logic devices (PLD), field-programmable gate arrays (FGPA), and
microcontroller implementations are investigated. Learned skills
culminate in a design project. A \$200 course fee required.

EGR3237 Electromagnetic Fields and Waves Laboratory⁵ 2 cr (PQ: EGR2107) Properties of transmission lines, electrostatics, magnetostatics, and electromagnetic waves in unbounded space are modelled by Maxell's equations and illustrated in a laboratory setting. Topics include wave guides, cavities, radiation theory, and antennas. A \$200 course fee required.

(PQ: EGR2105) Topics include design loads per structural and building codes; Support reactions; Structural stability and determinacy; Determinate structure including trusses, beam and frame, cable and arch; Deflections of beams and frames; Work-Energy Methods for deflection calculation: indeterminate structures: Force Method. Displacement Method, and Moment Distribution Method. A \$200 course fee required.

EGR3246 Materials Laboratory for Civil Engineering⁵ 2 cr (PQ: EGR2205) Behavior mechanisms for materials such as concrete, metals, plastics, wood and asphalt. Specification standards for material properties. Testing techniques for materials. A \$200 course fee required.

EGR3326 Materials Laboratory for Mechanical Engineering⁵....2 cr (PQ: EGR2205) Testing of mechanical properties of engineering materials (modulus of elasticity, tensile strength, strength in compression, impact strength, creep, necking, fracture). A \$200 course fee required.

(PQ: EGR3225 and MAT3335) Fundamental principles of steady and unsteady heat transfer by conduction, radiation and convection are examined. Concepts of mass transfer are introduced. Contains design of fins, phase change heat transfer and heat exchanger design. Finite difference techniques are developed and examined. A \$200 course fee required.

EGR3328 Thermal-Fluids Laboratory^s2 cr

(PQ: EGR3225, and EGR3327 or concurrently enrolled) Experimental methods in fluids; boundary layer flows; radiative and convective heat transfer experiments; compressible flows. A \$200 course fee required.

EGR3335 Microcontrollers^{\$}......2 cr

(PQ: EGR3236) Microcontroller organization, opcodes, assembly language programming, logic operations, and bit manipulation with C language equivalency are introduced in a laboratory setting. Peripheral interface, PWM output, and interrupt programming are implemented for typical solutions. A \$200 course fee is required.

EGR3337 Signals and Systems[§]......3 cr

(PQ: MAT3335) An introduction to time and frequency domain representation of fundamental, continuous and discrete time signals and systems. Topics include fundamental signals and operations, system properties, and representation of linear time-invariant systems with application of appropriate Fourier and Laplace analysis, MATLAB is used to simulate, implement, and analyze the effects of various FIR and IIR filters. A \$200 course fee required.

EGR3338 Communications Systems Laboratory^s2 cr (PQ: EGR2108) The fundamentals of analog and digital communication systems are introduced in a laboratory setting. Various modulation

and demodulation methods are explored by practically transmitting and receiving signals, respectively. Signal to noise ratio, quantization error, and other parameters are evaluated in order to discuss system performance. A \$200 course fee required.

(PQ: EGR3246) Concepts include geological origin of soil; Grain size of soil; Weight-volume relationships; Plasticity and structure of soil; Classification of soils; Soil compaction; Permeability and Seepage; Stresses in soil; Compressibility of soil; Shear strength of soil; Lateral earth pressure; Slope stability; Bearing capacity of soil; Shallow foundations; Subsoil exploration. A \$200 course fee required.

EGR3348 Soils Testing Laboratory⁵......2 cr

(PQ: EGR3246, and EGR3347 or concurrently enrolled) Students investigate testing techniques for geotechnical engineering materials which includes specification standards for soils testing, behavior mechanisms for soils, and determination of moisture content, specific gravity, and Atterberg limits of soils. Sieve analysis, hydrometer analysis, soil classification, proctor compaction test, permeability of soils, shear strength of soil, consolidation testing of soil, and triaxial testing of soil are also explored. A \$200 course fee required.

(PQ: EGR3335) The specification, design, development, simulation, and testing of real-time, embedded microcontroller systems are discussed and practically implemented. Various architectures, realtime programming, and interface of common peripheral devices are introduced and used in applications. A programmable logic controller (PLC) device is introduced and used in typical industrial applications. A \$200 course fee required.

(PQ: EGR2107) The fundamentals of transformers and rotating machines are analyzed with typical industrial applications. Power system generation, transmission, and distribution are modeled using equivalent three-phase and single-phase circuits in order to assess stability and dynamic performance. Power flow is simulated with consideration of faults and protection. A \$200 course fee required.

(PQ: EGR2105) Properties of concrete-making materials; Proportioning of concrete mixtures; Design loads; Behavior of plain and reinforced concrete subjected to flexural and compressive stresses: Strength reduction factor for concrete structures: Failure theories, nominal and design strength of plain and reinforced concrete structural components; Bond, development lengths and splices; Design of beams, slabs, columns and continuous components of reinforced concrete; Design of reinforced concrete structures including footings, retaining walls and shear walls; Design for shear, torsion and serviceability of reinforced concrete. A \$200 course fee required.

(PQ: MAT2122) Introduction to the profession of transportation engineering; transportation systems and organizations; principles of traffic operations including characteristics of drivers, pedestrians, vehicles and roads, highway safety, theories of traffic flow, intersection design and control, and highway capacity and intersection capacity; process of transportation planning including forecasting travel demand and evaluation of transportation alternatives; design of highway infrastructure including geometrical design of highway facilities and design of highway drainage; pavement materials and pavement design including soil engineering, bituminous materials, and design of flexible and rigid pavements; pavement management. A \$200 course fee required.

EGR4295 Professional Engineering Practice^{\$}......2 cr

(PQ: minimum of 34 EGR-prefix credits or consent of instructor.) The practice and responsibilities of a professional engineer are presented and discussed in various ethical, legal, and business contexts. The process and maintenance requirements for state licensure and membership in the National Society of Professional Engineers are reviewed. Preparation for the Fundamentals of Engineering exam is implemented in order to initiate the licensure process. A \$200 course fee required.

(PQ: ENG1107, ENG2205, or ENG2825, and 34 credits from EGR-prefix courses; COS3001, MAT3326, and SCI1010 may be included in the 34 credits) Systematic project design with consideration of client need and specification is implemented by a student team. In particular, the team researches and proposes a solution with analysis of components, materials, man-power, cost estimate, and possible health, safety, environmental, ethical, and social impact. An approved project is then scheduled to identify and define major activities in each project phase, minimize resource conflicts, describe team member responsibilities, and ensure cost effective budgeting, control, and reporting in order to audit, assess, and mitigate project risk. A \$200 course fee required.

EGR4312 Engineering Design II^{\$ OCE}.....3 cr

(PQ: EGR4311; and COM1075 or COM1825) Based upon Engineering Design I, a student team implements an established project plan and evaluates the solution with consideration of the design criteria and impact on health, safety and environment. Assessment is based on member ability to support team success in project organization, documentation, presentation and achievement. A \$200 course fee required.

EGR4315 Computer Simulation and Analysis** \$................. 3 cr

(PQ: EGR2206, EGR2205 or EGR3225, MAT3335; C- or better in all prerequisites) Geometric and solid modeling for computational analysis, system optimization and rapid prototyping. Focus is on designing a system, representing that system on the computer using appropriate meshing techniques, and analyzing it using finite volume or finite element techniques. Emphasis is on the use of computer-based tools for system design. Students are required to develop models that capture the necessary physics, are computationally efficient, and are validated where possible. A \$200 course fee required.

(**PQ**: C- or better in EGR2206 and MAT2122) Topics studied include solution of equations by interpolation and approximation, differentiation and integration, matrices and systems of equations and solution of differential equations. A \$200 course fee required.

EGR4355 Biomedical Instrumentation and Devices** \$ 3 cr

(PQ: EGR2107) The fundamental devices, circuitry, and techniques used to acquire and process biomedical quantities and signals are discussed, analyzed, and practically implemented in a laboratory setting. In particular, physiological signals, related transducers, signal conditioning methods, and extracted features are used in the design of biomedical acquisition systems. Furthermore, the safe design of biomedical devices, clinical laboratory instruments, and medical imaging systems is discussed and analyzed. A \$200 course fee required.

(PQ: EGR2205 and MAT3335) This course introduces the complex mechanical behaviors of biological tissues and human movement. It is intended to provide a sound basis for students interested in pursuing careers in biotechnology, medicine, or biomedical research. The course includes anisotropy, viscoelasticity, active force generation and pressure vessels as applied concepts of statics, dynamics, and mechanics of materials to biological systems. Changes in mechanics due to injury or disease are also discussed. Relevant aspects of anatomy and physiology are covered as appropriate. A \$200 course fee required.

EGR4841 Research⁴......0-2 cr

(PQ: consent of instructor) Students identify a problem, conduct a literature search, write a proposal outlining the research to be conducted and then carry out the research project. Students prepare a written report and/or an oral summary of their work. Note: This course is designated as repeatable for a maximum of 4 credits. A \$200 course fee required.

(**PQ**: junior standing, consent of instructor, and internship registration form)Students gain industry experience through an internship position that provides an opportunity for the application of problem-solving skills with consideration of engineering ethics and practice. **Note**: This course is designated as repeatable for a maximum of 4 credits. See page 25 for note regarding internships.

English

Directed studies are available. See pages 26-27.

ENG1105 Composition......4 cr

(PQ: ACT English or ACT English/Writing score of 19 or above [SAT Writing and Language score of 26 or above]; CLT Grammar/Writing score of 21 or above, high school cum GPA of 2.67 or higher) A writing course designed to prepare students for college-level thinking and writing. Emphasis will be placed on the writing process, including editing skills.

ENG1107 College Writing & Research# \$\displays4 cr

(To be taken concurrently with ENG1107L, if required) A writing course designed to prepare students for college-level thinking and writing. Emphasis will be placed on skills used in writing and research processes, including information literacy, critical thinking, argumentation, drafting and revision, and editing. Students will undertake writing of various genres, including a research paper. Equivalent to ENG1105 and ENG2205.

ENG1107L English Composition Lab......1 cr

(To be taken concurrently with ENG1107, if required) Reinforcement of skills used in college-level writing, including an emphasis on compositional strategies and editing. This course supports students in ENG1107.

ENG2146 Professional Writing......2 cr

(PQ: ENG1105, ENG1107, or ENG1825, or consent of instructor) A writing course that explores the principles and forms of professional writing. Special attention is given to workplace-based genres, clear & concise writing, and adaptation to developing contexts and industry needs. Students will explore writing in the workplace across various potential career paths and industries.

ENG2205 Critical Thinking and Writing**	ENG3248 Grant Writing
ENG2215 Writing Creative Nonfiction*	(PQ: ENG1105, ENG1107, or ENG1825, or consent of instructor) A writing course exploring use of social media to tell stories of a brand's products and services. Topics include identifying target audiences for ministry, nonprofit and for-profit applications and identifying techniques and strategies for audience engagement across multiple
ENG2216 Writing of Poetry	social media platforms. ENG3316 Freelance Content Writing*
poets with an emphasis on creating original poetry in a workshop format.	(PQ: ENG1105, ENG1107, or ENG1825) A writing course designed to give students practical knowledge and writing skills in content marketing and freelancing which will enable them to do independent,
ENG2217 Writing of Fiction	freelance writing for clients.
study of the techniques of fiction writing and contemporary fiction writers with an emphasis on creating original short stories in a workshop format.	ENG3625 Advanced Writer's Workshop*
ENG2235 Editing and Proofreading	writing experience in which students produce sophisticated texts in a chosen genre.
substantive and line editing, copyediting and proofreading. Students will read and reference relevant texts on editing and will practice their editorial skills on a variety of sample manuscripts.	ENG4435 Writing Theory and Ethics ^{WCE} *
ENG3125 Structure of English Grammar	the relationship of theory to Christianity and ethics, encompassing the overlapping studies of literacy, rhetoric/composition, professional/technical writing and creative writing, as well as drawing on language studies and philosophy.
ENG3165 Instructional Design for Professional Writing* 2 cr	ENG4615 Literary Editing
(PQ: ENG1105, ENG1107, or ENG1825) Students study learning theory and design models to write and develop training or educational materials for online platforms.	(PQ: ENG2216, ENG2217 and consent of literary magazine advisor) Practical experience in editing Inkstone, the university literary magazine, including publicity, selection of creative pieces and work with printing houses. Note: This course is designated as repeatable
ENG3210 Christianity and Writing*	and may be repeated three times for credit after the original taking of the course.
writing course designed to give students practical and theoretical insight into how writing and the arts integrate with Christian faith. Students will produce creative, faith-oriented texts and read faith-based literature by established writers.	ENG4855 Senior Capstone: Creative Writing ^{oce}
ENG3219 Autobiographical Writing* 2 cr	English major with a writing or literature and writing concentration;
(PQ: ENG2215 or ENG2217, or consent of instructor) Development of students' writing skills centered on personal histories. Emphasis	and consent of instructor) An individualized course in which students write creative texts in poetry, personal essay and/or short fiction.
will be placed on writing technique and critique, heightened self-awareness and the importance of memoir in literature and life.	ENG4858 Senior Capstone: Professional Writing ^{OCE}
ENG3240 Writing of Place*2 cr	ENG2146; ENG4435; 4 credits from ENG2235, ENG3165, ENG3247, ENG3248, ENG3249, ENG3316 and approved topics; senior standing;
(PQ: ENG2215, ENG2216, or ENG2217 or consent of instructor) A writing course designed to give students practical and theoretical	English major with a writing or literature and writing concentration;
insight into how landscape integrates into writing. Students will	consent of faculty supervisor and internship registration form) An individualized course for which students write within the field of
read work by professional authors and produce creative text that prominently features a sense of place.	professional writing and produce a portfolio.
ENG3247 Technical Writing*2 cr	ENG4995 Writing Internship. 1–4 cr (PQ: consent of faculty supervisor and internship registration form)
(PQ: ENG1105, ENG1107, or ENG1825) Principles and forms of	Supervised work experience in writing, publishing, or other English-

related employment. Note: This course is designated as

repeatable. See page 25 for note regarding internships (professional

experiences).

technical writing, including writing technical instructions, technical

descriptions and technical reports.

English for Non-Native Speakers

English as a Second Language (TESOL)

(PQ: LIN2226) Study of current research and theories in language acquisition. Examination of the language learning process and variables that affect language acquisition.

Finance

FIN2025 Personal Money Management#......2 cr

A survey of the principles of financial management from the viewpoint of the consumer. Topics include personal budgeting, consumer buying, credit, real estate, investments, personal income tax, insurance, risk analysis, trusts, wills and estates. (Open to business and non-business majors.)

in ACC2102) Introduction to financial concepts and issues within the context of the corporation. Topics include analysis of financial statements, budgeting, leverage and working capital management.

General Studies

GST1015 Basic Computer Applications##......1 cr

This class teaches basic computer literacy and troubleshooting. It also introduces students to common, full-featured desktop applications such as word processing, spreadsheets, Internet, and multimedia. Software specific to the course includes a web browser, screen recording tool, Microsoft Office 365 (including Word, Excel, PowerPoint, and OneNote), and Google Sites. Skills gained in the course will provide a foundation for using these applications in other Northwestern courses and in various careers. Only offered through Dual Enrollment.

GST1025 Culture, Language, and Transition into College1 cr

This course will use experiential techniques to expose students to a variety of learning paradigms that address best practices that align with a successful college life in the U.S. The course will focus on the adjustments students make upon entering college campuses in the U.S. and the strategies that support college success. The course will use a wrap-around approach to offer personalized interventions leading to a successful college experience. Students are expected to use this information to develop and at the end of the course, present a personalized portfolio outlining strategies for continued success in meeting the academic rigor of college life. This course is a requirement for all incoming students on an F-1 visa. Note: This course is designated as repeatable for continued support.

GST1035 Discovering Majors##.....1 cr

This experientially based course is recommended for students who are undecided about an academic major and who are motivated to explore options. Students will explore both the concept of a college major and the content within the major to understand how majors relate to careers. Students will learn about major/career decision making strategies, research and evaluate majors they are considering and rank their major choices based on what they have learned. Finally, students will critically reflect on their decision making process and create an action plan for further exploration. Only offered through Dual Enrollment.

GST4095 Intent to Register for an Academic Internship 1-14 cr

(PQ: Faculty advisor approval) This course indicates a student's intent to register for an academic internship. It is to be used for students that intend to secure an academic internship, but will not have secured the internship prior to the deadlines required for financial aid and/or athletic eligibility.

Geography

GEO1005 Introduction to Geography......2 cr

An introduction to the study of the interrelation of human and physical geography. Attention is directed to geographical concepts, maps, physical geography, population geography, cultural geography, political geography, agriculture and economic geography.

GEO1007 Principles of Geography##......3 cr

An introduction to the study of the interrelation of human and physical geography. Attention is directed to geographical concepts, maps, physical geography, population geography, cultural geography, political geography, agricultural and economic geography. May be taken to satisfy the Scientific & Quantitative Literacy social science requirement in the core curriculum. Equivalent to GEO1005. Only offered through Dual Enrollment.

An analysis of the global perspective of peoples and places in a political and economic geographical context. Topics include the study of the various geographical regions of the world with attention paid to the particular aspects of each region's peoples, cultures and economic development.

GEO1017 Principles of World Geography##......3 cr

An analysis of the global perspective of peoples and places in a political and economic geographical context. Topics include the study of the various geographical regions of the world with attention paid to the particular aspects of each region's peoples, cultures and economic development. May be taken to satisfy the Scientific & Quantitative Literacy social science requirement in the core curriculum. Equivalent to GEO1015. Only offered through Dual Enrollment.

Health & Physical Education

Full details are given under School of Education programs for the Physical Education/Health licensure areas. See pages 100-104 and 112.

HPE1005 Foundations of Physical Education and Health 2 cr

For freshmen and sophomores majoring or minoring in physical education or kinesiology Survey of trends in the field of physical education. History, present philosophy and objectives are examined. Professional publications in the field are analyzed.

Skills and knowledge necessary to give aid to victims of trauma or sudden illness. Red Cross first aid and CPR certifications available.

HPE2006 Sexuality Education2 cr

This course will explore the current knowledge, attitudes and contemporary issues in family, social and sexuality education and prepare future professionals for family life and sexuality education at the K-12 level. The course is intended to help students increase their knowledge of sexuality, relationship principles and the ability to educate and promote sexual and family health. There will be an emphasis on knowledge mastery, curriculum design, educational materials and implementation methods.

HPE2007 Methods of Teaching Group Exercise......2 cr

This course is an introduction to teaching group exercise. A foundation of information about fitness and principles of exercise necessary to teach group exercise will be explored. In addition, the students will have an opportunity to practice techniques and skills needed to teach a variety of formats of group exercise.

The theory and practice of skill analysis and instructional strategies in the teaching of soccer, flag football, team handball, lacrosse, basketball, softball and badminton.

HPE2016 Techniques of Individual and Lifetime Sports. 4 cr

The theory and practice of skill analysis and instructional strategies in the teaching of soccer, flag football, team handball, dance rhythms, lacrosse, basketball, softball, badminton, and group exercise.

HPE2175 Anatomy of Human Movement	HPE3075 Assessment and Measurement in Physical Education .2 cr A study of existing methods of evaluation for physical education programs with consideration given to techniques of test administration and the organization and interpretation of test data.
be of the circulatory, neuromuscular, skeletal and articular systems and their relationship to human movement, exercise and sport. The course is designed as a complementary course to the mechanics of	HPE3205 Advanced First Aid**
human movement known as Biomechanics. HPE3005 Personal and Community Health	HPE3275 Care and Prevention of Injuries
emotional, social, spiritual and mental areas.	HPE3305 Health Education Curriculum and Instruction 3 cr
HPE3006 Human Nutrition	(PQ: EDU2215; for K-12 Physical Education & Health majors only) This course provides teachers with the competencies and knowledge needed to teach school health education. An examination of the school health program, national health education curricula, national health education standards and pedagogy and teaching resources in health education will form the focus of the course.
HPE3007 Coaching Theory*	HPE3376 Exercise Physiology*4 cr (PQ: BIO1009 or BIO1011) A study of the physiological effects which muscular activity and exercise have upon the human body. Laboratory experiments, diagnostic techniques and methods will be integrated
HPE3008 Health Behavior: Theory and Program Planning2 cr A study of the determinants of health behavior, factors influencing	with principles and theory.
health behavior, health behavior theories and application methodology will be outlined. Contemporary models to plan health education programs will also be discussed.	HPE3377 Biomechanics*
HPE3009 Officiating Athletics**	SKIII3.
Techniques, rules, problems and procedures in officiating high school basketball, volleyball and baseball.	HPE4075 Administration of Physical Education and Sport* 2 cr Current practices and principles applied to problems of organization and administration of curricular and extracurricular programs in
HPE3015 Adapted Fitness and Activity2 cr A study of exceptional physical and mental conditions that affect	physical education and sport.
body movement and motor development. Course material will also cover techniques and principles directed to a teacher or trainer of fitness and sport for special populations and/or students with physical disabilities.	HPE4305 Health and Fitness Evaluation and Diagnosis*2 cr (PQ: HPE3376) The professional preparation in the fitness field as well as the theory and practice of evaluating physical fitness for the purpose of prescribing cardiovascular, flexibility and strength training
HPE3025 Health and Sport Management4 cr	exercise to all age groups, both healthy persons and those with medical concerns.
This course covers the basic knowledge and skill sets of a sport and	
health manager to current trends and issues in the management	
industry. This course provides the principle and theory for students as they study and prepare for a variety of sport and health management	
careers. The major themes within this course include principles of	
management, marketing, financial and economic, legal, ethical, sales,	
facility, event and career preparation. Best practices and principles	
applied to the organization and administration of for-profit and nonprofit sport and health programs.	

Healthcare Management

HCM4087 Healthcare Law and Ethics[⋄]·······2 cr

This course is designed to give students an understanding of the common legal and ethical issues in healthcare delivery. Students will evaluate cases to better their understanding of informed consent, as it relates to existing conditions, risks, and cost. Students will learn and assess various risk mitigation techniques for human resource, technology, and malpractice liabilities. The positive and negative aspects of corporate governance, community, state, and federal accountability systems in healthcare will be explored. Only offered online through Adult Undergraduate. Included in the Traditional Undergraduate tuition block.

HCM4089 Finance Systems in Healthcare[⋄] 4 cr

This course will explore the unique and complex systems of healthcare reimbursement. Students will gain an understanding of how insurance reimbursement systems intersect with delivery and how providers use analytics to determine cost, cost sharing, and pricing. Students will also learn how hospital systems operate financially and how those systems comply with corporate governance and operational requirements. Students will use information interviews to build context for class content. Only offered online through Adult Undergraduate. Included in the Traditional Undergraduate tuition block.

Health Sciences

HSC4835 Senior Seminar for the Health Sciences OCE WCE2 cr (PQ: ENG1107, ENG2205, or ENG2825, COM1075 or COM1825, and at least junior standing as a health sciences major) A capstone course designed to provide an integration of concepts in the biological sciences, biochemistry and the health professions with a discussion of the ethics of applied biology and the health sciences as they pertain to a global and culturally diverse society.

HSC4995 Health Sciences Internship 1-4 cr

(PQ: consent of faculty supervisor and internship registration form) Supervised work experience in the health professions. Note: This course is designated as repeatable. See page 25 for note regarding internships.

History

HIS1005 Historical Perspectives on Culture, Belief, and Civilization#..4 cr Students will examine how world cultures and belief systems have interacted with each other since ancient times. They will explore a variety of ideas, traditions, and movements, discuss key literary and cultural texts, and develop a thoughtful view on the roots and influence of Judaism, Christianity, and Islam. Reflecting upon this complex historical heritage will inform discussion of today's global issues.

HIS1005L Historical Perspectives Lab1 cr

(Required of students with ACT Composite score of 20 or below, high school cum GPA of 2.66 or below, or First-Generation Student with high school cum GPA of 3.0 or below. Taken concurrently with HIS1005.) This lab course supports students' academic skill building in areas such as reading college texts, note taking, repeated spaced

HIS1007 Survey of American History##.......4 cr

This course is designed to provide an introductory survey of significant themes in American History. It will consider how the United States formed and developed and will pay attention to important topics in American politics, society, economics, culture and religious belief. Only offered through Dual Enrollment.

HIS1825 Honors Historical Perspectives on Culture, Belief, and Civilization4 cr

(PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) Students will examine a variety of ideas and movements to understand how world cultures and belief systems (especially Judaism, Christianity, and Islam) have interacted since ancient times and inform today's global issues. Special emphasis is placed on the use of documents to create historical interpretations. The course stresses the practice of rhetoric in all its forms: writing, discussion, presentation, and debate. HIS1825 may be taken in the place of HIS1005.

HIS1826 Honors Seminar in Humanities4 cr

(PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) Students will examine a variety of ideas and movements to understand how world cultures and belief

systems (especially Judaism, Christianity, and Islam) have interacted in the past and inform today's global issues. Special emphasis is placed on the use of documents to create historical interpretations. The course stresses the practice of rhetoric in all its forms: writing, discussion, presentation, and debate.

HIS2001 U.S. History to 1877......4 cr

A survey of the social, economic, political, religious and diplomatic $history of the \, United \, States \, from \, the \, age \, of \, exploration \, and \, colonization$ through the Reconstruction period. Topics include exploration and colonization, the American Revolution, the new nation, Jacksonian Democracy, slavery, reform, manifest destiny, sectionalism, economic development, the Civil War and Reconstruction.

A survey of the social, economic, political, religious and diplomatic history of the United States since Reconstruction. Topics include the Gilded Age, the Progressive Era, World War I, the Twenties, the Great Depression, World War II, the Cold War and recent America.

HIS2005 Introduction to Historical Studies2 cr

Meant for all History majors and minors, this course will equip students with the concepts and skills necessary for completing upperlevel history courses. Topics include locating historical resources, bibliographies, citation, historical argumentation, historiography and the integration of Christianity and historical study.

HIS3095 Digital History, Public History, and Archiving 4 cr

This course examines the practice of history in the digital and public spheres. In order to help students become knowledgeable practitioners in the fields of digital history, public history, and archiving, this course has the following aims: to introduce students to a variety of disciplines and careers for historians outside of academia; to evaluate the latest scholarship about digital and public history; to familiarize the student with digital resources; to construct a historical project in the field of public history and/or digital history.

HIS3105 History of the Ancient Near East*.....4 cr

(PQ: HIS1005, HIS1825, or HIS1826 or concurrently enrolled, or consent of instructor) A study of the history and culture of the civilizations of Mesopotamia, Syria-Palestine, Asia Minor and Iran from earliest times to 500 B.C. Special attention will be given to the

history and culture of	of the	Monarchy	period	in	Israel.
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HIS3106 History and Archaeology of Ancient Egypt.......4 cr (PQ: HIS1005, HIS1825, or HIS1826 or concurrently enrolled, or consent of instructor) A study of the history and culture of the civilization of ancient Egypt from earliest times to 500 B.C. Special attention will be given to contacts with Israel and to the methods and discoveries of archaeology in the Nile Valley.

HIS3136 History of Europe in the 18th and 19th Centuries*4 cr (PQ: HIS1005, HIS1825, or HIS1826 or concurrently enrolled, or consent of instructor) A survey of European political history and socio-cultural developments between 1700 and the outbreak of World War I.

HIS3156 History of Russia from Earliest Times to the Present*. .4 cr (PQ: HIS1005, HIS1825, or HIS1826 or concurrently enrolled, or consent of instructor) A study of the history and development of Russia from the ancient world to the present with special emphasis on the 19th and 20th centuries. Topics to be studied will include Russian political, social, cultural and religious history.

HIS3165 American Revolution and Early Republic4 cr (PQ: HIS1005, HIS1825, or HIS1826 or concurrently enrolled, or consent of instructor) A study of the creation of the American Republic in the period 1763–1815. Primacy is given to the political changes which led to Independence and the creation of a Constitutional government, but the cultural, social, economic and religious changes of the period also receive consideration.

HIS3206 History of Recent America, World War II to the Present* .4 cr (PQ: HIS2001 or HIS2002 or consent of instructor) An examination of the political, social and economic forces, events, ideas and trends which have shaped the United States, including the impact of World War II, the Cold War era, the Korean War, the Vietnam War and the domestic and foreign affairs of the 1980s and 1990s.

Honors Courses

BIA1827 Honors Interpreting Scripture 2 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) A study of the Bible as the Word of God and of the proper methods of interpretation for spiritual transformation. BIA1827 may be taken in the place of BIA1015.

BIB2826 Honors Survey of the New Testament.....2 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) A study of the socio-historical setting, literary genres and theological message of the New Testament. Students study the process by which the New Testament was established, the relationship of the Old Testament to the New Testament and critical methods of New Testament scholarship. BIB2826 may be taken in the place of BIB2008.

BIB2827 Honors Survey of the Old Testament......4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) A survey of the 39 books of the Old Testament with emphasis on historical setting and literary features. BIB2827 may be taken in the place of BIB2005.

BIB3825 Honors Topics in Old Testament Exposition** 2-4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) Each of the offerings of this course focuses on an Old Testament book or grouping of books; specifically addressing its more specialized, technical and problematic issues; students interact with the work of scholars who have made special contributions to the field of study.

BIB3826 Honors Topics in New Testament Exposition**..... 2-4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) Each of the offerings of this course focuses on a New Testament book or grouping of books; specifically addressing its more specialized, technical and problematic issues; students interact with the work of scholars who have made special contributions to the field of study.

BIB3827 Honors Topics in Old/New Testament Exposition**.. 2-4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) Each of the offerings of this course focuses on Old and New Testament books or grouping of books as specified in the class schedule. Each course offering moves quickly through the basic content of the biblical book(s) to focus on more specialized, technical and problematic issues. Some of the issues that are examined critically include introductory matters (authorship, date, provenance, purpose and literary background), structure, theology and use in the Old or New Testament. Emphasis is given to interaction with the work of Old or New Testament scholars who have made special contributions to the book(s) studied.

BIB4825 Honors Systematic Theology*4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or UNW cum GPA of 3.6 or higher, or consent of instructor) The study of Evangelical Christian beliefs and their relationship to other belief systems as well as their relevance to contemporary discussions both inside and outside of the church. BIB4825 may be taken in the place of BIB4360.

BIO2825/2825L Honors Topics in Biology* \$ 2 or 4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) A study of a specialized aspect of biology curriculum that includes contemplation of the natural world. The laboratory component may consist of an intensive field trip to a specialized ecosystem or habitat. For 4 credit course only: \$200 laboratory fee required; concurrent registration required in lecture

COM1825 Honors Public Speaking......3 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) An introductory study and analysis of basic principles of effective communication with emphasis on public address, interpersonal and group communication. Emphasis will be placed on research and critical thinking skills. Attention will also be given to rhetorical analysis of contemporary speeches and to comparing Christian rhetoric and secular rhetoric. COM1825 may be taken in the place of COM1075.

HIS1825 Honors Historical Perspectives on Culture, Belief,

(PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) Students will examine a variety of ideas and movements to understand how world cultures and belief systems (especially Judaism, Christianity, and Islam) have interacted since ancient times and inform today's global issues. Special emphasis is placed on the use of documents to create historical interpretations. The course stresses the practice of rhetoric in all its forms: writing, discussion, presentation, and debate. HIS1825 may be taken in the place of HIS1005.

HIS1826 Honors Seminar in Humanities4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) Students will examine a variety of ideas and movements to understand how world cultures and belief systems (especially Judaism, Christianity, and Islam) have interacted in the past and inform today's global issues. Special emphasis is placed on the use of documents to create historical interpretations. The course stresses the practice of rhetoric in all its forms: writing, discussion, presentation, and debate.

IDS3825 Honors Colloquium**......0-4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], 3.6 cum GPA or higher and consent of instructor) An honors topics class in which students from a variety of disciplines do individualized study centered within a common cross-cultural geographic location. Students then meet in a colloquium setting of sharing and discussing with each other the results of their study and participate in a study tour of the designated location. Note: This course is designated as repeatable and may be repeated for up to a maximum of 4 credits.

IDS3826 Honors Project......0-1 cr (PQ: Eagle Scholars Honors Program member; consent of instructor) Supervised venue for Eagle Scholar to complete an individualized project supplementing his or her course of study and approved by a cooperating faculty member. Twenty to twenty-five hours of study is required. Note: This course is designated as repeatable.

IDS3827 Honors Seminar.....0-1 cr A required meeting time for members of the Eagle Scholars Honors Program. Note: This course is designated as repeatable.

MDS1825 Honors Big Ideas Through the Creative Lens2 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], or high school cum GPA of 3.7 or higher, or consent of instructor) Through creative work in the arts—literature, visual arts, theatre, music, film, and dance—humans experience and communicate divergent perspectives, grapple with complex topics and emotions, and ultimately move toward a fuller understanding of what is real, what we can know, and how we should live. In this course we examine a single complex aspect of the human experience through hands-on creative experiences with the elements and processes of various art forms and the study of notable artists and works. This introductory course does not require prior artistic experience.

Intercultural Studies

An introduction to biblical and philosophical principles for world missions with a view to discovering best practices for engaging in cross-cultural ministry. This course includes an emphasis on historical and contemporary issues in missions.

of personal evangelism and discipleship. Special topics related to outreach in a global and pluralistic society will be considered.

ICS2015 World Religions*4 cr

A survey of the beliefs and practices of the major religions of the world, including Animism, Buddhism, Confucianism, Hinduism, Judaism and Islam.

ICS2045 Socio-cultural Anthropology*......4 cr

An exploration of the field of socio-cultural anthropology with a special emphasis on understanding culture and its impact on all aspects of society. This class guides learners to reflect on their own cultural background and to develop attitudes and skills that equip them to investigate and respond to cultural similarities and differences. The application of cultural anthropology to various contexts and fields of study is also explored.

ICS3005 Human Global Migration......2 cr

This course investigates the causes and consequences of human migration around the world. It examines various views and responses to migration from cultural, religious, and political perspectives, and provides practical ways to engage migrant communities in the United States and around the world. Special attention is given to refugees, asylum seekers, and communities impacted by forced migration.

ICS3015 Race and Ethnicity in America#4 cr

This course explores developmental, sociological, and philosophical questions of race, ethnicity, and citizenship, with special attention to the experiences of African Americans, Asian Americans, Latino Americans, and indigenous peoples of the United States. Practical implications for social justice, reconciliation, and personal well-being will also be explored.

ICS3016 Understanding Islam......2 cr

An overview of the Muslim faith as it is practiced today. Emphasis will be on areas of conflict and agreement with Evangelical Christianity and current issues in Christian witness to Muslims

(PQ: consent of ICS faculty) A study of peoples and cultures in global contexts with an emphasis on a particular national context. This course is normally completed in an intercultural context as part of an off-campus study abroad or field experience.

An interdisciplinary examination of social evil and social righteousness with the goal of constructing transformational responses to contemporary issues in social justice. Special topics will include ideology, power, sexism, religion, public policy, education, consumerism, and media.

ICS3068 Relief and Development*......2-3 cr

A practical and philosophical exploration of issues in domestic and international relief and development. This course explores topics such as the nature of poverty, asset-based community development, and holistic development.

(**PQ**: COM1075 or COM1825) A practical and philosophical exploration of issues in business as mission as they relate to forprofit, nonprofit, and mission contexts. Special topics such as kingdom entrepreneurship, faith and economics, and tent-making will be explored.

ICS3107 Biblical Theology of Mission WCE2 cr

(PQ: BIB2005 or BIB2827; BIB2008 or BIB2826; and ENG1107, ENG2205, or ENG2825) A biblically based study of the plan of God to be glorified among the nations, stretching from Genesis to Revelation, plus skill development in biblical theological method.

ICS4495 ICS Internship Debriefing0-1 cr (PQ: ICS4991, ICS4992, ICS4993, or ICS4994) A structured debriefing normally completed during the semester following an ICS internship experience. Note: This course is designated as repeatable.

ICS4991, 4992, 4993, 4994

(PQ: consent of faculty supervisor and internship registration form) Supervised ministry experience which includes crossing of significant cultural and/or language barriers. Note: See page 25 for note regarding internships.

Interdisciplinary Studies

IDS3825 Honors Colloquium**......0-4 cr (PQ: ACT Composite score of 27 or above [SAT score of 1280 or above or CLT score of 85 or above], 3.6 cum GPA or higher and consent of instructor) An honors topics class in which students from a variety of disciplines do individualized study centered within a common cross-cultural geographic location. Students then meet in a colloquium setting of sharing and discussing with each other the results of their study and participate in a study tour of the designated location. Note: This course is designated as repeatable and may be repeated for up to a maximum of 4 credits.

IDS3826 Honors Project......0-1 cr

(PQ: Eagle Scholars Honors Program member; consent of instructor) Supervised venue for Eagle Scholar to complete an individualized project supplementing his or her course of study and approved by a cooperating faculty member. Twenty to twenty-five hours of study is required. Note: This course is designated as repeatable.

IDS3828 Honors Lab......0 cr

(PQ: student must be enrolled as an Eagle Scholar; consent of instructor) Supervised venue for Eagle Scholar to complete an honors component while concurrently enrolled in a non-honors course approved by a cooperating faculty member and the Honors Director. Ten to fifteen hours of work is required, and should involve a discussion component. Note: This course is designated as repeatable.

IDS3827 Honors Seminar......0-1 cr A required meeting time for members of the Eagle Scholars Honors Program. Note: This course is designated as repeatable.

IDS4845 Capstone Project^{OCE WCE}......4 cr

(PQ: For approved Interdisciplinary Studies majors with senior standing only; COM1075 or COM1825 and ENG1107, ENG2205, or ENG2825) Development of a collection of work demonstrating that major outcomes have been met.

IDS4995 Interdisciplinary Internship.......1-4 cr

(PQ: consent of faculty supervisor and internship registration form) Supervised work experience in an interdisciplinary field. Note: This course is designated as repeatable. See page 25 for note regarding internships.

Kinesiology

Introductory course in sports studies dealing with sport and physical activity as a psychological and sociological phenomenon. Emphasis on career opportunities in fields related to sport in American society.

This course is designed to provide students with an overview of the field of Sports Management. The course will examine the fundamental components of sports management, including personnel issues, the development of the industry, current state, and future trends in the discipline. Students will be introduced the basic tenets and principles of sports management. Through guest speakers and site visits students will have the opportunity to see theory in practice at various events, venues, and businesses.

KIN2025 Issues and Trends in Sports2 cr

Issues of society are reflected in sport, no matter how insulated or isolated sport may appear to be. The contemporary issues of society, an understanding of their reflection in, their relationship to, and their influence upon sport, whether it be amateur or professional, will be examined. A special emphasis will be placed upon how issues in sport today are examined through our societal passion for social media, and how these behaviors influence consumers, fans, and sponsors.

KIN3035 Sports Marketing4 cr

The relevant areas of marketing are applied to sport applications for spectator and participative sport organizations. Special emphasis is placed on strategic planning, product analysis, and the development and presentation of marketing packages. It is important that sport management students understand the vital role of marketing within

the sport industry. Marketing may take several forms in sport businesses. Students must be able to differentiate between use of marketing to sell sport products and/or services (marketing of sport) from the use of sport and sport personality marketing to sell general or sport-related products or services (marketing through sport).

KIN3045 Sports Ethics2 cr

This course is designed to provide students with opportunities to develop moral, ethical, biblical, and philosophical values and skills in the area of sports ethics. Through reasoning and case studies, students will explore and clarify their career goals and sharpen their critical thinking skills for analyzing ethical issues and generating possible solutions to those issues in sports management.

KIN3075 Sports Leadership......2 cr

(PQ: department chair approval) This course is designed to provide students with opportunities to develop moral and ethical values, and philosophical skills, in the area of Sports Leadership. Sports Management issues and organizational behavior are examined and students are presented with opportunities to develop and understand key leadership and management skills. Students will analyze management decisions and their impact as well as the process of how decisions are made. The course's association with a local professional coach or front office executive will provide a unique perspective into topics relating to leadership and management in the sports industry.

KIN3305 Upper Body Evaluation*.....2 cr

(PQ: BIO3157 or HPE2175; and HPE3275) Evaluation and diagnosis of injuries to the chest, spine, shoulder, elbow, wrist and hand.

KIN4055 Sports Facility and Game Management4 cr This course is designed to provide students with opportunities to develop an understanding of planning, funding, and operating

sporting events and the operation of the facilities in which the events take place. Topics that will be discussed include building a facility, financing a facility, operation of a facility, producing events, day-to-day operations of a facility, concessions, maintenance, franchise interaction, game night production, and the career paths to become a successful sports event and/or facility manager.

Leadership

LDR1011 Spiritual and Personal Formation for Leadership⁵.....2 cr As a part of the Leadership Development Core, this course is an exploration of the role of spiritual formation, discernment, and self-awareness as they relate to one's personal and professional leadership development. Students engage in a vulnerable learning community to grow personally and spiritually. LDR1011 and LDR2112 together are equivalent to LDR1015. A \$25 course fee required.

LDR2112 Relational and Cultural Awareness in Leadership⁵2 cr (PQ: LDR1011) As a part of the Leadership Development Core, this course is an exploration of the role of relational, global, and intercultural awareness in one's personal and professional leadership development. Students engage in a diverse and vulnerable learning community to grow in interpersonal and intercultural awareness. LDR1011 and LDR2112 together are equivalent to LDR1015. A \$25 course fee required.

LDR3060 Foundations of Nonprofit Leadership......2 cr

This course provides foundational understanding of the role of nonprofits in civic and global societies with special emphasis on their unique missions, ethical responsibilities, and organizational structures. Emerging trends and innovations shaping the future of nonprofit organizations are also discussed.

LDR3135 Peer Mentoring for Leadership Growth...........0-1 cr (PQ: Peer Mentor Application) Students work with a lead faculty to develop plans for serving as peer mentors for a group of 8-12 students in LDR1015. This course prepares students to lead weekly small group mentoring sessions in a section of LDR1015. Note: This course is designated as repeatable.

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Linguistics					
LIN2226 Introduction to Linguistics	To prepare for their own individualized research, students will also conduct background research and locate a community or research participant for fieldwork or, for written language, a text to analyze.				
LIN3841 Research	LIN4856 Senior Capstone: Linguistics OCE WCE (PQ: ENG1107, ENG2205, or ENG2825; LIN4425; COM105 or COM1825; senior standing; English major with a linguistics concentration; and consent of instructor) An individualized course in which students research, analyze and describe the language of a linguistic community or linguistic informant. Students will prepare a paper and a presentation on a topic such as a feature of a specific language, dialect, or accent. LIN4996 Linguistics Internship				
Literature LIT1037 Introduction to Shakespeare##	LIT2118 Multiethnic American Literature#				
will provide a study of a selection of Shakespeare's plays and an introduction to reading and interpreting the plays. Only offered through Dual Enrollment. LIT1100 Introduction to Literature##	through Dual Enrollment. LIT2135 Shakespeare and Film				
LIT1106 Popular Literature*	LIT2156 Contemporary Poetry*				
LIT1107 Comparative Study of Major Authors*	LIT2157 Contemporary Fiction*				
LIT2045 Epic Literature	LIT2825 Honors Topics in Literature				
LIT2105 Literary Studies	Emphasis will be placed on independent work and critical thinking. LIT3136 Shakespeare				

Reading, analysis and discussion of selected Shakespearean plays.

authors, specifically non-American and non-British authors.

Topic of course will be announced prior to registration.

LIT3145 Contemporary World Literature2 cr

(PQ: ENG1107, ENG2205, or ENG2825, or concurrently enrolled) An investigation of selected works of contemporary non-Western

(PQ: ENG1107, ENG2205, or ENG2825, or concurrently enrolled) Reading and analysis of selected novels. Course content may revolve

around a theme, a literary period, literature of a selected region, etc.

LIT2117 Historically Based Literature*......2-4 cr

and other students interested in an intensive study of literature) A

course designed for English majors which provides training and

practice in the analysis of various literary forms and in the use of argument, evidence and documentation in literary essays. The course

introduces literary theory while emphasizing the integration of faith,

reading and writing.

A study of literature produced during or concerning particular periods of time, such as the American Civil War, World War I, and the Holocaust. Particular focus of course to be published prior to registration. Note: This course is designated as repeatable as long as topic covered is not duplicated.

(PQ: ACC2101, MGT2271, and FIN3222 [or concurrently enrolled] [C or better in all]) All businesses require some form of operations

COURSE DESCRIPTIONS

LIT3225 Survey of American Literature	LIT4859 Senior Capstone: Literature CPC:
Management MGT2271 Management ⁶	to deliver a product or service to a customer. For most companies, operations is a complex network of complex processes and systems. This course studies the key operations, including product design, environmental design, facility management, management systems, payroll, HR, finance and marketing. Students will build operational systems to manage a particular area of an operation, identify problems, and determine strategy for improved performance in the
MGT3075 Entrepreneurship ⁶	area of operation. This class is an application-based class that draws on content from management, finance, and accounting courses. MGT3375 Operations Continuous Improvement**2 cr (PQ: C or better in MGT3276) Continuous improvement in Operations is essential for a firm to remain competitive in a global economy. This course covers Lean Operations operations as exemplified by the
MGT3255 Human Resource Management ^o	Toyota Production System, Statistical Quality Control (including 6 Sigma) and quality improvement. Field trips to local companies are part of the course.
organization. Building to topics introduced in the Management course, students will investigate how the HR function can assist managers in enhancing the performance of their functional areas. Major topics include the changing nature of HR management, HR planning, organizational development, employee recruitment selection & retention, legal issues, employee training, appraisal, pay & benefits, motivation and change implementation.	MGT3376 Supply Chain Management ⁹
MGT3272 Management II**	management, production activity control, purchasing, inventory management, distribution, quality management and Just-in-Time manufacturing.
breadth than MGT2271; e.g., teaming, empowering, partnering, etc. Case analyses and presentations and a comprehensive research paper are required.	MGT4245 Business Strategy
MGT3275 Small Business Management ^o	Strategic Management Process and its application to business cases. Readings in contemporary publications understanding of the strategic challenges facing businesses. Teamwork and quantitative analysis are emphasized. Guest speakers and field trips reinforce the topics covered.
such organizations and the legal aspects of establishing & running a business. The functional areas of business, including marketing, operations, facilities, accounting and human resources are explored. The course requires students to develop operational systems in order to process data, providing critical information for problem-identification and solving. This is a hands-on, application class.	MGT4267 Project Management ⁶

of successful team, finance, and operations management. This class

focuses on both lecture and practical application.

MGT4855 Corporate Strategies and Policies⁶......4 cr (PQ: ACC2102, BUS2011, and MGT2271 [C or better required in all]; and senior standing) This is the senior capstone course. Students gain knowledge of the Strategic Management Process through readings and case analysis. Greater business and strategic understanding is then developed with readings in contemporary publications and application to cases. Teamwork, quantitative analysis, current business news and strategic communication are emphasized. Guest speakers and field trips reinforce the topics covered.

Management Information Systems

MIS2062 Database Management I*......4 cr

This course presents the fundamental concepts of databases and the general architectures used in modern databases. The ideas of database design are presented along with topics such as database access, indexing, reports and queries. The student will be exposed to one of the current database management systems. An actual database application using the programmability of the DBMS is created as part of this course.

MIS3185 Server Administration*.....4 cr (PQ: COS2112) This course provides the student with knowledge and exposure for managing network servers. Students will administrate

file servers and web servers as well as build virtual machines (VMs).

Marketing

MKT1085 Principles of Marketing#......4 cr

The structure, function and behavior of marketing systems are discussed. Emphasis is placed on the impact of social and economics environment and on the process of the decision-making aspect of marketing.

This course focuses on the application of marketing principles to E-Commerce including B2B, B2C, the use of Social Media and how they provide business with a global outreach. Additional topics include: Internet Security, Social, Ethical and Political issues. It is a hands-on course. Students will work individually and in groups.

(PQ: MKT1085 and BUS2011 [C or better required in both]) This course acquaints the student with the basic dynamics of consumer behavior and analytical techniques used in marketing to study consumer behavior. Consumer behavior examines influences upon consumer decision-making while marketing research relates to methods used to explore, examine and evaluate existing market opportunities.

MKT3188 Advertising and Promotion 4 cr (PQ: C or better in MKT1085; and COM1075 or COM1825) Analysis of the role of advertising and sales promotion in marketing. Subject areas treated include advertising strategy, agencies, media and consumer motivation.

MKT3189 International Marketing**.....4 cr

(PQ: C or better in MKT1085) Management problems, techniques and strategies necessary to incorporate the marketing concept into a world market place. Particular attention is paid to environmental and cultural variables as they affect marketing procedure.

(PQ: BUS3835, consent of faculty supervisor, and internship registration form) Supervised work experience related to student's major. Students may enroll for this course at various times as their schedules permit. Note: This course is designated as repeatable and may be repeated three times after the original taking of the course. See page 25 for note regarding internships.

Mathematics

MAT1005 Mathematics for the Liberal Arts*4 cr

(Two years of high school algebra is recommended) A course designed for non-mathematics majors to spark interest in everyday mathematics and develop the mathematics needed to thrive in society. Contemporary topics may be chosen from mathematical fields such as: voting theory, apportionment, fair division, graph theory, scheduling, sequences, geometry, growth models, personal finance, probability, statistics, fractals, and cryptography.

MAT1005L Mathematics for the Liberal Arts Lab1 cr

(Required of students with ACT Math score of 17 or below [SAT Math score of 470 or below or CLT Quantitative Reasoning score of 19 or below] or high school cum GPA of 2.66 or below. To be taken concurrently with MAT1005, if required.) Math skill building in areas including, but not limited to fractions, decimals, percentages, and ratio and proportion. This lab course supports students in MAT1005 Mathematics for the Liberal Arts.

MAT1006 Mathematics for Elementary School Teachers 4 cr

(Two years of high school algebra is recommended) A course designed for elementary education majors to expose students to the mathematics they will need in teaching elementary school mathematics. Topics include problem solving, number theory, real numbers, geometry, probability, statistics, algebra, sets and mathematics of finance, fractions, decimals and numeration systems.

MAT1035 Business Mathematics*.....4 cr

(Two years of high school algebra is recommended) This course will cover topics and skills essential for success in business, accounting, and finance courses. Mathematical topics will include developing mathematical models, general quantitative and proportional and statistical reasoning, interpreting operations with real numbers, solving equations and systems of equations, graphing, functions, and the mathematics of finance. Emphasis on applying mathematical concepts and appropriate technology related to realistic examples from the business world.

MAT1035L Business Mathematics Lab......1 cr

(Required of students with ACT Math score of 17 or below [SAT Math score of 470 or below or CLT Quantitative Reasoning score of 19 or below] or high school cum GPA of 2.66 or below. To be taken concurrently with MAT1035, if required.) Math skill building in areas including, but not limited to fractions, decimals, percentages, and ratio and proportion. This lab course supports students in MAT1035 Business Mathematics.

MAT1126 Precalculus##4 cr
(Two years of high school algebra required) A preparatory course
intended for students who will take MAT2121. Topics include limits,
functions (exponential, logarithmic, trigonometric), conic sections,
polar coordinates and other topics in analytical geometry. Only
offered through Dual Enrollment.

MAT2122 Calculus and Analytic Geometry II* 4 cr (PQ: C- or better in MAT2121) Continued study of calculus to include antiderivatives, integration techniques, applications of definite integrals such as volumes of revolution, polar coordinates, series, sequences and power series.

MAT3255 Advanced Concepts of Middle School Mathematics (Grades 5–8)......4 cr

(PQ: completion of at least 3 MAT courses at the 2000 level or above) An in-depth, college-level study of the foundational structure underlying the major mathematical concepts taught in the middle grades. Content strands include number and operations, patterns and algebra, geometry and measurement and data analysis and probability. Includes emphasis on key transitions in mathematical thinking and connection of middle level concepts to college math course content.

using contemporary data analysis tools. Topics include planning statistical procedures for data analysis, statistical research design principles, planning data files for analysis, using computer software for data analysis, extended study of analysis of variance (ANOVA), completely randomized designs, factorial designs, randomized block designs, split-plot designs, crossover and repeated measure designs, and response surface designs.

MAT3265 Advanced Concepts of High School Mathematics (Grades 9-12)*......4 cr

(PQ: completion of at least 5 MAT courses at the 2000 level or above) A study of foundational secondary level mathematics concepts from an advanced, college-level perspective. Content strands include number system structures, functions and equations, integers and polynomials, congruence and symmetry, area and volume, trigonometry, data analysis and probability and discrete math topics. Includes emphasis on extensions and generalizations, applications, problem solving and connection of secondary level concepts to college math course content.

MAT3335 Differential Equations with Applied Linear Algebra...4 cr (PQ: C- or better in MAT3211 or MAT3223) Techniques for solving systems of linear equations and first, second, and higher order ordinary differential equations, including the method of the Laplace transformation. The algebra of matrices, linear transformations, determinants, vector spaces, characteristic equations, eigenvalues, eigenvectors, and applications in the physical sciences and engineering are included.

MAT4337 Mathematical Models and Applications* 4 cr (PQ: C- or better in MAT2055, MAT3225, or MAT3226) A survey course in choosing mathematical models and computer simulations to help explain and predict real-world phenomena. Mathematical models related to linear programming, integer programming, Markov chains, game theory, social choice theory, dynamic systems and chaos theory will be explored. Particular problems in the social, life, physical and management sciences are discussed, with models being developed as needed.

MAT4845 Senior Project^{OCE WCE}......2 cr (PQ: ENG1107, ENG2205, or ENG2825, COM1075 or COM1825, and senior standing) A capstone experience for mathematics majors in their senior year. This will provide an overview of all mathematics with attention to its history and philosophy. Each student does an in-depth, guided project, culminating in both a written report and an oral presentation. Media Production Directed studies are available. See page 26-27.

MAT4995 Mathematics Internship 1-4 cr (PQ: consent of faculty supervisor and internship registration form) Supervised work experience in mathematics. Note: See page 25 for note regarding internships.

This course introduces students to the world of Audio Production. Students will examine the history, theory and practice of audio production plus investigate the unique properties of the medium. In addition to providing extensive hands-on experience through production exercises and projects, the course places considerable emphasis on aesthetic analysis of audio products through a series of "critical listening" exercises. The concept of sound design for radio, TV, film and animation is applied to the various productions. Students will see how the power of sound can influence audiences and shape

their mood and emotion.

This course introduces students to the world of video production. Students will examine the history, theory and practice of video production plus investigate the unique properties of the medium. In addition to providing extensive hands-on experience through production exercises and projects, the course places considerable emphasis on aesthetic analysis of video products through a series of "critical viewing" exercises.

MEP1016 Story Structure4 cr

An examination of communication in the electronic media through the analysis and development of script structure and narrative story elements. Subjects include storyboarding, acts, scenes, premises, plots, characters, action, motifs, etc. Students write critical analyses of professional scripts and productions and author their own treatments.

MEP2115 Production Technology......2 cr (PQ: MEP1012, MEP1013, or consent of instructor) An introduction

to the technical equipment used in film, radio and other media productions. Students will learn the basic production components and processes found in the production environment including set-up, operational logistics, signal flow, troubleshooting, and maintenance.

MEP3045 Directing the Actor......3 cr

The class provides students with the study of techniques, approaches, and hands-on experience in directing actors in film.

MEP3115 Scriptwriting4 cr

(PQ: MEP1016) A study of the distinctive characteristics of scripts written for radio, television and film. Special attention will be given to the three-act structure, character delineation and motivation, conflict development and pacing, dialogue and subtext and unifying message. Students gain extensive experience through writing a treatment for a short film or television screenplay.

An overview examination of the multi-faceted business aspects of the media industry with a particular focus on radio, TV, film, and the music industry. Students learn organizational structure, financial economic elements, audience measurement tools, marketing, promotions and advertising, and other programming and production concepts relating to the operation of electronic media.

MEP3125 Advanced Audio Production4 cr (PQ: MEP1012) This course will give advanced instruction and practice in the techniques of audio production. Students will complete hands-on assignments and develop a stronger working knowledge of what it means to produce excellent audio.

MEP3126 Brand Production Strategies 3 cr

An examination of communication techniques and strategies used to create effective audio and video commercial brand messages. The class will explore strategies for radio station branding & imaging plus develop and produce video creative branding campaigns for other products and services. Students will experience the power of audience-oriented strategic branding and the role storytelling plays in production process. The course shows how branding moves beyond simply focusing on attributes and benefits. (When feasible, the class will often collaborate with classes in the Marketing major.)

MEP3135 Single Camera Production3 cr

(PQ: MEP1013) In this course you will receive advanced instruction and practice in the art and craft of single camera production and narrative storytelling. You will produce two exercises and one short film, bringing the projects through preproduction, production and postproduction.

(PQ: MEP1013 or consent of instructor) An intensive course in postproduction techniques applied in Adobe Premiere Pro. Editing theory and practice are integrated components of this course that broadly covers four areas: Editing aesthetics, Editing techniques, compositing and effects and finishing techniques.

MEP3139 Cinematography and Lighting2 cr

(PQ: MEP1013) This course explores the aesthetics of cinematography and the execution of these ideas and principles. Subjects include: composition, exposure, strategy, filters, lighting, camera movement, operation and power distribution. The class will be divided into lecture, screenings and on set and in-studio lighting and shooting (UNW studio and Lights On in Minneapolis).

MEP3626 Five16 Film Workshop0-1 cr

This course provides students with hands-on experience and training in writing, directing, producing and editing different types of video productions. Students will work in crews (teams) in bringing a project from conception to completion. Note: This course is designated as repeatable.

MEP3627 Journalism & Video Workshop0-1 cr

Laboratory experience in the production of television news. Northwestern Live (7) is a news program produced for distribution over the local cable television system. Students are involved in all aspects of the production.

concepts, sonic environments and aural experiences.

Ministry

MIN1007 Ministry Foundations

.....4 cr

This course addresses theological, philosophical, and historic foundations for Christian ministry. Students will be introduced to various fields of ministry, explore giftedness and call, discover the purpose of the church, and wrestle with cultural implications for ministry practice. The student will connect with a local ministry and begin to formulate a personal theology and philosophy of ministry during the context of this course.

MIN1641, 1642, 1643, 1644 Christian Service I, II, III, IV. .1 cr each (PQ: consent of faculty supervisor and internship registration form) Practical experience in a local church or Christian organization. Designed to encourage student involvement in Christian service. Each credit requires ministry involvement totaling at least 50 hours per credit.

MIN3045 Developmental Foundations for Ministry^{wce o}4 cr (PQ: ENG1107, ENG2205, or ENG2825, and sophomore standing) This course provides an overview of theories related to educational psychology and human development across the lifespan. Specific application to ministry contexts in the local church and other ministry-based agencies is examined. Students complete research-based projects in their area of ministry interest.

and equips students with practical skills to build a team and develop contextually appropriate strategies for planting new churches. Special topics will be considered such as multi-ethnic church planting, multi-site churches. and church revitalization.

MIN3105 Leading in Pastoral Ministry*......4 cr

(PQ: MIN1007) This course examines a biblical foundation and a practical understanding of the shepherding and overseer roles of the pastor in local church ministries. Special attention is given to church governance, ministerial ethics, discipline, staff leadership, ceremonies, and the ordinances. Pastoral self-care including family well-being is also considered.

MIN3107 Spiritual Lives of Children 2 cr

This course overviews the biblical, philosophical, theological, and theoretical foundations for ministry with children and families. Attention is given to both internal and external influences on children and the impact of their moral and spiritual formation. The importance of children learning and growing in the context of their family will be emphasized.

This course will examine biblical and theological foundations, as well as social science research, for human sexuality. A holistic view of human sexuality will be explored through the examination of sociological, biological, psychological and spiritual aspects of human nature and behavior. Biblical principles are discovered and applied to the development of individual sexual values and sexual discipline. The role of the church in supporting healthy sexuality will be considered.

MIN3206 Relationships⁰4 cr

(PQ: sophomore standing) This course will examine biblical and theological foundations, social science research and relationship models for healthy relationships. Focus will be given to the process of relationships: identity formation, friendship, dating, courtship, engagement and marriage. Additional issues including singleness, intimacy, forgiveness, gender issues, communication skills, conflict resolution, relational integrity, cultural awareness and financial planning will be addressed. Research projects and other assignments will include exegetical work in relevant scriptural passages.

MIN3207 Ministry in a Globalized World⁶......2 cr

This course prepares students to understand the impact of globalization on present day ministry. Students will be equipped to investigate diverse social and cultural contexts and develop strategies to minister effectively in an era of cultural, religious, and ethical diversity.

MIN3216 Leadership in Ministry^{\$}\$\$\dots\$......4 cr

A study of the principles and practices of leadership in local church, nonprofit, and mission contexts. This course includes a study of biblical principles for leadership, leadership self-awareness, leadership styles, team dynamics, culture and leadership, and conflict management. Special attention is given to developing strategic initiatives informed by one's organizational mission and vision. A \$40 course fee required.

MIN3218 Teaching Methods in Ministry OCE 0......4 cr (PQ: C- or better in MIN1007 and MIN2016 or BIA1015/1827; COM1075 or COM1825) A theoretical and practical approach to giving students experience in the development and practice- teaching of biblical lessons. The course will address contemporary methods, scope and sequence and curriculum analysis and evaluation, with special attention to the effect of gender and culture on the teaching/

MIN3227 Retreats, Events, and Camps*\$......2 cr

This course gives consideration to biblical, theological, philosophical, and historical foundations of retreats, events, and camps in light of Christian spiritual growth and formation. Principles related to organizational responsibilities and operational aspects of Christian ministry are also addressed. There is an emphasis on the role of retreats, events, and camps in ministry contexts. A \$95 course fee required.

MIN3231 Care and Counseling in Ministry^{\$ ()}4 cr

This course provides a foundation and overview of counseling techniques, practices, and typical counseling situations which are faced in both church and parachurch ministry settings. Emphasis is placed on methods and techniques for effectively counseling people in crisis from all age groups. Guidance is given in the counseling of lay leadership, families in crisis, and the handling of abuse cases. Consideration is given to the legal, ethical, and practical implications of Christian counseling. A \$100 course fee required.

MIN3308 Leading Children and Families 2 cr

A study of the establishment, development and evaluation of children and family ministry. Emphasis will be on practical methods of ministry, leadership, recruitment and training. Learning experiences and curriculum development will focus on integrating spiritual, cognitive, social, emotional, physical and creative domains for the emerging development of the child. Emphasis will be placed on helping congregations become communities that support families and nurture faith of the families.

MIN4306 Preaching and Worship*4 cr

(PQ: BIA1015 or BIA1827 or MIN2016) This course prepares students to faithfully preach the Word of God in partnership with the Holy Spirit. Special emphasis is given to the role of preaching in worship and to general principles for leading worship. Students will deliver two sermons in this course.

MIN4405 Contemporary Issues in Preaching*.....2 cr

(PQ: MIN4306) An advanced preaching course designed to help students understand contemporary issues in preaching including the integration of technology. Students practice using contemporary

MIN4845 Research Seminar2 cr

(PQ: senior standing and MIN3045 or MIN5045U, MIN3216 or MIN5210U, and MIN4991) This course includes both theological and empirical research aiming to introduce students to basic methods of Christian ministry and social science research. Use of observation. interview, and evaluation with an emphasis on the development of critical thinking skills and writing are included. The course is designed to help students gain a fuller understanding of church and parachurch ministries in their socio-cultural settings, enable them to develop more relevant and effective ministries, and prepare students for additional further study. A major research project and paper are included in the course.

(PQ: senior standing and MIN3045 or MIN5045U, MIN3216 or MIN5210U, and MIN4991) During the final semester, in conjunction with an internship or otherwise involved in a ministry setting, students will discuss and evaluate their ministry preparedness, areas of gifting, and calling. Students will revisit and revise the personal theology and philosophy of ministry created during the Ministry Foundations course and complete a ministry portfolio to prepare and guide them in future ministry.

MIN4991, 4992 Ministry Internship I, II. 2 cr each (PQ: senior standing, MIN3216 or MIN5210U, consent of faculty supervisor and internship registration form) Supervised experience in ministry locally or abroad which focuses upon leadership and

counseling. Internship requires 50 hours of ministry per credit. Note: See page 25 for note regarding internships.

MIN5045U Human Development for Ministry.....4 cr

(PQ: acceptance into an accelerated graduate program) This course applies theories of human development and educational psychology to ministry contexts. In addition to completing a ministry research project, students develop a philosophy of formational ministry that applies relevant theory.

MIN5210U Leading and Organizing Ministry[§]4 cr

(PQ: ENG1107, ENG2205, or ENG2825, and acceptance into an accelerated graduate program) This course considers the leadership development of the whole person: knowledge, character, and skill. Practice of leadership and management for the church and for Christian nonprofit organizations will be studied. Students will examine God's vision for their lives, leading and organizing a ministry to accomplish a mission, and how to develop leaders who equip other leaders. A \$40 course fee required.

MIN5310U Pastoral Care......4 cr

(PQ: MIN1007) This course examines the theological foundations and practice of pastoral care. Consideration is given to personal discipleship, the shepherding role, counseling, the ordinances, relational skills, and assessing church health.

MIN5405U Advanced Preaching*2 cr

(PQ: MIN4306 or MIN5410, and acceptance into an accelerated graduate program) This course prepares students to evaluate contemporary approaches to preaching including overall sermonic structure and technological integration. Students identify and utilize advanced preaching strategies.

MIN5410U Ministries of Preaching and Worship4 cr

(PQ: BIA1015 or BIA1827 or MIN2016) This course will focus on the public delivery of God's Word and on the creation and leadership of corporate worship.

MIN5610U Ministering Culturally and Globally......2 cr

(PQ: acceptance into an accelerated graduate program) This course prepares students to investigate social and cultural contexts in order to communicate and minister effectively in a diverse and globalized society. This course also applies theological and philosophical principles related to the global and local mission of the Church.

of faculty supervisor, and internship registration form) Students complete at least fifty hours of ministry field experience during the course of one semester. Through a process of practice and reflection, students evaluate their learning goals, personal growth, and overall growth as a ministry leader. A primary goal of the course is to test your vocational calling through field experience.

MIN5994U Graduate Internship II......1 cr

(PQ: MIN5993U, acceptance into an accelerated graduate program, consent of faculty supervisor, and internship registration form) Students complete at least fifty hours of ministry field experience during the course of one semester. Through a process of practice and reflection, students evaluate their learning goals, personal growth, and overall growth as a ministry leader. A primary goal of the course is to assess one's vocational calling in order to choose an emphasis track in the M.Div. program.

Multi-Disciplinary Studies

Music - Applied

CLASS APPLIED

A study of basic solo vocal techniques, including breath control, proper tone production, diction and stage presence, as well as psychological aspects, taught in a class setting. Course may be repeated.

MUP2013 Group Piano......1 cr

Instruction and practice in piano technique, repertoire, harmonization, transposition, accompanying, hymn playing, score reading, and sight reading. **Note**: This course is designated as repeatable for credit until the student passes the piano proficiency level required for the degree.

MUP3216 Keyboard Techniques**2 cr

(PQ: MTC2112 or consent of instructor) An overview of keyboard skills including score reading, transposition, improvisation, chart reading and figured bass realization.

INDIVIDUAL APPLIED

A separate lesson fee (see page 15) will be assessed per credit. 1 credit (25- to 30-minute lesson); 2 credits (50- to 60-minute lesson). A private lesson registration form is required for permission to register in each semester of study.

Note: Private lessons are designated as repeatable unless designated otherwise.

Applied numbers:

2XXX: All music minors, elective students, and secondary instrument study for music majors.

3XXX: All music majors primary instrument

(PQ: audition for first semester of study) Private, individual voice lessons for music minors, elective students, and secondary instrument study for music majors.

MUP3100 Private Voice - Major...... 1-2 cr

(PQ: Acceptance by audition as a music major) Private, individual voice lessons for vocal music majors. Required Vocal Lab class meets weekly with studio teacher.

MUP2210 Private Piano......1-2 cr

(PQ: audition for first semester of study) Private piano lessons for music minors, elective students, and secondary instrument study for music majors.

(PQ: Acceptance by audition as a music major) Private piano lessons for piano majors. Required piano lab meets weekly with the studio teacher.

MUP2227 Private Organ 1-2 cr

 MUP2230 Private String
 1-2 cr

 MUP3130 Private String - Major
 1-2 cr

(PQ: Acceptance by audition as a music major) Private string lessons for string majors. String Lab, GSR & Jury required.

(PQ: Acceptance by audition as a music major) Private woodwind lessons for woodwind majors. Wind Lab, GSR & Jury required.

MUP2250 Private Guitar	MUP2228 Private Songwriting
MUP2270 Private Brass	MUP2258 Private Commercial Guitar
MUP2280 Private Percussion	MUP2288 Private Drum Set
MUP2290 Private Harp	MUP2358 Private Electric Bass
MUP2260 Private Composition	(PQ: MUS3277 or consent of instructor) A continuation of conducting study with emphasis on expressive elements, score study, and rehearsal techniques.
motivic construction. Required Composition Lab meets weekly with the composition teacher.	MUP3695 Junior Recital - Half ^s
MUP3160 Private Composition - Major	on major instrument) Half recital for juniors in a Bachelor of Music Performance major. A \$200 course fee required.
standard musical forms with a focus on melodic and motivic construction. Initial works will be written for one or two instruments. Additional semesters of study will include the use of more intricate forms and the composition of works for varied ensembles. Required Composition Lab meets weekly with the composition teacher.	MUP4695 Senior Recital - Half*
MUP2360 Private Counterpoint1-2 cr	
(PQ: C- or better in two or more semesters of private composition lessons) Study of 18th century counterpoint through composition and analysis of invention, canon, fugue and related contrapuntal forms. Required Composition Lab meets weekly with the composition teacher.	MUP4696 Senior Recital - Full ⁵
MUP3360 Private Counterpoint - Major*	
Music – Ensembles Note: A separate fee (\$) will be assessed (see page 15). Courses in this se	ection are designated as repeatable.
MEN3001 Northwestern Choir\$ 0-2 cr MEN3002 Con Brio Men's Chorus\$ 0-1 cr MEN3003 Amata Women's Chorale\$ 0-1 cr	MEN3015 Worship Team 0-1 cr Ensemble participation. 0-2 cr
MEN3004 Chamber Singers ⁵	MEN3040 Symphonic Bands 0-2 cr MEN3041 Jazz Ensembles 0-1 cr MEN3042 Chamber Music 0-1 cr

Music - General

MUS1000 Music Hour......0-1 cr A weekly assembly of music majors and minors for the purpose

of student performance or discussion of topics of significance to musicians. On campus and off-campus concert attendance is required. **Note**: This course is designated as repeatable.

MUS2176 Fundamentals of Conducting*.....2 cr

(PQ: MTC2112) Technique, practices and principles of conducting, including hand and baton technique, metric patterns, tempo, style, dynamics, terminology study and preparation of the score. Practical experience with performing organizations is stressed.

MUS3101 Diction for Singers I*.....1 cr

(PQ: two semesters of private voice lessons as a major or consent of instructor) One class and one lab per week. An introduction to the study and application of the International Phonetic Alphabet (IPA) and its guidelines for usage in singing Italian and English vocal literature. Practical application will occur in the lab class through individual and group coaching of singing and speaking.

MUS3102 Diction for Singers II*1 cr

(PQ: C- or better in MUS3101 or consent of instructor) One class and one lab per week. A continuation of the study and application of the International Phonetic Alphabet (IPA) and its guidelines for usage in singing German and French vocal literature. Practical application will occur in the lab class through individual and group coaching of singing and speaking.

MUS3215 Piano Pedagogy*2 cr

(PQ: sophomore music major or consent of instructor) Procedures for teaching keyboard fundamentals and musicianship for private and class lessons, including a survey and analysis of current developmental psychologies, teaching methods and materials for beginning students. Includes practical experience in individual piano teaching.

MUS3277 Advanced Conducting*......2 cr

(PQ: MUS2176) A continuation of conducting study with emphasis on expressive elements, score study and analysis, and rehearsal planning and techniques.

MUS4405 Vocal Pedagogy*......2 cr

(PQ: Successful completion of the Music Major Progress Interview, or consent of instructor; vocal performance specialization students to take concurrently with MUS4841) A study of the basics of vocal production for singing and speaking: volition, body alignment, respiration, phonation, registration, resonation, articulation, and coordination. Anatomy and physiology of the vocal mechanism and its processes for vocal production. Mind-body integration concepts. Introductory information and techniques for healthy and efficient singing and speaking. Includes some out-of-class observations. Prerequisite for registration in MUS4405 for B.M.E. Piano Majors with Voice Emphasis is the completion of the minimum vocal proficiency requirements.

(PQ: successful completion of the Music Major Progress Interview and piano proficiency and consent of faculty supervisor, or declared minor in Music Composition and consent of faculty supervisor; vocal performance specialization students to take concurrently with MUS4405) A capstone experience for the B.A./B.S. Music degree. In cooperation with the faculty supervisor, the student will propose and complete a project demonstrating knowledge and skills acquired in their coursework and/or looking ahead to potential career opportunities.

MUS4995 Music Internship......1-2 cr

(PQ: successful completion of the Music Major Progress Interview and piano proficiency and consent of faculty supervisor, and internship registration form) Supervised experience in a real-world setting requiring a variety of skills, including, but not limited to, organizational, administrative, technical and musical abilities. 40 hours of on-site work is required per credit. Note: See page 25 for note regarding internships.

Music History

MUH3101 Western Music History to 1750* WCE4 cr

(PQ: MTC2112; ENG1107, ENG2205, or ENG2825; or consent of instructor) A study of the music of Western civilization traced from its primitive origins through the Renaissance to the Baroque period, ending with the music of J.S. Bach.

MUH3102 Western Music History after 1750* WCE......4 cr

(PQ: MTC2112; ENG1107, ENG2205, or ENG2825; or consent of instructor) A study of the music of Western civilization from the Rococo period to the present day, with special attention given to the major musical forms in vocal and instrumental music as demonstrated in the works of the major composers.

MUH3105 American Music......2 cr

A survey of the roots and development of American music from European, African and Native American sources. Both popular and art forms are studied, including worship music in the American Christian church.

MUH3106 Music in World Cultures2 cr

An introductory study of cultural traditions, belief systems and practices of world cultures as approached through the study and analysis of the music of ethnic groups. Various worldviews are examined through comparison with biblical and theological concepts.

Music in the Church

Directed studies are available. See page 26-27.

MCH3125 Theology of Worship*......2 cr

(PQ: MIN1007) An introduction to worship theology and worship arts with an overview of traditional, contemporary, and convergent worship forms and styles in the role of worship leading. Students will develop their own theology of worship statement.

MCH4995 Music Ministry Internship2 cr

(PQ: Successful completion of the Music Major Progress Interview and piano proficiency and consent of faculty supervisor, and internship registration form) Supervised experience in a local church music ministry setting that includes experience in worship planning/leading as well as administrative and technical experiences. 80 hours of ministry work required. Note: See page 25 for note regarding internships.

Music Literature

(PQ: successful completion of the Music Major Progress Interview or consent of instructor) A survey of art song literature and selected vocal chamber music from the 17th century through the 21st century.

MUL4315 Piano Literature*......2 cr

(PQ: MUH3101, MUH3102 and successful completion of the Music Major Progress Interview, or consent of instructor) A study of the literature for piano, surveying the repertoire of the late 17th century through the 21st century.

MUL4345 Instrumental Literature - Major Instrument**......2 cr (PQ: MUH3101, MUH3102 and successful completion of the Music Major Progress Interview, or consent of instructor) A study of available literature for a student's major instrument. The study includes literature from all grade levels and historical periods.

Music Theory & Composition

MTC1007 Music Theory Foundations......4 cr A study of the foundational concepts of music: pitch, rhythm, scales, modes, intervals, chords, and harmony with an introduction to notation software, piano, and singing.

MTC2004 Sight Singing and Ear Training II1 cr (PQ: C- or better in MTC1007) This course parallels MTC2112 from an aural standpoint with the addition of two- and three-voice dictation and an introduction to chord progressions. Passing the department competency exam fulfills the course requirement, but does not earn credit.

MTC2112 Music Theory II: Diatonic Practice......3 cr (PQ: C- or better in MTC1007) A continuation of MTC1007 with a basic understanding of the orchestral score and its analysis, instrument transpositions, higher tertian chords, modulation and secondary functions, as well as more advanced analysis. Passing the department competency exam fulfills the course requirement, but does not earn credit.

MTC3101 Music Theory III: Chromatic and Jazz-Pop Harmony oce .3 cr (PQ: COM1075 or COM1825 and C- or better in MTC2112.) A study of chromaticism: modal mixture; Neapolitan sixths; augmented 6th; 9th, 11th, 13th chords; altered dominant and chromatic mediant chords; sonata form; jazz and pop harmonies. Students write as well as analyze music. Passing the department competency exam fulfills the course requirement, but does not earn credit.

MTC3102 Music Theory IV: Practices after 1875 3 cr (PQ: C- or better in MTC3101; to be taken concurrently with MTC3104) A study of compositional practices of the late 19th century to the present. Students research, perform and present a paper on a work from the 20th/21st century. Also, students compose two pieces to be rehearsed and performed for the class. Passing the department competency exam fulfills the course requirement, but does not earn credit.

MTC3103 Sight Singing and Ear Training III......1 cr

(PQ: C- or better in MTC2004.) A laboratory class including solfège singing of chromatic music, rhythmic dictation, melodic and harmonic dictation with modulations, recognition of seventh chords, syncopation, modes and atonal sight singing. Passing the department competency exam fulfills the course requirement, but does not earn

MTC3104 Sight Singing and Ear Training IV1 cr (PQ: C- or better in MTC3103) A laboratory class concentrating on

atonal sight singing, changing meters and nonfunctional harmonic progressions, as well as continued work on speed in sight-reading music of all styles. Passing the department competency exam fulfills the course requirement, but does not earn credit.

(PQ: C- or better in MTC3101 and successful completion of the Music Major Progress Interview) Study of the characteristics and capabilities of orchestral instruments as applied to composing, orchestrating and arranging.

MTC4209 Choral Arranging*......2 cr

(PQ: C- or better in MTC3101 and successful completion of the Music Major Progress Interview) A study of the technique of arranging music for voices.

MTC4305 Analytic Techniques*......3 cr

(PQ: C- or better in MTC3102 and successful completion of the Music Major Progress Interview) A survey of standard analytical techniques applied to major forms from the Baroque through the Modern period. Includes an introduction to the analysis of 20th-century music: set theory, Schenkerian analysis and newer compositional techniques.

Nursing

NUR1005 Success in Nursing1 cr

This course is designed for those exploring the possibility of a career in nursing, enabling students to evaluate their interests, capabilities, and compatibility with the nursing profession. Utilizing a mix of selfassessment tools, students will reflect on their values and interests concerning nursing. Career exploration activities provide a broad overview of the nursing field, including its various specialties, practical experiences, and potential career paths. Through this holistic approach, students are equipped to make informed decisions about pursuing a nursing career, aligning their personal and professional aspirations with the realities of the profession.

NUR2215 Professional Nursing: Called To Serve......2 cr

This course introduces the student to the concept of professional nursing as a Christ-centered calling. The course will explore ways students can be successful in the School of Nursing program. Skills and abilities characteristic of a professional nurse will be emphasized. Topics of professionalism, resilience, self-care, patient advocacy, nursing judgment, leadership, and current trends in nursing will be addressed.

NUR2216 Assessment and Communication Strategies for Service . . 4 cr This course develops foundational health assessment and

communication skills related to individuals within the home, church. community and world. Service to the well-adult population will be emphasized.

NUR2218 Foundational Adult Care Services⁵......6 cr

This course introduces the hands-on application of the biblically based Christian worldview to professional practice. Development of foundational nursing skills related to serving adult individuals and families across the continuum of healthcare environments will be emphasized. A \$260 clinical fee required.

NUR3215 Pharmacology and Therapeutic Services 3 cr

(PQ: C or better in NUR2215, NUR2216, and NUR2218) This course will introduce pharmacology principles and therapeutic modalities into nursing ministry and services. It will emphasize pharmacological agents and their effects on body systems and medication administration.

NUR3217 Serving Through Interprofessional Collaboration2 This course introduces students to the defining characteristics and competencies of interprofessional practice incorporating a biblically based Christian worldview. It focuses on the nurse as a member and leader of the interprofessional collaborative team. Emphasis is on communication, teamwork, and knowledge integral to the discipline of professional nursing.

NUR4317 Community and Population-Based Care Services⁶....4 cr (**PQ**: C or better in NUR3315, NUR3316, NUR3317, and completion of all pre-requisite courses) Explore community- and population-based care with an emphasis on health promotion and disease prevention within a biblically based Christian worldview. Provide nursing ministry and services using in-person or virtual-delivery systems. This course incorporates a community-based clinical-immersion experience. A \$260 clinical fee required.

NUR4319 NCLEX-RN Preparation for Service 2 cr (PQ: C or better in NUR3315, NUR3316, NUR3317, and completion of all pre-requisite courses) This course assists students with preparation (emotional, physically, spiritually and academically) for taking the NCLEX-RN examination required for licensure as a registered nurse.

Philosophy

theological nature of knowledge, and the dependence of the created order upon the providential activity of God. Particular attention will be given to topics such as the Creator/creature distinction, the effects of sin and regeneration on the mind, and the relationship between general and special revelation.

PHI3016 Modern Philosophy2 cr

A survey of the history of philosophy from Descartes to the close of the 20th Century. The course focuses on major developments and figures in philosophic thought with particular attention to Descartes, Hume, Kant, the Existentialists, Postmodernists, and Analytic philosophers. The course will also trace the relationship between Christianity and movements in the last four centuries of philosophy.

PHI3025 God and Philosophy......2 cr

(PQ: ENG1107, ENG2205, or ENG2825) This course is a critical examination of historical and contemporary views on several philosophical problems addressed by Christians and those in other monotheistic religions for centuries. These include such questions as the following: Does God know the future? How could God be absolutely sovereign and people be free? Since there is evil, what sense can be made of the claim that "God is good"?

PHI3028 The Problem of Suffering2 cr

This course examines the various solutions to the problem of suffering. In particular, if God is all-good and all-powerful, then why do people still suffer?

PHI3035 Metaphysics......2 cr

This course surveys metaphysics as the study of the nature of reality and is concerned with identifying and understanding the fundamentally distinct sorts of things that exist such as properties, relations, time, causality, freedom, mind, numbers, sets and possible worlds. The course attempts to relate these things to the doctrine of creation and to the dynamics of God's acting according to his plan for his purposes in Christ. This is a course in worldview integration for those majoring in physical and social science, mathematics, or in any of the humanities.

PHI3036 Jonathan Edwards Seminar**.....4 cr

This course examines the Christian philosophy and theology of Jonathan Edwards (1703–1758) in its early modern setting. It critically evaluates his theses, argumentation and practical implications regarding God's motive and purpose in creation as it is expressed in his Dissertation of the End for which God Created the World. (The first half of the course explores Edwards' philosophical argument as expressed in the introduction and Chapter One. The second half examines his biblical and theological argument as expressed in Chapter Two.) This work is the centerpiece of his life-long interest in understanding how science, metaphysics, history, ethics and especially religious experience are rooted in his view of the dynamics and purpose of God's acting.

PHI3037 Science and Theology4 cr

Course also listed as SCI3037. In this course, students will explore the interdisciplinary dialogue between scientists and theologians on critical, moral, ethical, scientific and theological issues. The course will read and discuss current literature in Science and Theology and explore major issues in context of the historical and contemporary framework of both disciplines.

PHI3057 Christian Apologetics*......2 cr

This course explains and argues for Christian beliefs about such topics as the existence of God, the reliability of Scripture, miracles, the problem of evil, science and the Bible, and other religions. Students will be introduced to different approaches to apologetics and investigate the relationship between apologetics and saving faith.

PHI3145 The Nature of Knowledge^{OCE}......2 cr

(PQ: COM1075 or COM1825) This course examines the question. When does a belief count as knowledge? It addresses the relevance of the knower in knowing, the role of proof and evidence, and the major historical and contemporary theories of epistemology such as skepticism, relativism, and empiricism.

PHI3165 Political Thought......4 cr

(PQ: ENG1105, ENG1107, or ENG1825, and HIS1005, HIS1825, or HIS1826) Course also listed as POS3165. This course considers how individuals have thought and written about politics from a philosophical perspective. It seeks to understand both Ancient and Modern perspectives, and it will emphasize Christian political thought. It will also consider normative considerations about justice and the nature of political rights.

(PQ: senior standing) In this capstone project, students will write a substantial paper under the supervision of a philosophy faculty member. The paper will address a philosophical issue and require an integration of themes in metaphysics, epistemology, and/or ethics, as well as advanced research skills and a demonstrated awareness of the history of the issue.

Physical Education Activity Courses

NOTE: SOME PHE COURSES MAY REQUIRE A FEE.

PHE1005 Basketball**	1 cr
PHE1007 Volleyball	1 cr
PHE1015 Aerobics	1 cr
PHE1016 Fitness**	1 cr
PHE1018 Power Walking	1 cr
PHE1019 Weight Training	1 cr
PHE1021 Beginning Tennis	1 cr
PHE1025 Badminton*	1 cr
PHE1026 Racquetball*	1 cr
PHE1031 Beginning Swimming**	
PHE1035 Canoeing**	1 cr
PHE1056 Bowling ^{\$ **}	1 cr
PHE1057 Golf ⁵	1 cr

PHE1065 Lifetime Fitness and Wellness1 cr

This course is an introduction to fitness and health principles with an emphasis on physical activity, nutrition, weight management and health related fitness concepts. Students will have the opportunity to assess their current levels of physical fitness, nutrition and activity patterns in order to develop a personalized health and fitness program. Students will be required to participate in a variety of physical fitness activities as well as the study of pertinent principles governing fitness.

PHE1066 Fitness and Health for Life##......2 cr

This course is designed to motivate and enable students to improve their knowledge and application of lifelong and optimal fitness and health. Students will learn how to assess themselves in the fitness areas of cardiovascular, body composition, muscular strength and endurance and flexibility within the FITT formula. This course will also cover topics such as body image, weight control, nutrition, emotional health, sleep habits and personal relationships as they affect the vigor and vitality that is needed to function physically, psychologically and socially. Only offered through Dual Enrollment.

PHE2075 Athletic Performance Development*.....1 cr This course is designed specifically for the athlete or the coach of athletes who want a better understanding of the unique underlying principles of athletic conditioning, fitness and improvement of athletic performance.

PHE2085 Theory of Coaching Baseball*.....1 cr Students will learn the strategies and techniques to teach the game of baseball. Students will develop drills and philosophies to assist the student in their development as a baseball coach.

PHE2086 Theory of Coaching Basketball*.....1 cr The student who successfully completes this course will be able to use coaching theories and techniques in coaching middle age and high school basketball.

PHE2087 Theory of Coaching Football**.....1 cr Students will learn fundamental strategies and techniques to teach the game of football. Students will develop drills and philosophies to assist the student in their development as football coach.

PHE2088 Theory of Coaching Volleyball*1 cr Students will learn the strategies and techniques to teach the game of volleyball. Students will develop drills and philosophies to assist the student in their development as a volleyball coach.

PHE2089 Theory of Coaching Youth Sports**2 cr To develop hands on knowledge on the basics to coach youth sports. This course acquaints students with necessary skills to coach youth sports.

Physics

Note: For all natural science courses, the student must earn a "C-" or better in all prerequisite courses.

PHY1005/1005L Concepts of Physics** \$ 3 cr (NOT available to students who have received a grade of C or better in any PHY course) A topical study of physics at the introductory level with some applications to contemporary society. Concepts covered are selected from: history, methods, motion, energy, electricity and magnetism, light, the atom, the nucleus and some current areas of research in physics. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

PHY1101/1101L Fundamentals of Physics I⁵......4 cr (PQ: C- or better in MAT1126 or ACT Math score of 24 or above [SAT-I Math score of 580 or above], or B- or better in high school (or college-equivalent) pre-calculus, trigonometry, or advanced algebra with trigonometry) This course stresses the use of fundamental principles to solve quantitative problems. Mechanics, rotations and waves. Motion in one dimension, vectors, motion in two and three dimensions, force and Newton's laws, particle dynamics, work and energy, conservation of energy, rotational kinematics, rotational dynamics, angular momentum, fluids, oscillations, gravitation and other topics as time permits. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

PHY1102/1102L Fundamentals of Physics II⁵4 cr (PQ: C- or better required in PHY1101 or PHY1201) This courses stresses the use of fundamental principles to solve quantitative problems. Electricity and magnetism; optical phenomena; modern physics. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

PHY1201/1201L Engineering Physics I^{\$}4 cr (PQ: C- or better in MAT2121 or concurrently enrolled; one year

of high school physics or PHY1101 recommended) Calculus-level, general physics course stressing the use of fundamental principles to solve quantitative problems related to mechanics, rotations, and waves. Specific topics include motion in one dimension, vectors, motion in two and three dimensions, force and Newton's laws, particle dynamics, work and energy, conservation of energy, conservation of momentum, rotational kinematics, rotational dynamics, angular momentum, oscillations, gravitation and fluid statics. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

PHY1202/1202L Engineering Physics II⁵......4 cr (PQ: C- or better in MAT2122 and C- or better in PHY1201) Second semester of calculus-level general physics course stressing the use of fundamental principles to solve quantitative problems. Electric circuits, electricity and magnetism. Current and resistance, DC circuits, electric charge, Coulomb's Law, the electric field, Gauss' Law, electric potential, capacitors and dielectrics, the magnetic field, Ampere's Law, Faraday's Law, inductance, AC circuits, magnetic properties of matter and waves. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in

PHY2203/2203L Engineering Physics III** \$......4 cr (PQ: C- or better in PHY1202) Third semester of calculus-level general physics course stressing the use of fundamental principles to solve quantitative problems, optics and waves. Modern physics, including quantum mechanics, special relativity and the atomic structure of materials. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Concurrent registration required in lecture and lab.

lecture and lab.

Political Science

POS1005 Introduction to Political Science4 cr An introduction to the study of political power, political groups and parties and political ideologies. The modern state and its relationship to the individual and to political groups will be discussed. Constitutions, branches of government, bureaucracy and international politics will also be studied.

POS2005 U.S. National Government*......4 cr

The study of the structure and processes of American national government and its political processes and institutions. Particular attention is paid to constitutionalism, federalism, the presidency, the Congress, the Judiciary, bureaucracy, interest groups and policy formation.

POS2625 Workshop in Student Government......0-1 cr

(PQ: consent of instructor) For student government members only. Note: This course is designated as repeatable and may be repeated five times after the original taking of the course.

POS2695 Minnesota Legislative Internship 1-8 cr

(PQ: POS1005 or POS2005 or consent of instructor; internship forms required) Supervised work experience in the Minnesota legislature. Designed to provide a variety of experiences in the legislative process, research and political activity. Requires application both to the internship program at the State Capitol and to the university for approval. Credits may not be used to satisfy core curriculum requirements. May not be repeated for credit.

POS3165 Political Thought	POS4625 Workshop in Student Government
Psychology PSY1005 Introduction to Psychology*	PSY3207 Abnormal Psychology ^o
intelligence and personality.	assessment, diagnosis, and the conceptualization of disorders as defined by the Diagnostic Statistical Manual classification system. An
PSY2105 Social Psychology**4 cr	exploration of etiology, diagnostic considerations, and cultural factors
(PQ: PSY1005) A study of behavior and cognition as a function of interpersonal relationships and group contexts. Topics include person perception, attitudes and attitude change and motivation of social	will be emphasized. Clinical and scientific research will be examined to understand psychopathology and mental health.
behavior.	PSY3209 Physiological Psychology4 cr
PSY2108 Lifespan Psychology*4 cr	(PQ: PSY2108) An examination of how psychological functioning impacts and is impacted by physiological functioning. Areas studied
A study of the nature and implications of development from conception through death. Emphasis is upon cognitive, moral, spiritual, emotional, interpersonal and self development. Topics to be addressed include:	include central and peripheral nervous systems, sensation and perception and neuropsychological functioning, with an emphasis on brain-behavior relationships.
stages of development from birth through adolescence; maturation during the college years; critical periods of adulthood, marriage and parenting; ageism and physiological processes of aging; death and dying.	PSY3215 Interpersonal Psychology
PSY3005 Statistics and Research for the Social Sciences4 cr (To be taken concurrently with MAT1035L, if required.) This course	and theological factors on relationships is examined with emphasis given to sexual function and dysfunction.
introduces students to descriptive and inferential statistics and	PSY3218 Psychology of Gender2 cr
experimental/non-experimental methods used in social science research. Students will gain conceptual and working knowledge of measures of central tendency and dispersion, z-scores, correlation and regression, hypothesis testing, parametric tests (t tests and one-way	(PQ: PSY2108) An examination of current approaches associated with the psychological and sociological study of gender. In this course we explore the ways in which men and women are different, study and critique theories that attempt to explain those differences and
ANOVA) and nonparametric tests (sign test, U test, and chi-square). Attention is given to writing research results using APA guidelines.	recognize how and when those differences are meaningful.
Attention is given to writing research results using APA guidelines.	PSY3305 Research Methods in Psychology ⁰ 4 cr
PSY3135 Positive Psychology	(PQ: PSY3005) A course designed to acquaint students with the scientific method as it is applied to research in psychology. Application
experiences, positive character strengths, positive relationships,	of research statistics is stressed. Students are taught to write their
and the institutions and practices that facilitate their development, (including spiritual institutions and practices). This course will	results according to A.P.A. guidelines.
examine these positive domains that lead to human flourishing.	PSY3308 Principles of Counseling ⁶
Throughout the course students will engage in experiential learning and practical exercises to increase well-being, which will inform our	A study of the clinical types of mental illness, the schools of psychotherapy and the theories and techniques of counseling.
theoretical and empirical understanding of important questions in	Emphasis is upon personality integration and the principles of mental
positive psychology.	health. Consideration is given to the legal, ethical and practical

is given to the behavioral, cognitive, social learning and information

processing approaches to learning. Students are encouraged to apply

their understanding of different learning theories to clinical situations.

PSY3317 Treatment of Special Populations4 cr (PQ: PSY3308) An examination of issues and dynamics associated with understanding and treating persons dealing with death, dying, bereavement, child abuse and substance abuse.

implications of counseling relationships. Reference is made to various

PSY3315 Counseling Children4 cr

(PQ: PSY3308) Identification of childhood disorders and the

development of appropriate treatment plans. Study of techniques of

play therapy, art therapy and cognitive behavioral theory.

personality tests.

(PQ: PSY3308 recommended or may be taken concurrently) Students

examine theories and intervention techniques in marriage and family counseling. Methods of assessment are addressed. Specific issues

facing couples and families are considered.

COURSE DESCRIPTIONS

PSY3326 Psychology of Stress Management** 4 cr This course examines the physiological, psychological and spiritual dimensions of stress and its management. Students are trained in practical stress management techniques. The relationship between stress, illness and pain management are considered.	PSY4318 Marriage and Family Dynamics
PSY3327 Psychology of Pain Management**	online through Adult Undergraduate. Included in the Traditional Undergraduate tuition block.
psychological and social causes of pain are considered in the context of a Christian worldview. Attention is given to the role of personality characteristics and pain. Methods of treating pain are examined.	PSY4365 Family Communication and Relationships 64 cr (PQ: PSY3308 recommended or may be taken concurrently) This course focuses on the psychosocial and spiritual foundations for
PSY3329 Professional Issues in Psychology	healthy communication and interpersonal relationships within families. Strategies for developing appropriate problem solving and communication patterns are discussed.
application of these principles in a clinical setting. This course will also address issues of cultural competence, limits of competence and topics in preparation for graduate school.	PSY4367 Intervention Strategies with Families ⁶⁰ 4 cr (PQ: PSY3308 recommended or may be taken concurrently) This course is an examination of effective methods for addressing problems
PSY3615 Health Psychology Practicum**	within families. Forms of neglect and abuse are examined and crisis intervention techniques are also considered. Case studies are used to apply interventions from a Christian worldview. Only offered online through Adult Undergraduate. Included in the Traditional Undergraduate tuition block.
PSY4025 Foundations of Health Psychology	PSY4407 Integration of Psychology and Theology**
on health and wellness is developed. Only offered online through Adult Undergraduate. Included in the Traditional Undergraduate tuition block.	PSY4425 Clinical Health Psychology** **
PSY4026 Stress Management Strategies	with prevention and intervention recommendations. Only offered online through Adult Undergraduate. Included in the Traditional Undergraduate tuition block.
Only offered online through Adult Undergraduate. Included in the Traditional Undergraduate tuition block.	PSY4835 Senior Seminar in Psychology Oct WCE
PSY4027 Pain Management Strategies	standing) This seminar emphasizes the skills of critical thinking and oral and written communication at the senior level. Students investigate a variety of critical and controversial issues in psychology
of pain are examined in relation to personality characteristics as well physiological and psychological dimensions. Only offered online through Adult Undergraduate. Included in the Traditional Undergraduate tuition block.	and conceptualize an integrative Christian response. Students are engaged in discussion groups, writing projects and a formal presentation to facilitate skill development.
PSY4305 Measurement and Assessment*4 cr	PSY4841 Directed Psychological Research I
(PQ: PSY3005 and PSY3207) Survey of basic concepts and principles of psychological measurement, including factors influencing validity and reliability. The student becomes acquainted with the administration and interpretation of tests which assess intellectual	work in a laboratory setting to develop and conduct an empirical research project. Students conduct background literature reviews in their specific area of interest, design an appropriate research method, obtain IRB approval of research, recruit participants and
and personality functions.	begin testing participants. Students will also complete the first half of the psychological research report, which includes the literature
PSY4306 History and Philosophy of Psychology	review and the Method section. Note : This course is designated as repeatable and may be repeated for up to 4 total credits.
foundations. Students apply critical thinking skills to identify, compare, contrast and evaluate the underlying assumptions of the	PSY4842 Directed Psychological Research II
various schools of psychology and formulate their own philosophy of social science research.	complete testing of study participants, analyze testing data, complete the written report (Results and Discussions sections) and submit the report for professional publication/presentation. Note : This course
PSY4316 Marriage and Family Counseling $^{\circ}$ 4 cr	is designated as repeatable and may be repeated for up to 4 total

credits.

note regarding internships.

PSY4995 Psychology Internship......1-8 cr

(PQ: consent of faculty supervisor and internship registration form) Supervised work experience in psychology. Note: See page 25 for

Public Relations

Directed studies are available. See pages 26-27.

An introduction to journalistic writing for various media platforms, with an emphasis on print and web. Basic news and feature writing are done as students consider structure, organization, fact-gathering and other components of the journalistic story.

PRL2085 Public Relations and Social Media Strategies 4 cr

The nature and role of public relations, activities of public relations professionals, major influences which affect organizational behavior and the ethics of public relations professionals. Examination and practice of skills and techniques used in the practice of public relations. Students begin developing a professional portfolio.

PRL3035 Nonprofit PR**2 cr

This course is structured to provide students with a thorough grounding in the principles and practice of two distinctive PR aspects of nonprofit organizations: fundraising (development) and volunteer relations. Students will consider development planning frameworks and a variety of conceptual tools before moving on to consider donor behavior (the underlying psychology and sociology) and each major form of fundraising in turn. The course will include an examination of the critical managerial and sectoral issues affecting the fundraising function, such as campaign integration and public trust and confidence. The course will then conclude with a discussion of best practices in volunteer recruitment, training, management, motivation, recognition, and relationship development.

PRL3187 Sport Public Relations**.....2 cr

This course focuses on developing the essential capabilities needed to serve as a communications consultant or employee for in the sports industry. The course is designed to help students gain experience in researching, planning, staging, scripting and critiquing the types of communications used by sports public relations professionals. Students should develop a strong understanding of the importance of communications—especially ethical communications—in sport public relations.

PRL3386 PR Events: Planning and Management*.....2 cr

This course focuses on developing the essential capabilities needed to stage and execute a wide variety of events relevant to the public relations profession. The course is designed to help students gain experience in researching, planning, staging, scripting and executing an array of events used by public relations professionals. These include press conferences, professional workshops, product launches, events sponsorship and coordination with partner organizations. Discussion of public relations tactics is integrated into the course.

PRL3387 Political Communication*......2 cr

This course focuses on developing the essential capabilities needed to serve as a communications consultant or employee on a political campaign or for a public affairs or public policy organization (special interest group). The course is designed to help students gain experience in researching, planning, staging, scripting and executing an array of communications used by public office seekers. Discussion of both political campaign principles and tactics is integrated into the course. Students should develop a strong understanding of the importance of communications in the political process.

This course provides hands-on experience in the operation of an in-house public relations agency. The main client is promoting and publicizing the activities of the Department of Communication and partnering with other student-led workshops. Students choose from various PR activities including web strategy and content, social media, publicity, news, and research.

PRL4385 Public Relations Cases and Crisis Communication4 cr

(PQ: PRL2085) This course focuses on the analysis of public relations case studies with a special emphasis on strategic communication and crisis communication. Students should develop a strong understanding of the strategic communication planning process, including research, SWOT analysis, objective development, strategy and tactic development, budgeting, calendaring and evaluation.

(PQ: PRL4385 and senior standing) A capstone experience for Public Relations students in their senior year. An original, individual project is planned and completed during the semester.

PRL4995 Public Relations Internship 1-4 cr

(PQ: junior or senior standing, consent of faculty supervisor, and internship registration form) Supervised work experience in public relations. Note: See page 25 for note regarding internships.

PRL4996 Event Planning Internship 1-4 cr

(PQ: junior or senior standing, consent of faculty supervisor, and internship registration form) Students gain hands-on experience in off-campus businesses and organizations, based on student interest and career objectives in event planning and management. Note: See page 25 for note regarding internships.

Science - General

SCI1006 Creative Explorations of Earth Science 2 cr

An introduction to earth science, including comparison of the standard evolutionary-uniformitarian interpretation of earth features with the catastrophic-creation account. The claims of both philosophies are examined by the observations of science. Includes rock formation, fossils, critique of dating methods and the geologic time column.

SCI1008 Introduction to Scientific Thought**2 cr

An examination of the history, development, philosophy and practice of the natural sciences in the Western world from prehistory to the present day. Laboratory exercises may include fundamental concepts in astronomy, biology, chemistry, geology, and physics.

SCI1010/1010L Environmental Science^s4 cr

Principles of the interrelationships between organisms and their environment. Discussion of issues including air and water pollution, waste disposal, population growth, resource management, public policy, ethics, and environmental stewardship. Three lectures and one two-hour lab per week. A \$200 laboratory fee required. Credit from SCI1029 (see College of Graduate, Online, & Adult Learning catalog) may not count toward/for SCI1010. Equivalent to SCI1015/1015L. Concurrent registration required in lecture and lab.

SCI1015/1015L Environmental Science and Sustainability##....5 cr A study of the principles of sustainability and the effect of human systems on the interrelationships between organisms and their environment. Discussion of issues including air and water pollution, climate change, waste disposal, population growth, resource management, public policy, and ethics. This course fulfills the core curriculum Natural Science requirement within the Scientific & Quantitative Literacy section. Equivalent to SCI1010/1010L. Only offered through Dual Enrollment. Concurrent registration required in SCI1015 and SCI1015L.

SCI1045 Medicinal Chemistry and the Drug Discovery Process . . 2 cr (PQ: One year of high school algebra recommended) This course offers a layperson's overview of the drug development timeline from early discovery research with natural sources through human clinical trials, regulatory approval, and accompanying concerns of financial and ethical significance. The scientific foundation explores the distinction between natural and synthetic, means of measuring efficacy and toxicity, and equips students to make informed decisions about pesticide use, artificial sweeteners, pseudoscience, and related health practices for their own lives. Infrequent lab work may include purification of the chemical constituents of coffee, bananas, herbs, spices, and other foods and medicines.

Sociology

A study of social organization, processes and control. Consideration is given to methodology and concepts in the areas of role and status, social and cultural change, deviancy and disorganization, urbanization and minority groups and primary groups and socialization.

Spanish

Directed studies are available. See pages 26-27.

(PQ: SPA1002 or completion of three years of Spanish during high school with minimum course grade average of B- or consent of instructor) This course reviews material and expands target language skills: reading, writing, listening, speaking. Authentic experiences, class discussions, and independent interests provide opportunities for individual oral and written expression. This course is virtually enhanced: approximately 20% of activity takes place in an online environment.

SPA2102 Intermediate Spanish II......4 cr

(**PQ**: C or better in SPA2101 or consent of instructor) This course continues the development of target language communicative modes: presentational, interpretive, and interpersonal. A wide variety of topics provide opportunity for personalized oral and written expression. This course is virtually enhanced: approximately 20% of activity takes place in an online environment.

SPA3201 Spanish Grammar.....4 cr

(PQ: C or better in SPA2102 or waiver for SPA2102 by placement examination or consent of instructor.) The primary goal of this course is to solidify the students' linguistic foundation by refining and deepening their grammatical knowledge, integrating this syntactical and semantic framework into their language production, and increasing their understanding of languages as dynamic systems thereby improving their Spanish language abilities in each communicative mode ultimately resulting in a fuller understanding of the Spanish language and its speakers. Course provides ample opportunities for cultural exploration and vocabulary development.

SPA3335 Spanish through Service......1-5 cr (PQ: consent of course instructor and internship registration form) Acquisition of knowledge of the Hispanic culture and application of Spanish communication skills in authentic contexts through service work in Spanish-speaking communities. Note: This course is designated as repeatable and may be repeated four times after the original taking of the course. See page 25 for note regarding internships. Study Strategies This course aims to equip students with the knowledge and skills necessary for a successful academic journey and to prepare them for personal and professional success in a collegiate environment. Only offered through Dual Enrollment.

Theatre

This course is an introduction to dance designed to broaden student perspective on dance as an art form by examining dance from a critical perspective, surveying dance traditions from around the world and placing dance in a social, historical and cultural context. Students will also have the opportunity to explore movement through a basic introduction to theatre dance styles. A \$75 course fee required.

THE1045 Theatre Production and Performance 0-2 cr An experiential learning course to provide the student with a practical application of theatrical theory. The student will develop skills and abilities for the theatre through supervised experience in a selected topic including: Performance, Stage Management, Costume Crew, Scene Crew, Lighting Crew, Sound Crew, Props Crew, Hair and Make-up Crew, or Stage Crew, etc. Student attends rehearsals and/ or designated crew hour in regards to their assigned area. Note: This course is designated as repeatable.

THE1051 Acting I⁵4 cr Creative methods of role development, styles of acting from major periods of the theatre and play analysis. A \$75 course fee required.

The experience and nature of theatre art and functions of the audience, actor, director, designer and playwright in contemporary drama. A \$50 course fee required.

This course is designed to introduce students to the art of improvisation. Students will learn to work creatively without a script. The focus of the class will be on improvisational exercises and how they relate to acting, masking and puppetry. Students will work extensively with partners and improvisational teams to create scenarios, scenes and skits, utilizing acting, masking and puppetry skills. This course is designed for students desiring to enhance their communication skills, acting skills and overall performance effectiveness.

(PQ: THE1051) An investigation into the fundamentals of human movement and issues of movement in performance. Exercises concentrate on the development of spatial and self-awareness, ensemble skills and group problem solving. A \$75 course fee required.

This course is an introduction to the basic components of Broadway style tap dance technique with an emphasis on basic terminology, foot and leg coordination, rhythmic awareness and timing and standard tap dance combinations. Note: This course is designated as repeatable. A \$75 course fee required.

THE2038 Ballet^s......2 cr

(PQ: 20 credits of 2000-, 3000-, or 4000-level SPA-prefix courses and

8 credits of Semester in Spain [SIS] or Students International [SPN]

courses) An individualized course in which the student researches an

aspect of the language, culture, or people of the Spanish-speaking

world. The student prepares a written report and gives a public

presentation in the Spanish language.

This course is an introduction to ballet technique, based on the study of the fundamental principles, practices and vocabulary from the Russian school. Emphasis is placed on establishing proper alignment, rotation/turnout, increasing flexibility, building core strength and stamina and developing artistry. Note: This course is designated as repeatable. A \$75 course fee required.

This course introduces students to the movement style of the jazz vernacular. Dancers engage in classical jazz technique rooted in the combination of both European and African dance traditions embodying syncopated rhythms and musicality, body isolation and improvisation. Note: This course is designated as repeatable. A \$75 course fee required.

The course focuses on the methods and materials of producing plays for children, including audience analysis, script analysis, design,

rehearsal and performance. A \$75 course fee required.

An introduction and exploration of technical and aesthetic aspects of stage combat. Goals include developing the ability to safely portray violence onstage within the context of a play with specificity and dramatic power, as well as to understand how stage combat fits into the practice of theater as a whole. Other aspects include the development of strength and flexibility, eye/hand coordination, understanding and applications of principles of safety in working with a partner and learning how to advance a character journey and develop ensemble work through each individual move in a fight sequence. A \$75 course fee required.

This course will explore the tools and techniques involved in stagemanaging a theatrical production. Subjects will include effective communication with directors, designers and actors; managing rehearsals, production meetings, keeping a prompt book and calling the cues for a production.

THE2152 Acting II⁵4 cr (PQ: THE1051) Students will build upon precepts from Acting I to

explore various acting methods from Stanislavski to Grotowski, expand analysis skills through scene study and continue to develop skills through monologue work. Students will also learn how to use their bodies and voices to develop flexible and expressive instruments that serve the text. A \$75 course fee required.

THE2165 Introduction to Stage Technologies ⁵ 4							4 cr	
This	course	introduces	students	to	the	methods	of	designing,
planr	ning, con	struction, pa	ainting, rigg	ging	and	shifting sta	ige :	scenery for
the t	heatre A	\$75 course	fee requir	red				

course fee required.

THE3145 Advanced Theatre Production and Performance . . 0-2 cr (PQ: THE1045) An advanced practical experience utilizing theatrical theory. Students will build high-impact skillsets through hands-on learning in production leadership roles in a specific area: Performance, Design, Stage Management, Costume Crew, Scene Crew, Lighting Crew, Sound Crew, Props Crew, Hair and Make-up Crew, or Stage Crew, showing proficiency in production-specific duties, rehearsals and meetings, and designated crew hour in their assigned area/role. **Note**: This course is designated as repeatable.

be repeated one time after the original taking of the course. A \$75

course fee required.

(PQ: senior standing) This seminar will serve as a culminating

experience for theatre majors. Emphasis placed on Christian worldview in theatre arts and career. A \$75 course fee required.

THE4995 Theatre Performance Internship 1-4 cr

(PQ: consent of faculty supervisor and internship registration form) Supervised advanced training in the performance theatre career; paid and unpaid experience; provides transition from educational to professional world in acting. Note: See page 25 for note regarding internships.

THE4997 Dance Performance Internship 1-4 cr

(PQ: consent of faculty supervisor and internship registration form) Supervised advanced training in a performance dance career; paid and unpaid experience; provides transition from educational to professional world in acting. Note: see page 25 for note regarding internships.

Youth Studies

YOU2205 Serving Youth and Emerging Adults*.....2 cr

This course provides an introduction to biblical, philosophical, and theoretical foundations for serving youth and emerging adults. Various models of ministry are presented alongside current research and practice. Students consider their call to serve youth in various contexts alongside trends in social, cultural, and developmental norms. Students create a personal philosophy related to discerning how to effectively navigate discipleship, influence, and formation of youth.

YOU3206 Contemporary Issues and Interventions with Youth* .2 cr

This course examines issues that youth encounter related to development, culture, social realities, family dynamics, trauma, and generational differences. The role contemporary issues play in the identity development and day-to-day lives of youth is also addressed alongside strategies for prevention, intervention, and referral.

This course examines healthy youth faith formation from biblical, theoretical, and practical lenses. The role faith formation plays in the overall development of youth is emphasized alongside effective models and typical challenges youth face related to faith formation. An emphasis on the impact of familial, peer, and faith community influence is emphasized.

YOU3208 Leading Youth and Emerging Adults*OCE4 cr

(PQ: COM1075 or COM1825 and YOU3206 or YOU3207) This course is designed to prepare students for effective leadership with youth and emerging adults. Attention is given to effective ministry planning, practices, implementation, administration, leadership, and understanding the tasks of leading youth in the local church and parachurch/non-profit organizations. Students articulate their call and direction for leading youth and develop a philosophy of youth ministry to prepare them for leadership with youth and emerging adults.