

ART

ART W10 Process & Play: Creative Darkroom Explorations. Frequently in analogue photography the final photo is previsualized while exposing the film and the darkroom is the place to execute that initial vision. The darkroom, however, can be a place of discovery and creative investigation in its own right. Experimentation can lead to visual breakthroughs and possibilities to investigate further. Without the pressure to create a perfect final product for an assignment, students will be encouraged to investigate 'what if' and learn from results that otherwise may be considered failures. Happy accidents will turn into ideas to be developed further. Intensive photographic production will provide significant opportunities to grow in a short amount of time. Students will be introduced to the artwork of a variety of artists who work in experimental photographic processes. Working independently and in collaborative groups, students will be introduced to new ways of producing photographic imagery and to the darkroom as a space of creative exploration. Mandatory Prerequisite: ARTS 256: Introduction to Photography. \$100 Materials fee. *J. Steensma Hoag*. 8:30 a.m. to noon.

ART W40 Artist Book Making – A Mixed-Media Exploration. This course introduces the design, production, and publication of mixed-media artist books, concentrating on the book as aesthetic object embedded with content. Physical and conceptual elements of the artist book unfold through time and space. Book design problem solving includes organizing conceptual, visual, physical, kinetic, and chronological transitions. Students will engage in developing content, three-dimensional form, integration of image and text, and harmonizing these elements in the execution of visually effective artist books. The study of hand-made books from Medieval illustrated manuscripts to contemporary book art introduces students to traditional and innovative materials as well as binding techniques. Students will investigate high and low technologies of reproducing imagery for the purpose of execution and publication. Bookmaking will occur individually and collaboratively. The class will produce one of a kind artist books and a limited-edition publication. This course provides interdisciplinary investigation opportunities and enables building professional portfolios. This course may fulfill an elective in the Art majors and minors. *A. Greidanus*. 1:00 p.m. to 5:00 p.m.

ART W41 The Creative Toolbox. This course shepherds students through a repertoire of principles and practices of effective visual communications. It consists of a knowledge base that can only be developed through a practical hands-on experience. The course covers a series of challenging exercises in Adobe Illustrator and Photoshop that focus on personal and conceptual thought processes with an emphasis on concept rather than on technique. Preference is given to individual solutions that lead to developing one's graphic design skills. Focus is on principles such as frame reference, positive/negative relationships and cropping techniques, which engender innovative visual communication skills. *F. Speyers*. 8:30 a.m. to noon.

BIOL

BIOL W11 Fizzy, Fermented, and Funky. Exploring Live Culture Real Foods and the Microbes Behind Them. Typically, we try to avoid exposure to microorganisms whenever we can – equating them with sickness and disease. However, do you enjoy cheese? Chocolate? Coffee? Kefir? Kombucha? Yogurt? Sourdough bread? Or, if you are of age, a taste of wine or sip of beer? All of these foods and many more owe their very existence to microorganisms! The microorganisms transform the food, preserving it,

enhancing its flavor and nutritional benefits – true “real food.” In this course we will investigate how humans have harnessed microorganisms to make these foods by making these foods ourselves. Students will dig into the diversity of microorganisms, the nuanced metabolic processes that lend each food its particular flavor and health benefits, and how changes in microbial community structure and function over time results in the development of flavor and texture. Additionally, the rich cultural values and societal impacts associated with the long history of many of these foods will be discussed and compared with mass production and artificial additives that dominate today’s market. Students will perform hypothesis-driven experiments using different microorganisms, components, and preparation methods to create their own unique live culture real food. These lab activities will be supplemented by guided visits to West Michigan companies producing some of these foods. Science and non-science majors are welcome; a science background is not assumed. Evaluation will take place through design and leadership of food-making experiments, several presentations exploring microbial, cultural and historical aspects of the food, and a notebook that documents laboratory activities. A course fee of \$50 will be assessed to cover supplies and field trip expenses. *J. Wertz*. 8:30 a.m. to noon.

BIOL W60 Pathophysiology. Pathophysiology is the study of how the body’s normal function changes when disease strikes. This course presents aspects of many human diseases, including the biochemical or cellular causes of the disease, structural and functional changes resulting from it, and the prognosis related to it. Presented are diseases of the cardiovascular, gastrointestinal, hormonal, muscular, neural, renal, reproductive, and respiratory systems using the classic organ system approach and case studies. Tests, a research paper, and a class presentation determine student grades. Prerequisite: Biology 206 or 331. *R. Nyhof*. 2:00 p.m. to 5:00 p.m.

BIOL W80 Silent Spring and Stolen Future. The slogan of the post World War II “chemical boom” was “better living through chemistry,” and indeed these chemicals brought many benefits in industry, agriculture, and public health. However, in 1962 Rachel Carson’s book *Silent Spring* challenged the public’s optimism regarding chemicals by revealing many environmental and health effects of pollution. While many chemicals were restricted during the 1970-80s, the publication of *Our Stolen Future* in 1996 revealed the ability of some chemicals to disrupt hormonal systems at very low doses in wildlife and humans. Today our society uses 60,000- 80,000 chemicals, with 1000-2000 new chemicals introduced every year. Legacy pollutants still contaminant some ecosystems, concern is emerging about newer chemicals, and old debates have been revived, such as whether DDT should be used to control malaria. This course explores issues related to the sustainable use of chemicals in both developed and developing countries. Scientific and policy issues are examined within the context of Christian environmental perspectives. This course is intended to benefit students interested in environmental science, biology, ecology, natural resources, pharmacology, medicine, environmental chemistry, environmental studies, and public health. In addition to the books listed above, course readings will emphasize new articles in the scientific literature. With advisor approval this course will serve as an upper-level elective in the environmental science major, environmental studies major and minor, public health major and minor, biology major and minor, biotechnology minor, and biochemistry major and minor. Prerequisites: BIOL 160 and 161 (or 224 and 225) and CHEM 253 or 261, or permission of the instructor. *K. Grasman*. 8:30 a.m. to noon.

BUS W80 Accounting for Small to Medium-Sized Enterprises. Small to Medium-Sized Enterprises (SMEs) are a significant part of many economies. The European Commission indicates that SMEs represent 90% of all businesses in the EU. The U.S. Trade Representative states that SMEs are the backbone of the economy and the primary source of jobs for Americans. However, many of the special issues encountered by these enterprises are not addressed in standard accounting courses. This course

will introduce and evaluate various accounting solutions that have been developed to assist accounting professionals in meeting the unique needs of SMEs. This course may fulfill an elective in the accounting minor. Prerequisite: Business 204. *D. Cook*. 8:30 a.m. to noon.

CAS

CAS W10 Crime & Detective Fiction. This course involves the close study of crime and detective fiction. The course focuses on reading novels (by American, British, and Scandinavian writers) but students also watch and analyze film and television adaptations. Learning objectives include an understanding of the history and development of the genre, the ability to engage in a close reading of literary and cinematic texts, and a basic facility in writing crime/detective stories. *G. Pauley*. 8:30 a.m. to noon.

CAS W11 The NEW Golden Age of Television. Through readings, lectures, discussions, and screenings, students are led through the development and implications of the “new” Golden age of television, paying particular attention to televisual productions outside of the studio system. Students examine the rise of cable television, serialized, Internet-based televisual production, and subscription-based programming from companies like Netflix, Hulu, and Amazon. Through aesthetic, historical, and cultural analysis, students grapple with the new paradigms of television production and distribution that have brought us the influential series *The Guild*, *The Sopranos*, *Game of Thrones*, *The Making of a Murderer*, and *House of Cards*. Students keep a daily screenings/reading blog and present final projects. *C. Smit*. 8:30 a.m. to noon.

CAS W40 The Amish Project: What is the meaning of Forgiveness? On October 2, 2016, a gunman entered a one-room Old order Amish school house and took 10 girls (ages 6- 13) hostage. Five of the girls were killed before the gunman committed suicide. The response of the Amish community was one of forgiveness and reconciliation and was widely discussed in the national media. Playwright Jessica Dickey created play that focuses on the Amish community’s response. The New York Times called the play “a remarkable piece of writing.” This course involves the process and performance of the play *The Amish Project*, a fictional response to this shooting. Theatre is located in a social context. The world of the play provides a testing ground for understanding why characters do what they do, what pressures are brought to bear, and how these characters choose to respond to this pressure and resolve their dilemmas. The conversation doesn't stop at the end of the performance. The “what if” of the theatrical dilemma can be shared amongst the performers and the audience. It provides a unique way to begin dialogue and negotiate issues of cultural events, in this case the West Nickle Mines school shooting. This course will acquaint students with the context of *The Amish Project*, studying documents of the historical event, reading and study of Amish religion, the Christian practice of forgiveness as outlined in Dorothy Bass’s book *Practicing Our Faith*, as well as our own struggles with the concept forgiveness. The final goal of the course is to produce this play. The course will give students the opportunity to exhibit their theatrical and technical skills in a performance practicum, which will culminate into performances before an audience. Three or four performances will occur for school audiences during the day, the remainder will be evening performances for a general audience, which will occur during the first week of the second semester. This course will meet in the afternoons with afternoon and evening rehearsals. Some mornings and Saturdays may also be required for play production work, but no more than eight hours will be required on any given day. This course may fulfill an elective in the theater major. *D. Freeberg*. 2:00 p.m. to 5:00 p.m. and 6:00 p.m. to 9:00 p.m.

CAS W41 The Films of Joel and Ethan Coen. A study of the key films of Joel and Ethan Coen, with a view toward understanding their key themes and preoccupations, their moral and theological significance,

and their stylistic qualities. The films examined will include *Blood Simple*, *Barton Fink*, *Fargo*, *The Big Lebowski*, *O Brother Where Art Thou?*, *No Country for Old Men*, *A Serious Man*, *True Grit*, *Inside Llewyn Davis*, and *Hail Ceasar!*. Students will be expected to view films both inside and outside of class. Course work will include readings, papers, presentations, and an in-class exam. Among the course readings may be *The Due Abides: The Gospel According to the Coen Brothers*, by Cathleen Falsani; *The Philosophy of the Coen Brothers*, ed. Mark T. Conrad; *Joel and Ethan Coen*, by R. Barton Palmer, and the novel *No Country for Old Men*, by Cormac McCarthy. This course may fulfill an elective in the Film and Media major. *C. Plantinga*. 2:00 p.m. to 5:00 p.m.

CAS W80 Advanced Studio Production. Building on knowledge and skills learned in CAS 250, this class produces video and online content related to the January Series by hosting IDIS W19 “Inside the January Series” (Instructor: K. Saupe) within the format of a town hall meeting featuring a student-studio audience. As IDIS W19 students and instructor K. Saupe interact with the January Series speakers, Advanced Studio Production students gain advanced experience with live-to-tape studio interviewing, stationary video cameras, recorders, switchers and related technologies, as well as preparation of assets for exhibition via the web. Camera recording, studio lighting, audio recording and mixing principles are analyzed and demonstrated. Prerequisite: CAS 250 or permission from the instructor. *G. Heetebrij*. 8:30 a.m. to noon.

CS W61 Design Principles and Patterns: Advanced Object-oriented Programming. In this course students will learn about, implement, and evaluate various advanced object-oriented design principles, such as “Encapsulate what varies”, “Favor composition over inheritance”, etc., as well as design patterns that follow those principles, such as Strategy, Observer, Decorator, Singleton, and so on. Students will apply these patterns to real-world programs, written previously by themselves or by others. Additionally, students will learn about and use advanced STL classes and template programming in C++. Opportunity will be given to apply design patterns and equivalent advanced mechanisms in other languages, such as Python, Java, or C#. Prerequisites: CS112 and CS262. *V. Norman*. 8:30 a.m. to noon.

EDUC 343 Early Childhood Education: Preschool Field Experience (4 hours). Students participate in a six-week full-time student teaching experience in a preschool setting that meets state requirements for the Early Childhood (Z5) Endorsement. It provides for analysis of developmentally appropriate practice in curriculum, teaching methods, assessment, and classroom management as they relate to the early childhood setting. Prerequisites: EDUC 202, EDUC 236, EDUC 238, EDUC 312, EDUC 335, EDUC 337, EDUC 339, SPAUD 311, and SOC 304. *S. Verwys*. Off campus.

ENGL

ENGL W10 Faith and Writing: Working on the 2018 Festival. This class invites you into a conversation about how faith and contemporary literature overlap and intersect, sometimes comfortably and sometimes uneasily. It invites you to think about what it means to be a faithful writer and a faithful reader. And if you are taking this class as a member of the FFW student committee cohort, it serves as a chance to study the writer(s) you will host at Festival 2018, an opportunity to practice your hand at writing book reviews, and an overview of what to expect as a student committee member. FFW student committee members will be expected to be enrolled unless they are participating in an off-campus English interim or have other degree requirements that must be fulfilled during interim; in that case, they’ll be excused on a case by case basis by the CCFW co-directors and given other ways to fulfill their committee obligations. Other students interested in participating in this class are most welcome to

contact the instructors, and they will be added as there is space. *J. Holberg, J. Zwart*. 2:00 p.m. to 5:00 p.m.

ENGL W11 An Introduction to Corpus Linguistics for Non-Linguists. In this course, students learn the fundamentals of corpus linguistics, its history and methods, and its most common tools, and work on a variety of corpus projects, including a final project of their own devising. *J. Vanden Bosch*. 8:30 a.m. to noon.

ENGL W41 Editors and Editing. This course introduces students to professional editing and to the full publishing process from acquisition to marketing. Students are introduced to different kinds of editors and their roles, various editing genres, and stages in the publication process. Students practice a variety of editing skills (including copy editing and layout) and complete an individual or group project. The class visits local publishing houses to meet and learn from editors about their areas of specialization. This course may fulfill an elective in the English majors or minors. *K. Merz*. M-Th, 6-9 p.m., Friday 2-5.

ENGL W42 Manga and Anime: Intertextuality and Interpretative Strategies. Now more than ever, it is quite clear that interest in manga and anime is no longer confined to sub-cultures and niche markets in the US. Exhibit A: Justin Sevakis, founder of Anime News Network, reported in March 2016 that “manga is doing far better than the rest of the book market, and 2015 will mark the third year in a row that manga sales have risen.” This trend did not go unnoticed by Barnes and Noble who doubled their shelf space for manga in 2015 citing strong customer demand. Exhibit B: Amazon launched its own anime paid streaming service in January 2017 to compete with long-time streaming services Crunchyroll and Funimation and has struck exclusive streaming deals for several anime series. Given such interest, this interim takes manga and anime as literary forms and will explore interpretative strategies for analyzing their narratives, aesthetics, genres, and cultural commentary. We will also analyze intertextual connections between manga, anime, and fandom and how such connections create new ways of understanding them. Finally, we will look at issues surrounding the consumption of manga and anime such as scanlation (the unauthorized translation of manga by fan groups), and cosplay and fan culture. This course may fulfill an elective in the English majors and minors. *J. Williams, P. Goetz*. 8:30 a.m. to noon.

ENGL W43 Human Creativity. This course is designed for, but not limited to, writers interested in exploring the creative process as well as looking for inspiration for their art. Throughout the course, students investigate answers to a variety of questions: What is the source of human creativity and how do writers tap into it? What can be learned from pioneers in and outside the literary arts—their methods, their studios, their habits of thought? What does creativity have to do with godliness? The primary text for the course is Peter Turchi’s *Maps of the Imagination: The Writer as Cartographer*, but students watch and discuss documentaries of various creatives reflecting on their process—architects such as Frank Gehry, entrepreneurs like Steve Jobs, photographers such as Annie Liebovitz, and others. The course approaches creativity in a multi-sensory, multimedia way. Class periods not only provide opportunities for the mind to roam in conversation but also hands-on exercises, mini-field trips, and invitations to play. Throughout the course, students reflect, dabble, scheme, and dream in a sketchbook—blank pages for their observations, questions, and creative responses, including the rough beginnings of stories, poems, or compositions. Students will be evaluated on the quality of the sketchbooks (25 page minimum) and a short reflection paper on the creative process (4 page minimum), as well as their level of engagement with the assigned readings and class activities. The ultimate goal, then, is that the course will serve as a hothouse for student creativity. In consultation with the student’s faculty advisor, the course may count as an elective in the Writing Minor. In consultation with the

student's faculty advisor, the student may choose to substitute this interim for a class that fulfills a line in the Writing Major. *L. Klatt*. 8:30 a.m. to noon.

ENGL 374 English Grammar. A study of traditional grammar, focusing on its history, its system, its applications, its competitors, and its place in the classroom; special emphasis will be given to the system and terminology of this grammar. Student work will be evaluated by means of daily assignments, in-class projects, an exam, and a course project. *K. Johnson, E. Vander Lei*. 8:30 a.m. to noon.

ENGR

ENGR W80 Mechatronics. Mechatronics is a growing field of engineering where a multidisciplinary team of engineers addresses a physical problem through the use of mechanical systems which are linked with control systems which often have electric or electronic systems. Mechatronics has been called a replacement word for electro-mechanical engineering. In this course, students will be provided a task for a robot to perform, and have 3 weeks to design and build a robot which can accomplish the task. Generally, successful completion of the task will require mobility and manipulation of external objects under autonomous and user control. The task to be completed will be defined by the First Robotics competition. This course is open to senior students in the Mechanical Engineering concentrations. Junior students in the Mechanical Engineering concentration may take the course by permission of the instructor. Prerequisites: ENGR 181 and ENGR 322. *R. Tubergen*. 2:00 p.m. to 5:00 p.m.

ENGR W81 Mobile Robotic Systems. Mobile robotic systems are becoming more commonplace and are now handling some of the most dangerous tasks, allowing humans to stay at a safe distance. In this course, students will learn about the historical development of mobile robotic systems, including some ethical issues surrounding such systems. Students will also analyze and design the electrical, mechanical, and control aspects of robotics systems. The final project will involve the construction and implementation of a mobile robotic system. Through this hands-on experience, students will learn about the mechanical structures needed to build the system, the motor and gears to drive the system, the sensors to guide the system, the wireless modules to communicate with the system, and the control algorithms and hardware to manage the system. Students will be evaluated on in-class discussions, lab write-ups, design project presentations, design project reports, demonstration, and their participation in team projects. Prerequisites: C Language Programming or equivalent, ENGR 307 and ENGR 311, and Metal Shop Training. This course is open to senior students in the Electrical & Computer Engineering concentrations. Junior students in the Electrical & Computer Engineering concentration may take the course by permission of the instructor. *Y. Kim*. 8:30 a.m. to noon.

ENGR W82 Advanced Chemical Engineering Special Topics. This course addresses essential advanced topics for design. Topics build on the foundational concepts from several earlier chemical engineering courses. The course includes advanced topics from separations, heat transfer, and non-elementary kinetics. An introduction to mathematical modeling for advanced transport is considered. In addition, fundamental concepts of environmental, health, and safety issues, as well as corrosion and materials of construction for design are presented. This course fulfills the Engineering Special Topics Elective requirement and is open to students with senior standing in the Chemical Engineering concentration. *J. & J. Van Antwerp*. 8:30 a.m. to noon.

ENGR W83 Site Development and Design (SDD). This course focuses on civil engineering site development and design (SDD). The objectives of this course are for students to: 1) Know the key elements used in the design of a civil engineering projects (e.g., topographical analysis and earth

balances, infrastructure documentation and linkage, regulations and permitting, and integration of built and natural systems; 2) Understand and apply various land measurement applications (e.g., surveying, global positioning systems, and geographic information systems) that are typically used for SDD; and 3) Learn sustainable SDD practices (e.g., LID and LEED) by integrating these into course design projects. This course will fulfill an elective in the Engineering major. Prerequisites for this course include Engr 306, Engr 320, and Engr 326, or permission of the instructor. *B. Masselink*. 8:30 a.m. to noon.

ENGR W84 Sustainable Energy Systems. Renewable and sustainable energy systems are providing increasingly large fractions of the energy mix worldwide. In this course, students consider fundamental engineering principles, economic factors, and Energy Return On Investment (EROI) for a wide variety of renewable and sustainable energy technologies. Special focus is given to performance and design of wind and solar systems, and data from demonstration systems at Calvin College are analyzed extensively. Several software packages that aid renewable energy system design are introduced. Daily assignments and several design projects are required. Prerequisite: Engineering 333 or permission of the instructor. *M. Heun*. 8:30 a.m. to noon.

ENST W40 Climate Change and the Biosphere. This course will first review normal Earth function as a complex of heat-driven systems. It will next examine the evidences for global warming and the changes to Earth's heat budget resulting from "greenhouse gas" emissions. We will then review some fundamentals of organismal ecology and community biogeography. The documented effects of a warming climate on species' geographic ranges and annual biological cycles will be covered in some detail. Ultimately, we will want to arrive at predictions for ecosystem functioning at some time in the future. Along the way, we will learn something of the history of discovery of global warming. A guest lecture or lectures will cover the history of international political initiatives to respond to global warming. *R. Stearley* 2:00 p.m. to 5:00 p.m.

FREN

FREN 112 Multisensory Structured French II. The second course in a three-course sequence of language study designed to meet the needs of at-risk students. Materials are presented with an emphasis on understanding the nature of language. General language learning skills are developed as specific foreign language goals are met. The course is open to students who are continuing from French 111 and expect to complete through the French 113 level. *Staff*. 8:30 to noon.

FREN 132 Intermediate French I. French 132 is an accelerated course designed for students who have completed French 131, or for those seeking an intensive refresher. It seeks to develop student proficiency in listening, speaking, reading, and writing through a variety of activities, both in class and out and to serve as a bridge to French 202. *V. De Vries*. 8:30 to noon.

GEOG W40 The Geography of Terrorism. This course introduces students to terrorism from a geographic perspective. The course is formatted to provide both foundational theory and practical skills as a lecture and lab. Lectures and readings will include a variety of topics on terrorism, including investigation of definitions of terrorism, various historical and modern forms of terrorism, critical theory, issues of Christian faith in relation to terrorism, Homeland Security, and the state-of-the-art of terrorism research from a geographic perspective. Laboratory work will be conducted using Geographic Information System (GIS) technology. Lab work will explore the spatial analysis and mapping of multiple forms of terrorism, vulnerability and threat analysis, border issues, privacy, international relations, and

weapons of mass destruction. No pre-requisite is required and the class is open to all students. This course may fulfill an elective in the Geography major or minor. *J. Van Horn*. 8:30 a.m. to noon.

GERM 150 Intermediate German. This course is the next step in a sequence that spans two semesters and the interim. The sequence begins with 121 in the spring or fall followed by 150 during interim and then 202 in the spring. This sequence is intended for students with no prior knowledge of German. This sequence serves both beginners interested in an accelerated core track, or those who have completed some high school German but, on the basis of a placement test, are not prepared for 201. The course includes a strong emphasis on oral interaction and intercultural learning. Prerequisite: GERM 121. *Staff*. 8:30 a.m. to noon and 2:00 p.m. to 3:00 p.m.

HIST 293 Public History. 'Public history' refers to historical work done outside of schools, colleges, and universities, especially work in institutions such as museums, archives, preservation offices, and cultural resource agencies. It also includes historical work in business, consulting, and the legal profession. This course surveys the major topics and helps students develop skills used in public history through readings, discussion, guest presentations, field trips, and projects. For example, students will learn about the history of public history, employment opportunities for public historians, and public historical issues, and they will reflect on their own career possibilities in this field. Course fee: \$100. *K. Van Liere*. 8:30 a.m. to noon.

IDIS

IDIS W16 Inside the January Series. The Award-winning January Series brings world-class authorities in their fields to Calvin to speak on a range of topics. Participants in this course encounter a diversity of issues and perspectives by attending the January Series programs. Students enjoy additional opportunities to interact with the speakers during our morning class sessions. In response to the values and ideas they encounter with each speaker, students are challenged to clarify and articulate their own worldviews and to find ways to put their values into action. Course requirements include attendance at all January Series events, a short reflection paper on each presentation, an oral presentation on one of the presenters or topics, and a research paper on one of the Series speakers or topics. *K. Saupe*. 8:30 a.m. to 11:30 a.m. and 12:15 p.m. to 1:30 p.m.

IDIS W17 Norms and Gender Discrimination. This Course will explore, analyze various forms of gender discrimination in less developed countries (LDCs), especially in collectivist LDCs, with reference to the Arab World. Such discriminating practices are rooted in inherited norms (beliefs, traditions, taboos, customs, and myths, etc.). Gender Discriminating norms continue to play significant roles in marginalizing /discriminating against women by limiting their capabilities, participation, and effective representations in many spheres of life. The course utilizes both the new institutional economic analysis (NIEA) and the capability approach (CA). The course materials will be closely related to my book "Norms and Gender Discrimination in the Arab World" (Palgrave Macmillan, October 2015), in addition to other references and reports from human rights' organizations. The instruction style for this short interim course will include regular lectures, students' led discussions, watching video clips/movies, and students' presentation of their projects. *A. Abadeer*. 2:00 p.m. to 5:00 p.m.

IDIS W18 Friendships and Marriage. Students will review, explore, compare and contrast multiple historical and current Biblical examples, principles and perspectives on friendships and marriage. Students will learn and apply a variety of Biblical principles in these areas in their own lives from their past, in the present and into their futures. Class sessions will include lectures, guest sharings,

readings from a wide variety of books and articles, personal assessments, and both small group and class discussions. *C. Jen.* 8:30 am to noon.

IDIS W19 Personal Finance. All of us have been forced to make decisions that impact our future economic well-being. What is the best type of loan to finance college? Can I afford to study abroad next semester? How will I pay for a car to get to my job? Are there any issues in signing that lease agreement for my off-campus house? Personal finance is a specialized area of study focusing on individual and household financial decisions: How much should I save? How much should I spend? How much should I give? Do I need life and health insurance when I get out of college--what type would be best for me? How much do I need to save for retirement and when should I start? How do I decide what to invest in? Financial planning is a process of setting financial goals and organizing assets and making decisions to achieve these goals, in an environment of risk. This class will consider financial goals for Christians and will provide information and techniques to help students be good caretakers of what God entrusts to them. Topics covered will include: financial planning tools, goal setting and budgeting, tax planning, cash management, consumption and lifestyle choices, credit strategies, charitable giving, automobile and housing decisions, insurance needs, concepts of investing, estate planning and retirement planning. Class sessions will include lectures, presentations by finance professionals, video, and group discussion. *D. Pruis.* 8:30 a.m. to noon.

CANCELLED IDIS W20 I Long; Therefore, I Am. ~~What does it mean to be human? From the time of Descartes forward, at least in the west, thinking has been thought to be at the center of human nature. One way of understanding this interim course is as a sustained reflection on an alternative to the Cartesian view. On this alternative view, we human beings are first and foremost—not thinking things—, but desiring, wanting, yearning, craving, longing, hungering beings. Put another way, if the Cartesian and Enlightenment view of human existence has it that at the center of being human are head and mind, this course explores the idea that at the center of human existence is heart and gut. This alternative view is not a new revelation or idea, but an ancient one reaching back at least to Saint Augustine, who said at the beginning of his Confessions, “You have made us for yourself, Oh God, and our hearts are restless until they rest in you.” Our hearts are rest-less. They’re agitated. They ache. They yearn. They long. They want. It is this feature of human existence that we will explore in this course through film, fiction and non-fiction. Ultimately, we will want to consider the idea, again present in the quote from Augustine, that this restlessness is not a result of sin and the fall, but is instead part of our created nature: we are made to yearn, to long, to desire. And since this is part of our created nature, our heart’s deepest longings and yearnings have their ultimate aim or end in God. In a way, therefore, one task of a follower of Christ involves the realigning or re-aiming of our longings, the redirection of our yearning for connection, wholeness, intimacy, and meaning. *K. Corcoran.* 8:30 a.m. to noon.~~

IDIS W21 The Beatles and the Sixties: Music and More. In this course the students get an overview of the career of perhaps the most important artists in 20th century popular music. They study the Beatles in both their musical and historical settings as well as other important music and culture of the era. The course includes an analysis of the Beatles recordings and films, videos, and concert recordings. Readings include recent books and articles that give context to their music and their careers. There is an emphasis on understanding the music in the context of the career path of the artist, other music of the time, and other things going on in the world that both influenced and were influenced by their art. Christian engagement with the music of the Beatles and the culture of the sixties is an important part of the discussions. *R. Keeley.* 8:30 a.m. to noon.

IDIS W22 Spiritual Strength Training. Do you want to build your spiritual strength and be strong in the Lord? Do you want to deepen your relationship with God through the power of the Holy Spirit? This course is designed for students who earnestly desire to have a dynamic, intimate relationship with Jesus, and who long to cooperate with the Holy Spirit in all aspects of life. The third person of the Trinity is often the least known, yet it is He who makes Jesus Christ known to us. Special emphasis is placed on teaching students about the Holy Spirit to understand how one may be transformed and empowered to live as Christ leads, rather than charting one's own course and asking God to bless it. Course topics include: historical overview of the church's understanding of the Holy Spirit; overview of Spirit-led waves of revival beginning in the 18th, through the 21st century; theological and historical reasons why many traditions have resisted emphasis on the Holy Spirit; how to receive guidance from, cooperate with, and be empowered by the Holy Spirit; how to discern and develop one's gifts from the Holy Spirit; and what the Bible teaches about the healing ministry of Jesus as it relates to spiritual, emotional, relational and physical healing. Students are regularly provided with opportunities for the practical application of theological and theoretical topics via the incorporation of in-class exercises; opportunities to pray with classmates; and opportunities to dialogue with, and receive prayer from spiritual mentors. Students are also required to attend a 2 ½ day on-campus Dunamis Project conference (1/18/18 – 1/20/18, sponsored by Presbyterian Reformed Ministries International. *J. Kraak, N. Van Noord.* 2:00 p.m. to 5:00 p.m.

IDIS W23 Theology of Narnia. Many Christians first encounter C. S. Lewis as children through reading his *Chronicles of Narnia*, but there is much in these books that children miss. Reading the books again as adults allows for a deeper exploration of Lewis' use of the Christian tradition, especially the medieval tradition that was his scholarly specialization. Students in this class are expected to read all seven of the *Chronicles* as well as some secondary readings. The class considers the theological and philosophical assumptions – sometimes explicit, sometimes hidden – that form the basis of Lewis' work. *L. Smit.* 8:30 a.m. to noon.

IDIS W24 Entrepreneurship in the Arts. Many students in the creative arts hope their craft will become more than a hobby after graduation. Often, however, these students struggle to see how they might use their artistic skills in concrete ways to sustain a fulfilling career. This course provides participants with tools to help them apply entrepreneurial models to their interests in the creative arts. Students with an interest in visual arts, architecture, poetry and creative writing, music, dance, theater, film, digital media production, and design explore their own passions and how they can be translated to successful careers. Throughout the course students engage with local creative arts institutions and talk with individuals who have successfully followed their calling into the arts. Topics that are covered include: steps to finding employment in the arts, funding sources for the arts, the legal organization of arts institutions, business plans and their key elements, a brief introduction to budgets and taxes, how to discern vocation in the arts, how to determine the value of a graduate degree in the arts, what it takes to be an entrepreneur in the arts, and the economic impact of the arts on society. The course involves field trips to local arts organizations. Through course activities and discussions, students formulate and articulate an understanding of how their unique skill set can be used to further God's kingdom, both as a sustainable personal vocation and a contribution to the common good. *S. Smartt.* 2:00 p.m. to 5:00 p.m.

IDIS W44 Social Entrepreneurship: How to Change the World. Injustice, social breakdown, and ecological dangers are ever-present and all around. Illiteracy, poverty, maternal mortality, malnutrition, joblessness, conflict, habitat loss, and pollution are all examples. Government programs and charity can help, but they don't always work, and they are not enough. This course introduces students to social entrepreneurship, the new and increasingly appreciated strategy for bringing constructive changes to

social and ecological problem areas. Social entrepreneurs develop social enterprises, organizations that marshal resources and people to make changes that set the world on a more positive course. These can be either for-profit or not-for-profit organizations, but their primary mission will be to address social or ecological needs in powerful and sustainable ways. In this experientially-based class, students are introduced to the experiences of successful social entrepreneurs, both international and domestic, as they learn how to build a social enterprise. Students work in teams to identify a particular area of need, research their area of interest, imagine solutions, and design start-up social enterprises that move rapidly toward financial sustainability. To supplement the experiential learning, students learn basic business and organizational tools, read stories of successful social entrepreneurs, Skype with international social entrepreneurs, engage with guest speakers, and more. This course may fulfill an elective in the International Development Studies major. *P. Snyder*. 8:30 a.m. to noon.

Cancelled IDIS W45 Sound Design. This course will take you deep inside the acoustical, psychological, and cultural basis of sound. You'll learn how to build sound pallets from ready made, found, and manipulated sounds. You'll master the basics of sound synthesis, sampling, and sequencing. You'll explore representative sound design applications in music for films, video games, web pages, and art installations. And you'll complete several far-out projects that will stretch your ears, imagination, and technical prowess. This course may fulfill an elective for Music majors. *D. Fuentes*. 2:00 p.m. to 5:00 p.m.

IDIS W60 Rare Diseases: From the Laboratory Data to Personal Stories. Understanding rare disease on the molecular level has value for developing diagnostics and treatments for those diseases and more broadly for improving the treatment of common diseases. This course will explore the genetic and biochemical aspects of rare diseases as well as the social, spiritual, and emotional impacts these diseases have on patients and their families. Through an integrated lab component, students will contribute to current research projects from the Rare Disease Research Initiative at Calvin College. Students will also have the opportunity to interact with families affected by rare diseases. The culmination of the course will be a Rare Disease Day mini-symposium (taking place in February 2018) that the students will help organize and host. Prerequisites: one semester of biochemistry or permission of the instructors. *R. Baker, A. Wilstermann*. 2:00 p.m. to 5:00 p.m.

IDIS 240 Introduction to Archaeology. A classroom introduction to archaeology with emphasis on archaeological theory, field work methods, artifact processing, data interpretation, and site conservation. The course is designed to introduce students to the theoretical concepts of archaeology, participation in field work, and the critical reading of archaeological reports in both the old world and new world archaeology. It serves as a prerequisite for Interdisciplinary 340. *B. de Vries*. 8:30 a.m. to noon.

IDIS 375 Methods and Pedagogies for Secondary School Social Studies. This course introduces prospective teachers to important curricular and pedagogical issues related to teaching history and social studies at the middle and high school level. It examines the links between a Christian understanding of human nature, pedagogy, curricular standards, lesson planning and curriculum construction, teaching resources, classroom methods, and assessment instruments. *R. Schoone-Jongen*. 8:30 a.m. to noon.

MATH

MATH W80 Materials for K-8 Mathematics. This course examines and evaluates K-8 mathematics curricula in the context of the NCTM and the Common Core. Familiarity with a variety of K-8 curricula, with state and national mathematics grade level standards, and with state and national testing instruments is important for prospective teachers. Practice in designing mathematics lessons, making mathematics/literature connections, and solving open-ended problems are valuable skills for teachers. Students are expected to contribute to small-group and whole-class discussions of the materials. Evaluation is based on in class participation, presentation of grade-level lessons, written quizzes, and several written projects. Optional K-8 classroom observations can be arranged for the afternoon hours. Students should arrange their schedules so that they can spend time outside of class in the Library and working with other class members. Prerequisites: Math 221 and 222. This course is required for the Mathematics Elementary major, and replaces another course for Mathematics Elementary minors (with permission of their mathematics advisor). *J. Koop.* 8:30 a.m. to noon.

MATH W81 Detecting patterns in data. How do fitness trackers know when you are running or sleeping? How can animal-borne data loggers be used to reconstruct a travel path based on a few known locations, or tell when an animal is hunting, nesting, or traveling? How does speech recognition work? How can we predict stock market trends, or what a Netflix user might want to watch next? Common threads between these questions are the use of big datasets (usually with many observations of multiple data-streams over time), and the need to extract patterns by grouping together similar data-points. This applied dataanalysis course will introduce students to techniques such as clustering, multivariate data processing (principal components/correspondence analysis), and state-switching classification models (Markov chains, hidden Markov models and state-switching models), all from a statistical perspective. Prerequisite: Introductory statistics course (STAT 145, 241, 243 or 343) or permission of instructor. This course can fulfil the mathematics interim requirement, but will be accessible to students from natural sciences, computer science, engineering, business, economics or data science with interest in quantitative data analysis. It is an approved elective for the information systems major or minor. *S. DeRuiter.* 8:30 a.m. to noon.

MATH W82 Mathemagic: Advanced Problem Solving. If you would like to be able to solve difficult mathematical problems quickly, this course is for you. You will learn how to use undergraduate mathematics to solve various kinds of problems speedily, often without pencil or paper! This course satisfies the interim course requirement for the mathematics major. Prerequisite: Mathematics 256. *C. Moseley.* 2:00 p.m. to 5:00 p.m.

PHIL

PHIL W10 Peaceable Kingdom. Though stewardship of the animal kingdom is one of the primary responsibilities accorded to human beings in the Christian creation narrative, the question of how best to respect the creatures under our care is one that Christians too often neglect to ask. This omission is unfortunate, given the mounting evidence of fallenness in the social and commercial practices that presently govern our relationships to animals. While large-scale animal farming has increased consumer convenience, this convenience comes at a cost, and not just to animals. Our current food system is also proving to have negative, if unintended, consequences for the environment, local and global commerce and agriculture in both rural and urban communities, and public health. In view of these considerations, the purpose of this course is two-fold: first, to gain insight into the problem through a survey of the theological, moral, environmental, and socioeconomic issues surrounding the treatment of animals and

the allocation of natural and human resources by our current food system and other industries that use animals; and second, to take the initial steps toward becoming agents of renewal by discerning an array of concrete approaches to addressing these problems (e.g., legislating for less intensive, more sustainable food systems, community supported agriculture, cooking and eating lower on the food chain, exploring “locavorism,” urban farming and growing, vegetarianism and veganism, animal compassion advocacy, etc.). *M. Halteman*. 2:00 p.m. to 5:00 p.m.

PHIL W11 Moral Complicity in Film. This course focuses on the concept of moral complicity and how it relates to moral responsibility, supererogation, and collective responsibility. About eight motion pictures will be shown illustrating these moral concepts. These concepts will also be examined in the context of the Christian life. Learning objectives include knowledge of these moral concepts and the ability to analyze and identify their presence in the plots of motion pictures and, by extension, how they function in the lives of human moral agents. *G. Mellema*. 8:30 a.m. to noon.

PHYS W60 Advances in Nanoelectronics and Information Technology. This course reviews the physics behind the major areas in current and emerging nanoelectronics and information technology. Adequate background of the underlying physical principles will be given including a few hands-on exercises with existing devices. The course is aimed at science or engineering students who are interested in familiarizing themselves with the interdisciplinary nature of nanotechnology. The course begins with an introduction to the fundamental properties of information and how it is processed. The lectures move on to the essential properties of materials often encountered in modern technology such as of dielectrics, semiconductors, ferroelectrics, and organic molecules. The quantum mechanical effects on electrons, electron spin, plasmons, and other excitations that are relevant in nanoscale information processing will also be discussed. Physical barriers that face current computing or communication technology will be pointed out and also the novel ideas that have been proposed to overcome those challenges will be introduced such as plasmons for increasing data storage density and organic electro-optic devices faster data transmission. The rise of carbon-based devices will be given ample attention including its possible application in metrology and quantum computing. Focus will be bent towards the underlying physical themes that recur in the diverse and growing field of nanotechnology. Prerequisites: PHYS 133, 221, CHEM 103 or MATH 169. *R. Balili*. 2:00 p.m. to 5:00 p.m.

PSYC

PSYC W11 Learning from Sexual Minority Christians: Biblical, Psychological and Cultural Perspectives. Polarized thinking about Christianity and the LGBT+ community often obscures the fact that many sexual and gender minority persons are themselves Christian believers. This class will explore the landscape at the intersection of faith and LGBT+, seeking to learn from those who identify with both communities. Starting from the CRC's theological position on same-sex sexuality, students will be introduced to a range of perspectives through readings, reports, research articles, video and personal narrative. The class will engage other issues facing LGBT+ Christians, including identity congruence, gender variance, intersecting marginalized identities, depression and self-harm, and LGBT+ youth homelessness. Practices of prayer and journaling will be integrated into the class, and the class will strive to create safe/brave space for all students to learn in an atmosphere of humility, curiosity, grace, and respect. The class will attend the annual Gay Christian Network Conference (January 18-21 in Denver, CO) to learn from a diverse, Christ-focused community of LGBT+ people and allies. Fee: \$500 (some financial assistance available, by request). *C. Beversluis, J. Smith*. 8:30 a.m. to noon.

CANCELLED PSYC W12 The Meaning of Childhood. How do we view children in our society? Are they to be indulgently pampered with Disney Cruises and given trophies “just for showing up”, or are they seen as an impediment to adult happiness and self fulfillment? Does our definition of childhood impact how they are treated and how does this view affect how adolescents are treated as they grow up as young adults? Views of children throughout history will first be examined; including examples of societal attempts to exploit children. We will also examine the meaning of childhood at different times in the Christian tradition. We will also consider modern perspectives and views on children, and how this has implications for both adolescents and young adults. We will also consider children as the important consumer group that they have become. Values regarding children implicit in parenting literature (both Christian and non-Christian) will be critically examined, in order to gain a richer understanding of what childhood means to current society. *L. De Haan.* 2:00 p.m. to 5:00 p.m.

PSYC W60 Practicum: Children at Risk. This course is a combination of field experience and classwork. Students will spend 8 mornings in class considering the neurological impacts of early childhood stress on brain development and the psychosocial impacts of specific stressors such as poverty, divorce and remarriage, deprivation/orphanage care, abuse, and child trafficking. Students will spend 7 days (3.5 hours per day) at an area Head Start, a government funded preschool for low income families. Morning and afternoon Head Start placements are available. This course is by application only. Applications are available in the Psych Dept and will be accepted until placements are filled (with a cut-off date of November 15). This course meets the College’s CCE core requirement. This course is not open to students who have taken or plan to take Psyc 208. *M. Gunnoe, E. Helder.* 8:30 a.m. to noon.

PSYC W61 Psychopathology on Film. Throughout the history of film and in the various genre of film, psychopathology has been presented as part of the story portrayed on film. From the era of silent film (The Cabinet of Dr. Caligary) to more recent film (Silver Linings Playbook) films have presented a wide variety of depictions of psychopathology. These depictions have ranged from the (close to) accurate to the distorted and absurd. This course is designed to take a critical look at psychopathology as presented in film. The course begins with a series of films from the 1920’s to the 2010’s, a series that exemplifies both consistent themes and radical changes consistent with Western Zeitgeist. The course continues with a presentation and critical analysis of various forms of psychopathology. The last several sessions consist of student groups presenting a film and providing an analysis of their group’s film. Prospective students must be aware that many of these films deal with dark, violent, and disturbing themes and images. Prerequisite: PSYC 212 or its equivalent. *R. S. Stehouwer.* 8:30 a.m. to noon.

PSYC W62 Helping Skills. This course presents fundamental skills and strategies that underlie many psychotherapies. In reviewing theory and research on therapy relationships, the course identifies basic principles of problem management, communication, listening, and helping. A workshop format is used to teach and practice skills. Students develop skills in practice interviews and small group exercises. Students are assessed with direct observation of skill development, behavior ratings, and written assignments. This course is appropriate for students in psychology as well as social work, pastoral counseling, or management fields. Prerequisites: Psychology 151 and Psychology to 212. *J. De Boe.* 8:30 a.m. to noon.

REL

REL W41 Elie Wiesel, Prophet of the Holocaust: In Search of God and Humanity. Among the atrocities of the 20th century that aggravate the problem of evil for our times, the holocaust stands out. Among those who write and reflect on what an Auschwitz means for belief in God and humanity, and our future together, Elie Wiesel stands out. Elie Wiesel, the 1986 Nobel laureate, is aptly called the prophet of the holocaust, devoting his life to the remembrance of this horrific event in the attempt to discern and publish its moral lessons. This course traces the life, times, and ethical vision of Wiesel, particularly through his holocaust experience and subsequent quest to sustain faith in God and hope for humanity in its ever-elusive task to build a just and humane society. We journey with Wiesel by aid of documentary and film, but principally through his own writings, which include *Night*, *The Trial of God*, *The Town Beyond the Wall*, *Twilight*, and selections from his memoirs, *All Rivers Run to the Sea* (vol. 1), *And the Sea is Never Full* (vol. 2). Beyond the inspiration afforded by Wiesel's own life journey, students are expected to deepen their appreciation of the question of theodicy, and of the Jewish theological and ethical resources for persevering in a world with an Auschwitz, a world still dangerously poised. These Jewish resources for living will also be appreciated in their formal similarity to those available in Christian theology, which they therefore help to accentuate, even though they differ in content by one coming of the messiah. This course may fulfill an elective in the Religion major. *T. Thompson*. 2:00 p.m. to 5:00 p.m.

REL W42 Martyrdom in Theology & Film. This course is a historical and theological study of Christian martyrdom that will devote significant attention to its cultural presentation in film. Topics considered include definitions of martyrdom, the literary genre often known as "martyrology," the theological significance that Christian traditions have attached to their martyrs, and the potential dangers of the concept of martyrdom, especially in an age of religious violence. To this end, students will study early church martyrs, the phenomenon of martyrdom in the Reformation era, and more recent martyrs such as the German anti-Nazi theologian Dietrich Bonhoeffer, civil rights activist Martin Luther King Jr., and Salvadoran Archbishop Oscar Romero. By taking this class, students will develop a deeper understanding of the meaning and ambiguities of Christian martyrdom. These topics are explored through readings, discussion, lectures, examination of films. This course may fulfill an elective in the Religion major. *M. Lundberg*. 8:30 a.m. to noon.

REL W43 Birth, Sex, and Death in the Biblical World. Why is sexual intercourse "unclean" according to Lev 15:18? If the body is in the grave, where is the "person" after death? In recent years, anthropologists and other social scientists have begun to examine more closely the ways in which human cultures conceptualize and organize the ordinary events of the human life cycle. Biblical scholars, too, have begun to consider these things by using the Bible, not as a theological textbook, but as a window into the lives of ordinary people in ancient Israel and the early Church. This course looks at various aspects of the human life cycle as they are described or discussed in the Bible. Material from other ancient Near Eastern cultures is also used to illuminate the thought world of the Bible. Some of the aspects of the life cycle covered are the reasons why people wanted to have children, theories of conception and fetal development, birth and the postpartum period, the female reproductive cycle, the educational process, marriage, raising children, sexual activity and restrictions, celibacy, old age, death, and the afterlife. Students get to 1) study biblical texts as reflections of a particular moment in human culture; 2) look at and interpret various biblical texts for themselves; 3) think about how various biblical texts might apply today. This course may fulfill an elective in the Religion major. *R. Whitekettle*. 8:30 a.m. to noon.

REL W80 The Book of Revelation. No writing in the Bible has been subject to a wider range of interpretations than the Book of Revelation. Many Protestant evangelicals claim to find in Revelation coded predictions about events that will take place in the modern world. But many Christian churches, including those in the Reformed tradition, recognize the highly symbolic nature of John's apocalypse. They also attempt to discern the book's message for its first recipients before considering its relevance today. This course begins by using a two-part documentary film on Revelation that devotes significant attention to the variety of ways in which the book has been interpreted through the centuries in Church history. Most class sessions will be devoted to working carefully through the text of Revelation chapter by chapter, with a focus on what the book would have meant to Revelation's first audience: Christians in first-century Roman Asia Minor (modern-day Turkey). Through group and general class discussion, however, attention is also given to the theological challenges raised by Revelation and to its relevance for Christian faith and life today. This course may fulfill an elective in the Religion major. Prerequisite: one course in Religion. *D. Harlow.* 8:30 a.m. to noon.

SCES 214 Communication and Learning in the Natural Sciences. This course provides a systematic examination of communication and teaching strategies for teaching natural science at the middle and high school level, including oral exposition, visual imagery, demonstrations, technology, and laboratory activities. Theoretical components include underlying educational theories, scientific literacy, and the unifying themes and practices in science. Practical components include methodologies for promoting class discussion, assessment, lesson development, laboratory safety, student presentations and responses. Evaluation is based on oral presentations, lesson planning, class participation, short quizzes, and two written exams. Prerequisite: At least three courses in natural science. *J. Jadrich.* 8:30 a.m. to noon.

SOC W41 Gender, Violence, and Resistance. This course will focus on the ways in which gender-based violence is perpetuated in the United States and around the world, paying attention to the intersection of identities that influence one's experience of violence. Students will learn about different forms of gendered violence, such as sexual assault, domestic violence, violence against LGBTQ individuals, and religious and cultural practices. The course will also explore the ways in which individuals resist violence in the everyday enactment of their lives, through individual and collective action, sometimes through protest, performance, organizing, and coalition-building. Students will develop an understanding of the role of social services, public policy, and faith communities in violence prevention and response. Students will examine these topics using a Reformed, Christian perspective to help understand the problem of violence and possibilities for restoration. This course may fulfill an elective in the Sociology major and Gender Studies Minor. *R. Venema.* 2:00 p.m. to 5:00 p.m.

SPAN 122 Intermediate Spanish (core). This course is the second part of the closely integrated 121-122-202 sequence, which fulfills the requirements for foreign language. Students attend large-group sessions in the morning and small-group sessions in the afternoon to acquire skills in speaking, listening, reading, and writing in Spanish and participate in discussion of cultural topics related to the Hispanic world. Chapter tests, vocabulary and grammar quizzes, compositions, possible oral presentations, and a final exam are required. *Staff.* 9:00 a.m. to 3:00 p.m.

SPAUD

SPAUD 343 Principles of Communication Neuroscience. This course provides a thorough understanding of nervous system anatomy and physiology as it relates to speech, language, and hearing. Principles of systems theory, neuromuscular control, somatosensory processing, and complex cognitive function are included. Select communication disorders are discussed to highlight the effects of breakdowns in nervous system function during speech, language, and hearing processes. Prerequisite: SPAUD 210. *Staff.* 8:30 a.m. to noon.

SPAUD 512 Augmentative and Alternative Communication. This course will introduce augmentative and alternative communication and the strategies used to improve the communication skills of individuals with limited or nonfunctional speech. Focus will include an in-depth review of the assessment process, as well as the AAC needs of individuals with developmental and acquired disabilities across the age continuum. Hands-on experience with various methods of AAC strategies and devices will provide a clearer understanding of AAC intervention. Part I will focus on an overview of AAC. Part II will describe the AAC needs for persons with specific disabilities, and Part III will present AAC needs for specific environments. Students will develop an understanding of information related to concepts, strategies, techniques and issues that are unique to the field of augmentative and alternative communication. Assessment methods will include written exams, written reflections, problem-based learning, and group discussion. Open to SPAUD graduate students and SPAUD 4-year BA students. *H. Koole, E. Oommen.* 8:30 a.m. to noon.

DCM

IDIS 150 01 DCM: Reading the Word and the World. Many educators regard Paulo Freire as one of the most influential educators of the 20th—and even now 21st—century for his contributions to literacy studies. His concept of reading the word and the world in particular has ushered in a view of literacy toward socio-cultural perspectives and away from cognitive/developmental ones. Such a paradigm shift has challenged the ways in which educators teach learners how to read basic alphanumeric texts in primary school and content area texts in such subjects as music, math, and Spanish at the secondary level. In this course, we will explore whether and how this concept of reading the word and the world is in harmony with a Reformed perspective. We will look at how the home, church, and social institutions into which each of us is born influence how we communicate and make sense of various academic language and texts we encounter in the K-12 schooling system. We will watch popular movies, tour local schools, engage in small and whole group discussions, participate in literacy activities such as read alouds, and write our way to a transformed understanding of a Christian perspective on reading the word and the world. How might Reformed theology inform our view of the literacy practices of learners? How does Reformed theology help us to assess and ultimately celebrate the ways in which each learner reads the word and the world? *N. Westbrook.* 8:30 a.m. to noon.

IDIS 150 02 DCM: Christian Faith and Stoicism. Taken during the first-year interim, this course introduces students to the central intellectual project of Calvin College, the development of a Christian worldview and a broad, faith-based engagement with the ambient culture. A set of common readings sketches out basic biblical themes and helps students begin to formulate a Christian frame of reference as they pursue their academic vocation. In addition to these common readings and themes, each section of the course defines a particular academic issue to explore from the perspective of Christian faith and

praxis. This course specifically will be based on readings from Greek and Roman Stoics, especially Cicero, Seneca the Younger, and Epictetus. After establishing a basic understanding of Stoicism – one of the most historically successful philosophies – we will compare and contrast this philosophical perspective with the Christian faith as revealed in the Holy Scriptures and summarized in the Reformed Confessions. *D. Noe*. 2:00 p.m. to 5:00 p.m.

IDIS 150 03 DCM: Thinking Beautifully about Mathematics. Historically, many figures, such as Pythagoras, Plato, Galileo, Newton and Einstein, have been inspired by ways beauty have been perceived in mathematics and the ways it displays itself in the natural order. In this section of DCM, we will consider various perspectives by which beauty can be perceived in the subject-matter of mathematics. In particular, we will address such questions as: Is mathematics invented or discovered? Why is mathematics “unreasonably effective” in the sciences? Is pure mathematics worth studying as a subject unto itself? Along the way, we will examine important developments in the history of mathematics, consider how understanding mathematics is connected to nature as being an orderly creation, in what ways mathematics can be said to be the language of the universe, how mathematical thinking relates to questions about the human mind and, moreover, how such thinking can be seen as contemplating Truth, Goodness and Beauty as reflected in the created order. *J. Turner*. 2:00 p.m. to 5:00 p.m.

~~**CANCELLED IDIS 150 04 DCM: Race, Class, Gender and Migration in the U.S.** This course will examine migration in the United States with a particular focus on the dynamics of race, class, gender, religion, citizenship, and other systems of oppression and their effect on migration processes. Particular emphasis will be on how systems of oppression such these interact with migration and migration processes including immigrant incorporation and assimilation, societal attitudes and policy. Students will examine the ways that North American race, class, and gender relations affect newly arriving immigrants and their access to participation in community. The experiences of migrants and their communities and how they understand their social location within the larger boundaries of North American racial, ethnic and religious relations will be central to the course. Also of central importance is the role of faith and religious organizations and institutions in supporting immigrants and immigrant communities. Students will participate in lectures, discussions, field trips, and films in order to engage the material. *L. Schwander*. 2:00 p.m. to 5:00 p.m.~~

IDIS 150 04 DCM: Environmental Health and Justice. This course will introduce students to the major issues in environmental health and justice with a focus on the United States and Grand Rapids, MI. The natural and built environment that we live in influences our health in profound ways. In this course, students will explore the basic principles, practices, and issues related to environmental health with emphasis placed on how environment influences human health and disease. In addition, this course will introduce students to the Environmental Justice (EJ) which justice seeks fair treatment of all people regardless of race, ethnicity, gender, income, and national origin with respect to environmental policies and their implementations. Students will learning about basic EJ philosophies, practices, approaches, past accomplishments and future potential. *E. Boldenow*. 8:30 a.m. to noon.

IDIS 150 05 DCM: Why Did I Do That? - Social Cognition in Everyday Life. Why do we do the things we do? How much of our decision making operates at a conscious vs. unconscious level? What factors really decide our level of happiness? These are just a few of the questions that the field of social cognition addresses. The DCM course focuses on what factors influence our everyday behavior and decision

making. This course follows three themes: 1) How do we process and utilize social information in our daily lives? 2) How do these processes both benefit us and how might they be distorted and harmful? 3) How can we use this knowledge to make better choices and behave in a more redemptive way? Specific topics include, psychological theories of decision making, Biblical views on human nature and behavior, factors that determine our level of happiness, how cognitive processes impact our relationships, and why humans are predictable. In addition to exams, students are evaluated through reflection papers which will include applications of the themes learned during the course. *B. Riek, D. Tellinghuisen.* 8:30 a.m. to noon.

IDIS 150 06 DCM: Water and Life in a Changing World. Water is essential to all life and yet water resources are unevenly distributed around the earth and all too frequently contaminated. Thus, water has been the focus of great engineering works from ancient Roman aqueducts to immense hydroelectric dams to sewage reclaimed for drinking water. This course explores the science, ethics, and management of water with a focus on contemporary challenges such as unsafe drinking water, water shortages, conflict over international rivers, climate change, and the food/energy/water nexus. *M. Bjelland.* 8:30 a.m. to noon.

IDIS 150 07 DCM: Listening in a World of Distraction. When you think about communication, you probably focus on the act of talking, not listening. But listening is central to human communication, especially given that we are created to live in relationship with one another and with God. When we do acknowledge the value of listening, we tend to make naively simplistic assumptions about what it takes to listen well, which lead us to overestimate our listening prowess. In this course, we will consider the power of listening to transform our interpersonal relationships and will practice engaged, supportive listening in our interactions with others. We will study the listening process, the variation in styles and types of listening; contextual factors, perceptual biases, attitudes, and behaviors that can undermine listening; and attitudes and behaviors that facilitate listening. We will also encounter spiritual practices designed to improve our attentiveness to God's voice. We will situate our study of listening in the current social context, seeking to understand the challenges of listening in our always-connected, multitasking world. Class activities will include observing listening in interpersonal interactions, fasting from technology and media for 24 hours, trying spiritual and interpersonal listening practices, and going on an overnight listening retreat as a class. Fee: \$20. *S. Wieland.* 8:30 a.m. to noon.

IDIS 150 08 DCM: Climate Change: Science, Rhetoric and Policy. This DCM section explores global climate change—a widely discussed topic today: in the media, among politicians, among scientists. Yet the various summaries offered sometimes seem mutually exclusive. Have we ruined our environment beyond repair? Or is it simply not possible for humans to have a significant impact at all? In this course students practice reasoning skills needed to sift through competing claims and to define which issues are pressing. Further, students consider moral questions raised by the scientific results, such as stewardship of a common earth or justice when the actions of one group affect the environment of another. Finally, students consider how environmental policies balance environmental, moral, and economic factors. There will be a course fee of \$15 to cover transportation costs for a field trip to Lake Winds Energy Park and the Ludington Pumped Storage Power Plant. *K. Groenendyk, L. Molnar.* 8:30 a.m. to noon.

IDIS 150 09 DCM: Law as Vocation. This course offers students an opportunity to explore concepts of calling and vocation by learning directly from legal practitioners about the many different kinds of law-

related work they perform and some of the basic legal principles they use in their work. Students will participate in class lectures, classroom seminars, and other activities led by legal professionals who will describe the work they do, introduce some core legal principles, explain how their work integrates into the legal process, and discuss their calling as legal professionals. The course will include off-campus activities in Grand Rapids and Chicago. *J. Westra, R. Vogelzang.* 2:00 p.m. to 5:00 p.m.

IDIS 150 10 DCM: Utopias, Dystopias, and Apocalypse. Political philosophers have told stories about perfect and imperfect communities and what we can learn from them since antiquity. Utopias offer us a picture of what should be and, perhaps, can still be. Dystopias warn us about how ambitious political and social projects can go horrendously wrong. And tales of apocalypse unveil a vision of a reality that truly lies behind all that we have taken for truth thus far. There is more than a passing resonance between these literary categories and the traditional Reformed emphases on Creation, Fall, and Redemption. In this course we will explore various examples of utopias, dystopias, and apocalypse through both the written word and visual depiction, and how these works of imaginative political philosophy relate to the Reformed "accent" and structure that informs the educational mission of Calvin College. *M. Watson.* 2:00 p.m. to 5:00 p.m.

IDIS 150 11 DCM: Perspectives in Education Reform. This course presents controversies in education reform by reviewing the major reforms in the U.S. public education since the publication of "A Nation at Risk" in 1983. These reforms include standardized testing, charter schools, and other forms of school choice. Students in this course also assess the future trajectory of education reforms in the United States. This course also examines the complex relationship between education and the larger socioeconomic environment in the U.S, particularly within urban neighborhoods. Specific dimensions of the current policy debate will be explored including equity in school funding, the role of race in education, and educational policy approaches from other countries. The last week of the course consists of site visits to Grand Rapids, Lansing, and Chicago (two-day trip), in which the class will listen to the perspectives of multiple education practitioners, reformers, administrators, and policy decision-makers. This course may fulfill an elective in the Political Science majors. As a DCM section, this course will broadly apply the Reformed perspective to the study of public policy. *M. Pelz.* 8:30 a.m. to noon.

IDIS 150 12 DCM: Understanding Japanese Mindset: Explore constructive dialogues with Japanese people about faith. A visitor in any Japanese cities might find a life in modern Japan not much different from a life in the US. However, Christians might get confused when they find out that many Japanese regularly participate in traditional rituals based on Shintoism, have a wedding ceremony at a Christian church, and then hold a funeral at a Buddhist temple. At the same time, those Japanese may profess that they have no religion. What does this mean? This course aims to introduce fundamental values and principles that are ingrained in Japanese mindset and to identify and explore how religious beliefs and rituals are integrated into modern Japanese life through non-fiction texts, documentary films, and feature films. This course is premised on a belief that one will be able to reflect on and nurture one's own Christian mind effectively by means of learning, understanding, and appreciating different faith traditions. We will reflect on and discuss differences in notions of faith or religion and seek productive dialogues that can stimulate mutual cross-cultural understanding between Christians and non-Christians in Japan. Example topics of class discussion are as follows. How does Japanese mindset manifest the longing for God? How is the Japanese belief of creation different from the Christian belief of creation? What are Japanese thoughts about our evil natures? If our nature is evil, how is it possible for us to do good? *K. Schau.* 8:30 a.m. to noon.

IDIS 150 13 DCM: Understanding Islam. This course introduces the Islamic tradition through interdisciplinary insights from religious studies and history, within a framework of interfaith understanding. Topics include the sacred texts, the Prophet Muhammad, the major sects, mysticism, key modern controversies including violence and the status of women, and Christian understandings of other faiths. Readings include the Qur'an, an anthology of Rumi's poetry, appropriate other source readings, and a textbook. In addition to the readings, students participate in discussion, keep a journal, visit a Grand Rapids mosque, take a quiz, and write an integrative paper. *D. Howard.* 2:00 p.m. to 5:00 p.m.

IDIS 150 14 DCM: Music and Politics. This course explores the complex relationship between music and politics: how governments, institutions and special interests groups have influenced the kinds of music made (or not made) in a given context, the variety of ways music has been used to meet political objectives, and the many different ways music has been understood to carry political meaning. By examining several case studies from the 20th century onward, the course will probe the positive and negative social functions for music in political contexts, considering when and how music can be a tool for expression, teaching, solidarity, identity-formation, and satire, but also oppression, control, dehumanization, and even torture. Case studies will include: worker's music from the North American labor movement (1920s and 30s), music in Nazi Germany and the Holocaust, Soviet music during the Cold War, the civil rights movement in North America, music during Apartheid in South Africa, censorship and regulation of popular music in the US (especially the Parents Music Resource Council), and uses for music by American soldiers in the Global War on Terror. Using Plantinga's Engaging God's World as a backdrop, we will probe theological and philosophical queries about music that arise out of these case studies: how can music be considered good or evil? how is music implicated in negotiations of power? what factors allow it to act as a redemptive or oppressive force in society? No musical training required. *B. Wolters-Fredlund.* 8:30 a.m. to noon.

~~**CANCELLED IDIS 150 15 DCM: Coaching Young Athletes.** This course is designed to provide students with knowledge and practical experiences related to coaching young athletes. The focus is on knowledge, skills, strategies, and issues in youth sport. This course aims to develop insight and knowledge for a youth sport leader, primarily in the areas of philosophy, psychology, and pedagogy, and secondarily in physiology and risk management. Cultural norms involved in coaching the young athlete will be critiqued using a Reformed worldview in an attempt to expose the complicated demands of coaching and the necessary tools one should possess in order to be successful in coaching. *J. Bergsma.* 8:30 a.m. to noon.~~

IDIS 150 15 DCM: Sport Documentaries. This course examines sport and its place in human life and culture through documentary films that feature sport. Students review several sport documentary films such as Hoop Dreams, Murderball, The Boxing Girls of Kabul, and ESPN's 30 for 30, identifying and evaluating why people play and watch sports, the interaction between sport and society, and the effects of sport on individuals and culture. In addition, the course explores common psychological issues in sport such as competition, motivation, leadership and aggression as well as sociological themes including race, gender, social class, youth development, and religion. Sport films serve as a catalyst for evaluation and discussion of sport in modern society and stimulate students to dig beneath the surface to explore the meaning of sport, including its intersections and contrasts with Christianity. Students work toward developing and articulating a Christian perspective on sport. *B. Bolt.* 8:30 a.m. to noon.

IDIS 150 16 DCM: God Rested: Why Can't You? Living in a life of a 24/7 world, the notion of rest may come to our mind as an anachronism, a fantasy, or simply unimaginable. While we are created to worship God and rest in Him, we tend to worship our work, and rest in ourselves. These distortions affect our perceptions of ourselves, our relationships with others, and most importantly, our relationship with God. We may wonder, "Do I realize life while I live it, every, every minute?" This class will examine some of the personal and socio-cultural forces that drive us toward living restless life. In addition, this class will assist in developing a new perspective that will help rediscover leisure, work and rest. *Y. Lee*. 8:30 a.m. to noon.

IDIS 150 17 DCM: Movies and Music: Theological Themes. This course examines the expression of theological themes in select musical works and films. Compositions studied include works by Haydn (The Creation), Bach (St. John Passion), and Mozart (Requiem). Films analyzed include *Babette's Feast*, *The Mission*, *The Seventh Seal*, and *Amadeus*. Where possible, the relevant libretto or screenplay is read prior to listening to or viewing the work in question. Prerequisites: interest in theology, the arts, and their intersection; readiness to listen carefully and watch discerningly; and willingness to engage in discussion. Students will: 1) acquire a knowledge of select theological themes 2) become acquainted with certain sacred compositions (and their composers) 3) enhance their listening skills 4) become acquainted with certain films (and their directors) 5) advance their skills in film analysis 6) exercise their skills in discussion and oral presentation. *R. Plantinga*. 2:00 p.m. to 5:00 p.m.

IDIS 150 18 DCM: The Big Bang Theory. This course will be a scientific and historical account of the progression of humanity's understanding of the physical universe, from ancient history to the present. Important discoveries will be highlighted along the way, with fundamental scientific concepts introduced as needed in order to provide a clear picture explaining the popularity of the big bang theory. In addition, students will explore the varying Christian perspectives on the big bang theory, seeking to understand some of the conflicting interpretive frameworks that can lead to disagreement over the theory's plausibility and theological legitimacy. This is not a survey introduction to astronomy but will cover topics pertinent to understanding the big bang theory as a scientific model. It is designed to be accessible to anyone with a high school level education in science and a firm grasp of algebra. *J. Smolinski*. 2:00 p.m. to 5:00 p.m.