January 2021 On Campus Interim Courses (revised 9/22/2020)

What follows is a list of all the on-campus courses offered during January 2021. For interims that are not regularly offered, therefore not in the university catalog, the course descriptions are included below. The other courses can be found in the catalog or in self-service.

ACCT 210 A Computerized Accounting

ACCT 521 A Advanced Topics in Auditing and Assurance Services

BIOL W80 Ecotoxicology. Today’s modern industrialized society uses approximately 60,000-80,000 different chemicals, including 1000-2000 new chemicals every year, in the form of pesticides, pharmaceuticals, personal care products, plastics, energy sources, and industrial chemicals and wastes. Some of these chemicals are significant environmental contaminants, presenting potential risks to individual organisms, including humans, and entire ecosystems. Ecotoxicology is the study of the effects of environmental contaminants on aquatic and terrestrial organisms, including relationships between chemical effects on the biochemical and physiological levels to impacts individuals, populations, and ecosystems. Ecotoxicology examines the local and global fate and transport of environmental contaminants as well as current approaches for assessing toxicity and chemical risks. Ecotoxicology provides important data to inform the development of environmental policies that promote safe and sustainable of chemicals.

Ecotoxicology is an important sub-discipline of environmental science and public health, and as such this course is intended to benefit students interested in these fields as well as ecology, natural resources, pharmacology, medicine, environmental chemistry, and environmental policy. This course will serve as an upper-level elective in the environmental health and conservation, biology, and biotechnology programs, and, with advisor approval in the environmental sciences, environmental studies, and public health programs.

Prerequisites: BIOL 160, BIOL 161, and CHEM 253 or 261. Instructor approval is needed for students who have not taken these or equivalent courses. K. Grasman. 8:30 a.m. to noon.

BUS W80 Negotiation Theory and Practice. Negotiations skills are crucial for interaction in today’s business world. In this course students are introduced to the theory and concepts for different negotiation approaches which are then reinforced through practical simulated negotiations. Covered topics include basic negotiation concepts (BATNA, reservation price, etc.) as well as critical discussion of different negotiation approaches such as principled negotiation championed in the popular book Getting to Yes. Students are graded on the basis of tests, class participation and engagement, and a mock negotiation. Prerequisites: Junior or Senior standing. P. Johnson, 8:30 a.m. to Noon.

CHEM 101.2 General Chemistry 1; Second Half

COMM 500 A Basics of Media Production

EDUC W80 Teaching and Learning with Technology. This course seeks to move students beyond the technology skills used in a classroom, to employing frameworks that examine issues regarding implementation, administration and evaluation of academic technologies. Students will explore face-to-face and online educational environments, theoretical frameworks, and a variety of software applications in order to develop knowledge and skill in managing the content and tasks of the teaching
profession as well as making instructional decisions regarding digital technology use for student learning and formation. After two weeks of analyzing frameworks and becoming familiar with technologies ranging from educational games to course management software, students will spend three days in an educational environment putting into practice the knowledge and skills they have developed. Prerequisites: IDIS 110, EDUC 102. M. Terpstra. 8:30 a.m. to noon.

ENGL 374 English Grammar

ENGL W40 Reading/Rewriting Moby Dick. Herman Melville’s Moby Dick is the great nineteenth-century American novel that everyone knows but few have actually read. In this fifteen-day course, our ambition is to swallow the whole fish—hook, line, and sinker—all four hundred and ten pages! No small task, but a generative one. Henry David Thoreau once said, “Decayed literature makes the richest of soils.” If he is right, then this whopper of a book will produce fine compost; from it, we will be able to grow our own garden, our own thoughts, our own art. The course encourages a new kind of reading where students draw creative inspiration (rather than information) from the text. True, they will probe the narrative and seek earnestly to understand it, but the goal is to germinate and compose, not merely appreciate. To accomplish this, the class will be invited to keep a sketchbook—blank pages for observations, questions, sketching, doodling—the rough beginnings of poems, stories, essays, songs, pictures, and other kinds of compositions. Class periods will not only provide opportunities for the mind to roam in but also hands-on exercises to play (seriously) with Melville’s tome. Students will be evaluated on the quality of the sketchbooks (25 page minimum), quizzes, and a short reflection paper on the reading process (4 page minimum), as well as their level of engagement with the assigned readings and class activities. There are no prerequisites for this class. In consultation with the student’s faculty advisor, the course may count as an elective in the Writing Minor or a line in the Writing Major. This course is primarily designed for, but not limited to, readers and writers interested in understanding literature as a creative process as well as looking for inspiration for their own creative endeavors. L. Klatt. 8:30 a.m. to noon.

ENGL W41 The Brothers Karamazov. An intensive reading of Fyodor Dostoevsky’s masterpiece in its historical, theological, and critical contexts, using the novel to grapple with large questions relevant to Christian higher education: What is the right relationship between faith and reason? To what extent does grace and salvation need to make sense? When and how is suffering redemptive? What does it mean to be a follower of Jesus Christ in a fallen world? Lectures will provide various contexts, film clips will help to keep the novel somewhat accessible, and engagement with the themes will be driven by student-led discussion. Students will be evaluated on regular participation and a formal essay. C. Engbers. 8:30 a.m. to noon.

ENGR 250 A Introduction to Biomedical Engineering

ENGR W80 Robotics in a Competitive Setting. Robotics is a growing field of engineering where a multidisciplinary team of engineers addresses a physical problem through the use of mechanical systems. The systems are linked and controlled with electric or electronic systems, including sensors, motors and computers. 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 First Robotics and is new every year. The specifics of the task will be unknown to the faculty and students at the start of the course. This course will require participation on the first Saturday after the course has started. R. Tubergen. 2:00 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 robotic 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 motors 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 the team design projects. Prerequisites: C Language Programming or equivalent, Engineering 307 & 311, and Metal Shop Training. Preference given to senior-standing ECE engineering students. M. Michmerhuizen. 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 requirement. Prerequisite: ENGR 331 and ENGR 335. J. VanAntwerp. 8:30 am to noon.

**ENGR W83 Masonry Design.** In this course the student will become familiar with basic masonry materials, including clay brick, concrete block, mortar, grout and reinforcing accessories. The student will be able to analyze and design unreinforced masonry structures using engineering methods. The student will understand the behavior of reinforced masonry structures and be able to design for flexure, shear, axial forces, combined flexure and axial forces, and in-plane shear forces. Problem sets and a final design-project report are required. Prerequisite: Engr 326 or permission from instructor. L. De Rooy. 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.

**ENTR W40 Entrepreneurship Finance.** This course examines processes by which startups and small businesses finance their entrepreneurial ventures. Students learn how startups can identify and obtain financing to develop, test, and grow their ventures. Students also examine the process for acquiring an existing company. Students learn methods for valuing an opportunity and different types of debt, equity and hybrid financing, such as venture capital, loans, and bootstrapping, including the rationale and benefits for each. The course employs different methods of learning including lectures, readings, cases,
discussions, and several guest speakers. Fulfills a 3-credit hour requirement for the minor in Entrepreneurship. P. Snyder. 8:30 a.m. to noon.

FIN W40 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? How much college debt is too much? 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? How do I negotiate a job offer I receive—what benefits should I be expecting? 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 stewards 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 various professionals in these disciplines, video, and group exercises and discussion. Students will be evaluated on the basis of regular attendance and participation, participation in team exercises, regular quizzes from text and other reading material, a short paper and related presentation on a book of their choosing and a final exam. D. Pruis. 8:30 a.m. to noon.

FREN 112 A Multisensory Structured French II

FREN 132 A Intermediate French I

GERM 150 A Intermediate German I Intensive

HNRS 250 A Legacies of Empire: New Orleans. This course undertakes interdisciplinary exploration of the historical and contemporary legacies of European empires in Louisiana broadly, but New Orleans and its surrounding area particularly. In the Louisiana colony, slave-based sugar plantations and slaved-based domestic work, which helped to sustain the economies of European empires (the French and Spanish, respectively), eventually changed over to petroleum, energy, and tourism as primary sources of revenue and economic development. Through a combination of academic and experiential learning, students will examine topics such as the Atlantic Slave Trade to Louisiana, the 1811 Slave Revolt, development of Creole society, Black Carnival culture, and gentrification post-Katrina. This course will fulfill the CCE credit for students and serve as an elective in HIST, POLS, IR, IDS, or AADS.

IDIS 103 A Oral Rhetoric for Engineers

IDIS 103 B Oral Rhetoric for Engineers

IDIS 206 A Intro to Medieval Studies

IDIS 290 A & B Members of One Another: The Cultural Self and Others. As its title implies, this CCE course relies on the belief that we learn about ourselves as human beings through shared experiences with people from diverse backgrounds and of diverse perspectives and persuasions. We take as our point of departure David Smith’s Learning from the Stranger: Christian Faith and Cultural Diversity.
Smith applies biblical mandates to engage with and learn from culturally diverse neighbors as cultural beings ourselves to a transnational context, reminding us that local and global cultural awareness are interconnected and inform one another. From within this frame, all students are invited to lend their multi-culled voices to the class. We will relate what we learn from Smith to the context in which we all now live. The US application is deliberately broad, touching on groups such as recent immigrants, historical minorities, older Americans and persons with disabilities, to give all class members an opportunity to gain awareness about and interact with human beings around several lines of cultural difference. As we learn together about various aspects of diversity (and, from there, commonality), class members will be encouraged to share their own individual sense of participation in or belonging to the United States cultural majority broadly speaking, or their identification with different cultural minorities or other home countries, or both. Requirements include class attendance at all six sessions, daily class participation, one worship service, two January Series events, regular brief response work, and a final reflection paper. This course is designated CCE-integral, 0 or 1-credit hours, pass/fail. A. Tigchelaar. A.m. and p.m. sections.

**IDIS 375 A Social Science Methods**

**IDIS W20 Sights, Sounds, Flavors & Fragrances.** Our senses provide more than simply a means of interacting with the world. They can inspire joy, provide warning of danger, and stir up old memories, or they can mislead us as with optical illusions. This course uses a hands-on approach to explore the ranges and limits of our senses. Through daily activities such as making and tasting salsas with a collection of spices, simulating multiple forms of color blindness, comparing the range of perceived sounds, tasting food without the benefit of smell or sight, and observing aromas used in sales and marketing, students learn to fully engage their senses. Students also gain an appreciation of the current chemical and biochemical understanding of their senses. Evaluation is based on class participation, daily blogs, and a final group project. This course assumes no prior knowledge of chemistry or biochemistry, though students who want to dig more deeply into the biochemistry of their senses will find plenty of resources to do so. E. Arnoys. 2:00 to 5:00 p.m.

**IDIS W22 Women’s Health.** This course focuses on personal decision making in all dimensions of women’s health. We investigate, discuss, and share women’s health concerns ranging from cancer to sexuality. We focus on the unique physiology and anatomy of women, as well as on health care use and advocacy. Community experts, women’s health videos, and women sharing their personal life stories add to our learning experience. Students are expected to complete assigned readings, make a class presentation, conduct a health interview, attend relevant January Series Lectures, and write reaction papers on each of the speakers. Course fee: $20. D. Bakker & K. Berends. 8:30 a.m. to noon.

**IDIS W32 The Beatles and the Sixties: Music and More.** In this course, 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. Evaluation will be based on student presentations of other music released in the decade, a
personal essay on an album by a member of Beatles after the band broke up, and reading responses for each of the assigned readings and listenings. R. Keeley. 8:30 a.m. to noon.

**IDIS W34 Inside the January Series.** The Award-winning January Series brings to campus world-class authorities in their fields 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 interact with these speakers during our morning class sessions. In response to the values and ideas they encounter from 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 noon.

**IDIS W35 Managing Diversity and Inclusion.** Why do we shy away from engagement or hospitality toward others who are very different from us in our working place? Would we like to love our neighbor as ourselves and yet we do not know we have offended our neighbor because of many implicit rules and assumptions? Would you like to use our differences to be the catalyst for creative breakthroughs and organization effectiveness? Would you like to implement an inclusive organization culture for Christ’s kingdom on the earth? For example, managing a diversified, equitable, and inclusive workforce will be crucial to achieving health equity in the United States. Implementing an inclusive organization culture is also related to the life and death issue. This course is designed to help students improve their ability to work effectively in diverse and cross-cultural organizational settings. It also offers students the opportunity to develop their critical thinking on topics such as identity, relationships across differences, discrimination and bias, equality, and equity in organizations and how they relate to organizational issues of power, privilege, opportunity, trust, compassion, inclusion, creativity and innovation, and effectiveness. It also helps students to discover how to be Christ’s renewal agents when they know how to change an organization’s leadership, organization systems and practices to maximize the potential advantages of a diverse work force and value diversity as an asset for organizations’ learning and adaptive change. Class sessions will be experiential and discussion-based. Students are graded by quizzes of readings, tests, reflection papers, case analyses, and group projects. 3 credit hour course. M. Lam. 8:30 a.m. to noon.

**IDIS W36 Tolkien’s “Lord of the Rings.”** Part of the power of J.R.R. Tolkien’s epic story The Lord of the Rings is the fully developed mythological world of Middle Earth in which it is set. Its development began long before The Lord of the Rings was written and was an intentional vehicle through which Tolkien could work out complex ideas about creation and art, evil and suffering, death, stewardship, service, friendship, and hope. Evidence of the power of the (nonallegorical) story is the degree to which readers find it an insightful commentary on current issues of faith, politics, and more. Students in this course read The Lord of the Rings in its entirety. Occasional lectures illuminate the biographical and literary contexts for Tolkien’s work. Most class time, however, is devoted to discussion of the daily readings, with the themes and applications that arise from them. In the final week, a marathon viewing of the Peter Jackson film adaptations takes place, accompanied by discussion of how the themes from the book are treated. Students are evaluated on participation in class discussion, a reading journal and a creative final project. The workload for this course is heavy: reading assignments typically exceed 100 pages per day. Students registered for the course should read The Hobbit over the break and expect an extensive quiz on the first day. Fee: none. Prerequisite: none. L. Molnar. 8:30 a.m. to noon.
**IDIS W37 Chinese Medicine and Chinese Culture.** Half of this course focuses on Traditional Chinese medicine (TCM) and the other half focuses on Chinese culture. TCM with its practice in acupuncture and herbal remedies is becoming more and more recognized and popular in western societies including the US and Europe. With a holistic approach, TCM focuses more on improving the body’s natural ways of healing rather than combating germs directly. Therefore it is very effective in dealing with chronic conditions such as migraine, asthma, depression and infertility. It has also been used to complement the use of western medicine (for example alleviating the side effects of Chemotherapy). Knowledge about and familiarity with TCM has increasing values for future healthcare professionals. In this course the students learn the theory and practice of TCM. Students will also learn about Chinese history, philosophy and culture in this class. As China becomes more and more influential on the global stage, understanding of Chinese values and culture is increasingly important. Through instructions by native Chinese instructors, as well as field trips to Chinese restaurant, stores, church and Chicago Chinatown, students will have first-hand experience of Chinese culture. The course consists of lectures, discussions, presentations, independent projects and field trips. An all-day field trip on Jan 16 2021 is required. This course will fulfill the CCE core requirement. No prerequisites. Fee: $200 to cover field trips, class materials and guest speaker fees. A. Shen. 2:00 to 5:00.

**IDIS W60 Clinical Experience in Healthcare.** This course is a combination of field experience in clinical healthcare settings and morning classroom-based discussion groups. Students in this course will participate in healthcare related activities in a clinical setting to gain patient care experience in medically underserved areas. Students will spend 12 days (3. 5 hours per day) at an area clinical healthcare setting working alongside of healthcare professionals and patients. Morning and afternoon placements are available. 2 mornings will be classroom discussion of patient scenarios. This course is by application only. Applications are available in the Biology Office and will be accepted until placements are filled (final cut-off date of November 15). Students will be required to be up to date on immunizations inclusive of the annual influenza vaccine and TB skin test due to clinical site placements (contact with patients). T. Crumb. 8:30 a.m. to noon.

**KIN W10 The Wild World of Sports: 15 for 15.** This course will critically examine 15 different topics and issues related to sport in today’s world and will mirrored “ESPN’s 30 for 30 series” but with an exploration through a faith-based lens. These topics will include issues and conflicts that are happening in and around sport today. Some examples of these topics are “E Sports- Aggression and Sexual Violence,” “Gambling and Sports,” “The Sport Spectator—the Decline in Attendance,” “ESPN—Is it Good for Sport?,” “Calvin Athletics—Future Direction and Challenges,” “Sport and Social Media—The Positives and Negatives,” “Coaches—What is Motivation and What is Crossing the Line?,” “Officiating: Perspective from the Coach and the Official,” and “NCAA—The Good, Bad and Ugly.” The class will examine psych-sociological issues in sport and sports culture including race, social economic class, gender, and religion. Students will review videos including “ESPN’s 30 for 30” and the documentaries Outside the Lines, and E60 to name a few. Students will talk with guest speakers to initiate discussion and dialogue among professors and peers. Class activities include writing blog entries in reaction to the topics, videos and speakers, and responding to classmates’ blog entries. Students will also work in groups to create a written and oral presentation on one of the 15 topics. A. Warners. 8:30 a.m. to noon.

**MATH W83 Nonlinear Optimization.** (2 and 3 semester hour options) This course will provide the foundations for the theory of nonlinear optimization, and present a variety of applications from diverse areas of applied sciences. Throughout the course we will gradually build the connections between
theory, algorithms, applications, and implementation. MATLAB will be used extensively throughout the course for the implementation phase. While there will be daily lectures, the students will be doing group work in solving the homework problems. Moreover, the students will give oral presentations on their solutions to some of the more interesting and difficult problems. An optional project will be provided to those students wishing to have this course be applied to a minor in Mathematics. This course satisfies the Interim requirement for the Mathematics major. Fee: $100 if the student decides to buy a personal copy of MATLAB. Prerequisites: Math 231 or Math 255. T. Kapitula. 2:00-5:00

**MATH W84 Mathematics and Music.** There are many for whom music and mathematics both hold an innate appeal. Mathematical language is built into the basic language of music theory with terms like half-, quarter-, and eighth-notes, whole- and half-steps. The Pythagoreans knew of relationships between lengths of string under tension and perfect intervals (octaves, fifths), and Fourier analysis can flesh out the various overtones that distinguish the sound of a pure note played on one instrument vs. that same note played on another. Modern signal processing has led to efficient storage of music as strings of 0s and 1s. In this course we will explore the mathematics of analog-to-digital signal conversion and related topics such as quantization, aliasing, filtering. Other topics may include various types of tuning, and the geometry of chords. Students are graded on exercises and projects, generally involving software tailored to specific applications, often done in groups, and presentations of that work. Prerequisite: Mathematics 231 or Mathematics 255 or permission of instructor. T. Scofield. 8:30 a.m. to noon.

**MUSC W80 Digital Music Production.** This course focuses on creating music with a computer. The course introduces students to the digital audio workstation, MIDI sequencing, audio editing, and software-based samplers and synthesizers. Students will learn principles of electronic sound design, audio editing, composing, arranging, mixing, and mastering within the digital environment. Students will be graded based on a combination of daily assignments and two significant creative projects, one of which will be a collaborative project and one of which will be produced individually. Fee: $50. Prerequisite: MUSC 100 or permission of the instructor. Course will meet in CFAC 224. F. Wakeman. 8:30 a.m. to noon.

**PER 137 A Bowling**

**PER 137 B Bowling**

**PER 173 A Basketball**

**PER 180 A Badminton I**

**PER 180 B Badminton I**

**PER 182 A Tennis I**

**PER 183 A Tennis II**

**PHIL W11. I Long, Therefore I Am.** One way of understanding this interim course is as a sustained reflection on an alternative to the Cartesian and Enlightenment notion of what is at the center of human nature. 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. It is the focus of nearly every Bruce Springsteen song ever recorded—Hungry Heart, Born to Run, 10th Avenue Freeze Out, to name just a few—and codified in U2’s anthemic, I Still Haven’t Found What I’m Looking For. 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, our yearning for connection, wholeness, intimacy, and meaning. This course explores all of these things as they are captured and explored in cinema and literature, specifically, Nicole Krauss’s The History of Love; C.S. Lewis’s, Surprised by Joy and Jamie Smith’s On The Road with Saint Augustine.

**PHYS W80 Biophysics.** Biophysics is a growing discipline in which the tools of physics are used to elucidate biological systems. The course covers a broad spectrum of topics, including why ants can easily lift many times their own weight, how bees fly, why the cells of an elephant are the same size as those of a chipmunk, and why cats have a higher survival rate when dropped from taller heights. We also delve into looking at how biotechnology has and will impact the human experience, with a special focus on artificial intelligence, which we will delve into from both biophysical and ethical perspectives. An additional feature of the course is that no calculators are used. All results are achieved by estimation, with a focus on learning the art of approximation. The class is highly participatory and the hope is that students will make the application of physical reasoning to biophysical systems their own, so that they can draw on this skill in the future. In addition to the above items, there is also a section devoted to the construction of simple biophysical simulations using the open source software package Sage, though no previous experience is required. Students will be evaluated via homework assignments, tests, computer labs and a final paper that will be a group project. Note that Biophysics can serve as an interdisciplinary cognate in Biology (B.S.) major. Prerequisites: One semester of university physics or a year of high school physics or permission of the instructor. P. Harper. 2:00 to 5:00 p.m.

**POLS W10 Women and Politics.** The United States has yet to elect a woman as President, and the United Nations has yet to be run by a woman. All around the world, women tend to be kept out of peace negotiations, judges’ chairs, corporate boardrooms, and even schools. What does this mean for domestic and international politics? How did these stark inequalities emerge; how have women pushed back against them; and how might women “do politics” differently from men? In this course, we will examine the political thought and political activism of women across history and around the globe, from Mary Wollstonecraft (an 18th century British political theorist of women’s rights) to present-day activists such as Pakistani Malala Yousafzi (a recent Nobel Peace Prize recipient and advocate for girls’ education). We will also consider the vast diversity among women—how do race/ethnicity, class, religion, sexual orientation, ability, and other markers of identity mediate women’s experiences with politics and with women’s movements themselves? Students will be evaluated by their regular participation, reading responses, a research-based “un-essay” project, and a class presentation. Un-essays can take multiple forms, but they cannot be a standard research paper. For example, students
might record a podcast on a current event that affects women in the political realm; they might design a campaign for social change around a relevant issue; they might draft a bill to send to the US Congress or to the UN General Assembly; or they might create an ad for a woman running for political office. K. Riddle. 8:30 a.m. to noon.

PSYC W61 Psychopathology in Film. From the advent of the motion picture industry, movies have attempted to capture the essence of human affect, behavior, and cognition. This course focuses on the attempts of the movie industry to capture the essence of mental illness. The course is divided into two parts. The first part of the course will trace historical changes in the understanding of mental illness and the perspective on the mentally ill and those who treat them, and in so doing emphasize how movies reflect the Zeitgeist of broader western culture. The second part will focus on various emotional disorders, emphasizing symptoms and perspectives on the development and the treatment of these disorders. Students view a variety of movies and are involved in critiquing them regarding perspective, accuracy, and realism. The goal is to develop critical-thinking skills in viewpoint film portrayals of psychological disorders. Students are evaluated on the basis of a group project and final paper. Please note: Some of these films may contain graphic portrayals including violent and disturbing content. Prerequisite: Psychology 212 or equivalent. S. Stehouwer. 8:30 a.m. to noon.

REL W40 The World of Jesus and the First Christians. This course surveys the historical, geographical, cultural, and religious contexts of Jesus and the first Christians, offering students background knowledge that will enrich their reading of the New Testament. It includes study of the history, beliefs, and practices of 1st century Judaism to help understand the public ministry of Jesus, developments in the earliest church, and the mission of Paul. The course also studies the Greco-Roman world in terms of its impact on Judaism and as the context for Paul’s apostolic mission to the Hellenistic cities of the eastern Mediterranean. Students learn about relevant archaeological discoveries, view videos, and read excerpts from some primary sources. The course also includes a field trip (Jan. 16-19) to the newly opened Museum of the Bible in Washington, DC, which displays artifacts and information on the world of the New Testament. Evaluation is based on class participation, a four-page report on some topic related to the course, and a final exam. Estimated Field Trip Fee: $325. No Prerequisites. K. Pomykala. 2:00-5:00 p.m.

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, 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. Two papers and a take home final help facilitate these major objectives. T.R. Thompson. 2:00 to 5:00 p.m.

**REL W42 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. Students write a paper which is based on the material covered in class. R. Whitekettle. 8:30 a.m. to noon.

**REL W43 Male and Female He Created Them: Biblical Views on Gender.** This course examines those biblical texts which focus on gender, the roles of women and men, and the relationships between them. We will read the creation accounts and selections from the Mosaic law, the histories, and the gospels, as well as carefully analyzing thorny passages in the epistles of Paul. Our discussion of these texts will occur in the context of present day gender issues such as men and women’s roles in the church, workplace, and home; the intersection of gender, race, and social class; sexual violence in the Bible; and masculine and feminine imagery for God. Through the readings, class discussion, and writing assignments, students will be equipped to make thoughtful, educated contributions to the ongoing conversation about the Bible and gender. C. Mesick. 2:00 to 5:00 p.m.

**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. Students are evaluated on the basis of class participation, daily answers to questions on the readings, a short reflection essay, and a brief oral report on their essay. Prerequisite: one course in Religion. The course is offered on a pass-fail basis. D. Harlow. 8:30 a.m. to noon.

**SOWK 373 Generalist Practice with Groups and Families**

**SPAN 122 Intermediate Spanish**
SPAN W80 Society of Mexico and the Yucatan. This course, conducted entirely in Spanish, focuses on the study of contemporary issues of Mexican society with a special emphasis on Yucatán. Class sessions consist of discussion of course readings as well as lectures (virtual and/or in-person) by Mexican guest speakers. Lecture topics include an overview of Mexican and Mayan history, health, education, the family, the current economic context, and the history of Catholicism and Protestantism in Mexico. Student learning objectives are to 1) improve oral and written proficiency in the Spanish language, 2) increase understanding of various cultural and religious phenomena of Mexico and particularly of Yucatán, and 3) grow in personal maturity and awareness of cultural differences. Evaluation is based on satisfactory achievement of course goals, including participation in course activities, and is assessed via reflection papers, cultural reports based on interviews (in person and/or virtual) with Mexicans, and a final oral presentation. This class includes field trips to (predominantly) Mexican neighborhoods and cultural sites in Grand Rapids, and thus offers students a unique opportunity to understand Mexico from a transnational perspective. For 2021 only, this course meets the interim abroad requirement for Spanish minors. It can also count as an elective for Spanish majors. Prerequisites: Spanish 201 and permission of the instructor. Fee: $50. S. Lamanna and A. Ceballos. 8:30 a.m. to noon.

SPAUD 343 Principles of Communication Neuroscience

SPAUD 512 Augmentative and Alternative Communication

STAT 241 Engineering Statistics