Elective Options

These outside electives are in addition to all BTHX course electives offered. Please meet with the Director of Graduate Studies to discuss the syllabus and coursework if you find a course of interest to you from this list.

Biological Sciences

**BIOC 8401 Section 001: Ethics, Public Policy, & Careers in Molecular & Cellular Biology**
Ethics of scientific investigation from viewpoint of western scientific enterprise. Relationship between science, culture, and public policies. Careers in molecular/cellular biology. Nontraditional career tracks. Invited speakers, case studies, small-group discussions, lectures. prereq: Grad student in [BMBB or MCDB] concurrent registration is required (or allowed) in G]

**PBS 8123 Section 001: Research Ethics in the Plant and Environmental Sciences**
invited speakers. Meets first seven weeks of spring semester. prereq: Grad student in [applied plant sciences or plant pathology or plant biological sciences or soil science]

**EEB 8200 Section 001: Sustainability Science Distributed Graduate Seminar**
Theories of sustainability science. Interactions between human/environmental systems. Improving present/future generations. Presentations/papers. Contemporary research from earth systems science, resource economics, institutional analysis, ecology, geography, development studies, health sciences, engineering.

**EEB 8990 Section 001: Graduate Seminar**
Community Genetics

**Center for Spirituality and Healing**

**CSpH 5111 Section 001: Ways of Thinking about Health**
Cultural contexts explored through field-trip immersion experiences. Aspects of different health care systems. Indigenous North American, Vedic, traditional Chinese, biomedicine. Writing assignment. prereq: [Jr, Sr, or grad student standing], instr consent "Ways of Thinking About Health" offers students a rare opportunity to explore diverse cultural contexts through field-trip immersion experiences. In this course, we will explore fundamental aspects of several different health-care systems, including Indigenous North American Medicine, Vedic Medicine, Traditional Chinese Medicine and biomedicine. The field-trip learning serves as a micro-cultural immersion experience for the purpose of helping students to understand different worldviews and systems of knowledge that do not correspond to a scientific model. The course is based upon the idea that thinking about different worldviews and healing systems from a detached, survey perspective is a quite different matter than thinking critically within the system being explored to attain deeper learning. Each field trip experience will be followed by a writing assignment, where the student will write on a health care issue of their choice, but from within the perspective of the system being studied. This approach is designed to allow each student the maximum opportunity to explore, experience, appreciate and articulate the cultural diversity in ways of thinking about health.

**CSpH 5315 Traditional Tibetan Medicine: Ethics, Spirituality, and Healing (2.0 cr; SP-Jr or sr or grad student or #; A-F or S-N or Audit)**
Ethics, spirituality, and healing from perspective of traditional Tibetan medicine. Belief that illness results from imbalance and that treating illness requires correcting underlying imbalance. How to apply these principles, integrate them into clinical practice, and consult with a traditional Tibetan doctor.
CSPH 5317 Section 001: Yoga: Ethics, Spirituality, and Healing
Students test claim that systematic yoga practice leads to optimal health. Yoga’s philosophy, scientific evidence, practical application. Students propose research-based programs for integrating yoga into personal/professional life.

College of Education and Human Development
Educational Psychology

EPSY 5641 Section 001: Foundations of Education for Individuals Who Are Deaf/Hard of Hearing

EPSY 5802 Section 001: Foundations of Developmental Psychology Across the Lifespan
Theories/research regarding human development across lifespan focusing on different contexts that shape development. Theoretical frameworks applied to study of human development. Cognitive, social, emotional development. Research methods in developmental psychology.

EPSY 5853 Section 001: Biological Bases of Behavior
Biological basis of behavior with emphasis on relationship between functions/structures of brain.

EPSY 8400 Section 001: Topics: Counseling and Student Personnel Psychology
Current issues in counseling and student personnel psychology, or related coursework in areas not normally available through regular curriculum offerings.

EPSY 8406 Section 001: Professional Ethics for Counselors and Psychologists
Theory, research, and practice in counseling ethics. Scope/impact of professional ethics. Ethical decision making. Ethics and the law. Ethical practice in special settings. Scholarship/research in counseling ethics. Lectures, discussions, case studies, individual/group examination of original research. Prereq: CSPP grad student

EPSY 8600 Section 001: Special Topics: Special Education Issues
Current trends (e.g., schoolwide discipline, models of collaboration, and diversity) investigated by formulating research projects. Students write a media piece describing an
issue and its impact on the community. This course is designed to address issues related to mathematics research and access to the general mathematics curriculum for diverse learners with math difficulties (MD). In addition, the focus is on examining effective mathematics interventions based on instructional design principles as well as identifying evidence-based practices.

**EPSY 8612 Section 001: Seminar: Students with Academic Difficulties**
Survey, analysis, and application of relevant theories and research related to current issues. Students in course develop skills in scholarly inquiry, writing, and debate.

**EPSY 8707 Section 001: Principles of Behavior Analysis and Learning**
Historical development of behavioral science. Thinking about learning/behavior, applying principles to common human experiences. Scholarly leadership skills. Prereq: [Grad student, foundational course in [learning or psychology]] or instr consent.

**EPSY 8823 Section 001: Ethics and Professional Standards in School Psychology**
Ethics, law, and current educational issues applied to study/practice of school psychology. Ethical principles, state/federal laws governing educational practices. How mandates are applied to work of school psychologists in general/special populations (e.g., special education, ESL, ethnic/racial minorities). Students apply learning as researchers and practicing school psychologists in schools. Prereq: 8821

**EPSY 8994 Section 001: Research Problems: Educational Psychology**
Research methodology, techniques, and literature. Students participate in formulating/executing research proposal. Prereq: instr consent Special Education, Counseling Psychology, School Psychology Food, Agriculture and Natural Resource Sciences.

**WRS 8581 Section 001: Research and Professional Ethics in Water Resources and Environmental Science**
Ethics of water resources science and environmental engineering research/practice. Societal responsibility, plagiarism, recording-keeping, authorship, confidentiality, conflicts of interest, professional relationships, fraud, reporting misconduct. Meets during first eight weeks of spring semester. Prereq: [Environmental engineering or water resources science] grad student or instr consent

Department of Gender, Women, and Sexuality Studies
GWSS 5201 Global Processes and the Politics of Sexuality
Comparative examination of the social construction of sexuality. Formal/informal norms/regulations, categories of deviance, representation of sex in the media/arts, role of sexuality in relation to agency/subjectivity.

Genetics

GCD 6110 Section 001: Science of Medical Practice
Combines Biochemistry/Medical Genetics aimed toward Medical/Genetic Counseling students. Biochemistry content covers genome organization, transcription, metabolism, nutrition, stem cell biology, cell signaling, cancer. Genetics content covers inheritance, genetic/genomic conditions, inborn errors of metabolism, cancer genetics, complex inheritance/genetic susceptibility to disease, birth defects. Meets with INMD 6802. prereq: Medical student or MCDB concurrent registration is required (or allowed) in G MS student with genetic counseling specialization or instr consent.

GCD 8073 Section 001: Advanced Human Genetics
Application of molecular, biochemical, chromosomal, and population genetics to human variation and disease. Abnormal chromosome number and structure; abnormal enzyme, structural protein, receptor and transport; analysis of inheritance patterns; behavioral genetics; genetic basis of common disease. Current research articles in human genetics. prereq: 8131 or BIOL 4003 or instr consent See attached flyer This innovative course will give students the opportunity to gain a deeper understanding of expanding genomic technologies by exploring their own genome or de-identified population data. The format will consist of interactive lectures, group discussions, and debates. The class will be taught from the primary literature and through hands-on application of technology. Experts and award winning teachers from throughout the University of Minnesota will bring their expertise and creative methodologies to this class. An essential part of this course is your own genome sequence. While it is not yet inexpensive enough for each of us to get the full sequence of all six billion nucleotides of our genome, participants in the class have the opportunity to order (for about the price of a textbook) their personal genome service? from a genomics company and analyze their data as a part of the course. By the end of the course students will have a deeper insight into your ancestry, physical traits, predispositions, and genetic risk for disease. You will also have explored the scientific, medical, ethical and societal issues that we face as we enter the era where access to individual genome sequences becomes commonplace in research and clinic.

GCD 8131 Section 001: Advanced Genetics and Genomics
Literature-based. Modern genetic/genomic analysis, including mutant screens,
characterization of multiple alleles, gene mapping/cloning, genome sequencing, intergenic interactions, transposable elements, genetic mosaics, epigenetics, molecular mechanisms of recombination. Prereq: [3022 or BIOL 4003], [BIOC 3021 or BIOC 4331] or instr consent.

GCD 8161 Section 001: Advanced Developmental Biology
This course considers key events and concepts in the development of vertebrate and invertebrate embryos through the detailed study of journal articles from the primary literature. Topics include gastrulation, left/right patterning, neural induction, segmentation, organogenesis, maternal determinants, axial patterning, growth control, and developmental timing. By completing reading summaries, participating in class discussion, and composing written paper critiques, students will become familiar with current findings in developmental biology, learn to critically read and discuss the literature, and become fluent with developmental terms and experimental approaches. As a discussion-based course, class attendance is mandatory.

GCD 8914 Section 001: Ethical and Legal Issues in Genetic Counseling
Professional ethics; ethical and legal concerns with new genetic technologies. Prereq: MCDG MS student with genetic counseling specialization or instr consent

GCD 8920 Section 001: Special Topics: Genetics and Reproduction: Law and Ethics
Special topics. Genetics and Reproduction: Law and Ethics Prereq: Grad student or instr consent This interdisciplinary class will examine the legal, ethical, medical, and scientific issues posed at the cutting edge of biomedical science, focusing on genetics, genomics, and assisted reproductive technologies (ART) in human beings. Topics will include the human genome project; history of eugenics; issues posed by genetic and genomic research; commercialization of genetic research, including issues raised by gene patents; genetic testing, counseling, and screening; prenatal screening and preimplantation genetic diagnosis (PGD); the use of genetics in ART; human gene therapy; pharmacogenetics; the privacy of genetic information; and issues of discrimination. Together, the class will work through the scientific, medical, legal, and ethical issues. In each instance, we will evaluate the legal, ethical, and policy challenges posed, critique current approaches, and explore alternative recommendations. This course will be highly accessible to a wide range of students. There are no science or law prerequisites. Students will actively debate the issues posed by each week's reading, prepare a paper on the topic of their choice, and make a brief presentation on their paper topic for feedback late in the semester. This is a highly interactive class, with opinions valued, and policies created!

History of Medicine and Biological Sciences
HMed 5002 Public Health Issues in Historical Perspective (3CR; A-F OR S-N or Audit)
Introduction to the evolution of major recurring problems and issues in public health
including environment and health, food customs and nutrition, control of alcohol and drugs,
venereal diseases and public policy, human resources regulation, and relationship of
science to promotion of health.

HMed 5045 Modern Medical Profession (3 cr; A-F or S-N or Audit)
Historical analysis of the American medical profession in the 19th and 20th centuries; the
role of institutions, influence of social and moral values, and consequences of specialization
and scientific innovation.

HMed 5200 Early History of Medicine to 1700 (3 cr; A-F or Audit)
An introductory survey of the history of medicine in Europe and America.

HMed 5201 History of Medicine from 1700 to 1900 (3 cr; SP-HMED 5-200; A-F or S-N
or Audit) An introductory survey of the history of medicine in Europe and America.

HMed 5210-5211 Seminar: Emergence of Modern Medicine (3 cr; A-F or Audit)
An introduction to the major theories, methods and debates in the history of medicine. The
first semester uses important historical works to introduce the major theories,
interpretations, and approaches to medical history and provides a sense of how
scholarship in the field has evolved. The second semester introduces the methods and
problems of historical research through the use of archival sources.

HMed 5940 Topics in the History of Medicine (3 cr)
Seminar on the historical relations between medicine and the State from the 18th to 20th
centuries.

HMed 8112 Section 001: Historiography of Science, Technology, and Medicine
Models of practice, different schools. Work of representative historians of science,
technology, and medicine. prereq: instr consent

HMed 8220 Section 001: Seminar: Current Topics in the History of Medicine
Course Topic: "Finding the Mind: Medicine and the Human Sciences, 19th and 20th
centuries"
HMed 8113 Section 001: Research Methods in the History of Science, Technology, and Medicine

Introduction to sources, methods, and problems of research in history of science, technology, and medicine. Preparation of major research paper under faculty supervision. 
prereq: instr consent; This class is intended to introduce key aspects of historical research to graduate students in history and related fields. Students will discuss sources, methods, and problems of research in the history of science, technology, and medicine. Each student will prepare a major research paper in an area of special interest, engage in peer review, and do a public oral presentation.

HMed 8830 Section 001: Topics in the History of Science, Technology, and Medicine

Historical literature of topics common to history of science, technology, and medicine. 
prereq: instr consent Course Topic: "Forms, Fibres, and Faculties: Matter and Vitalism"
Chronobiology is an area of biological science that has as its principal subject the rhythmic behaviors exhibited by living organisms and their components. Complex creatures, like human beings, manifest many sorts of biological rhythms, most obviously daily (circadian) and monthly (lunar) ones, but also a host of higher frequency rhythms, such as brainwaves and cardiovascular rhythms, weekly rhythms (wound healing and transplant rejection), semi-daily tidal rhythms, annual rhythms, and even longer term rhythms correlating to sunspot cycles. Biological rhythms have been investigated and demonstrated for a broad variety of living entities, from higher primates to fruit flies and fiddler crabs, from field corn to the single-cell alga acetabularia, and among the fungi (neurospora). Further, biological rhythms have been shown to characterize individual cells within complex organisms, and even parts of cells within single-cell organisms. They are so fundamental as to lead scientists to conclude that they played an early role in the survival of cellular life and were therefore implicated in evolution at an early stage. Awareness of rhythmic activity in nature and ourselves is ancient, as ancient as Babylonian clay tablets and Stonehenge. But the roots of scientific chronobiology lie in early eighteenth-century discovery that certain plants show rhythms that are independent of their environments. By the late nineteenth century closer scrutiny of rhythms of cell division and growth and plant movements were reawakening discussion of internal and external timing and the role of inherent plant behaviors in evolution. Insect, crab, and mouse studies soon followed. Key disputes about the nature of organismic timing and the direction of future research boiled up in the 1950s, and by the 1970s molecular mechanisms for biological clocks were postulated and gradually defined by experimental results in the laboratory, and arguments about whether the new science of chronobiology was an autonomous discipline, a sub-discipline, or merely a research field or area within biology were voiced. And yet, today there is almost no proper history of chronobiology, written by historians and for historians. There are ample popular explanations of our biological clocks written by popular science writers and journalists and there are numerous historical reflections or introductions to
chronobiology written by chronobiologists. But examination of the usual bibliographical sources and databases that survey the history and philosophy of science, technology, and medicine reveal scant attention to what has become a vibrant and interdisciplinary research field. Our goal is to begin studying this area by focusing on important historical persons, episodes, developments, controversies—all the things that make up the history of science, technology, and medicine, because the history of the study of biological rhythms is all these things. (Information from HMED 8830)

Law

LAW 6031 Section 001: Smart Growth
This class examines emerging legal strategies to address the fiscal, environmental, and social impacts of unrestrained metropolitan regional growth ("urban sprawl"). Topics include: inequalities in access to housing, jobs, and educational opportunities; local fiscal competition; local, state & regional regulatory responses to metropolitan development; environmental impacts of metropolitan development; and evolving legal structure of regional governance in America's large metropolitan areas.

LAW 6036 Section 001: Reproductive Rights
The age-old debate on the rights of individuals to sexual determination and reproductive autonomy rages on. It grows more contentious as new technology and heated political confrontations alter the playing field. This course, using cases, statutes, and ancient and contemporary critical writings, examines the legal foundations and social implications of regulating contraception, abortion, pregnancy, childbirth, and assisted reproduction. It addresses access, funding, the rights of men, women, minors, fetuses, and government. It also explores ethical considerations and international perspectives.

LAW 6037 Section 001: Emerging Sciences and Technologies: Law, Ethics and Policy
Technologies/applications conducted at nanoscale. Scientific, legal, economic, policy, ethical issues. Guest speakers, readings.

LAW 6046 Section 001: Human Trafficking
Seminar will examine the breadth and depth of efforts to combat and raise awareness about human trafficking, a form of modern-day slavery in which people are compelled through force, fraud, coercion, or other means to engage in commercial sexual exploitation or forced labor. An optional two-credit externship, Law 6047, is available.
LAW 6058 Section 001: Human Rights Advocacy
This course will study the histories, philosophies and activities of human rights activists and organizations. The course examines the theoretical basis of the human rights movement, the principles underlying key organizations in the human rights field, as well as their strategies, tactics, and programs. The class will use case studies and other active methods to understand and to evaluate the work of human rights activists. Topics to be considered include fact-finding and documentation, campaigns on human rights issues, cultural relativism, economic rights, and corporate responsibility for human rights. Students will consider the basic organizational structure and fundraising needs of NGOs. Students will design and present a research project based on their selection of in-class topics. Readings include material on the history of NGOs; roots and development of the human rights movement; analysis of key NGOs; advocacy within international institutions; and reports and publications from NGOs working in the field.

LAW 6126 Section 001: Water Law
This course examines the legal mechanisms by which society allocates and protects its most vital natural resource: water. The primary emphasis is on current legal and policy issues, but the course also addresses the historical development of water policy and water law in the United States. Topics include: the riparian and prior appropriation doctrines and modern administrative permitting schemes governing private uses of surface water and groundwater; public rights in water resources; federal and state water resource development, allocation, and control; alternative means of responding to the growing scarcity of fresh water and adapting to changes in the hydrological cycle due to climate change; the appropriate role for market-based approaches; allocation and protection of groundwater resources; environmental limits on water development, including the Endangered Species Act, Clean Water Act, and public trust doctrine; tribal water rights; the doctrine of federal reserved water rights; mechanisms for resolving or avoiding conflicts over transboundary water resources.

LAW 6201 Section 001: Land Use Planning
Public control of land use and development and its constitutional limitations.

LAW 6215 Section 001: Environmental Law
Legal aspects of major environmental problems with emphasis on issues that appear in various regulatory contexts, such as the degree to which environmental quality should be protected; who should bear the cost of enhancing environmental quality; allocation of responsibilities among courts, legislatures, and administrative agencies; the role of citizens' groups; and environmental litigation.
LAW 6220 Section 001: Poverty Law
Social welfare policy debates, major social welfare programs, delivery of social welfare services/benefits in Twin Cities. Welfare law from perspective of legislative/social policy. State/national social welfare programs relating to income maintenance (AFDC, social security, general assistance, food stamps). Housing/homelessness, medical care for low-income citizens, arguments for/against reforms implemented or under consideration.

LAW 6226 Section 001: Juvenile Justice
Legal, sociological, and philosophical bases of the principal agencies responsible for the control of youthful deviance. Emphasis on the juvenile courts. delinquency jurisdiction and the procedural and substantive limitations on the courts. authority to dispose of juvenile offenders.

LAW 6234 Section 001: Natural Resources
In this course, we will study the private and public aspects of natural resources; the local, state, and federal regulation of these resources; ownership interests and rights relating to these resources; protection and regulation of recreational and cultural resources; and how our relationship with natural resources has evolved through the history of the United States. The primary objectives of this course are as follows: (1) understand the legal principles governing natural resources at a local, state, and federal level; (2) develop an understanding of the concept of natural resources and appreciate our relationship with the natural environmental from a cultural and economic perspective in addition to a legal perspective; and (3) learn and apply principles of statutory interpretation in the context of laws governing natural resources.

LAW 6402 Section 001: Food and Drug Law
Food, drug, and cosmetic act of 1938 and its administration by the Food and Drug Administration. FDA licensing and other legal measures governing production, marketing, and labeling of foods, animal feeds, drugs, cosmetics, and biologics/blood products.

LAW 6405 Section 001: Labor and Employment Law Capstone
The course is largely simulation-based. It will provide students with experience integrating diverse areas of workplace law with practice skills and professional ethics. Students will work in teams representing a particular client. The roles of clients and witnesses will be played by a combination of actors and volunteers. Real arbitrators and mediators will play those roles. Claims may include unfair labor practice proceedings before the National Labor Relations Board, employment discrimination and sexual harassment charges before the EEOC, arbitration of employee discipline under a collective bargaining agreement, arbitration under non-union employment contracts, defamation, and claims under FMLA
and ERISA. Students may experience interviewing and counseling clients, filing claims with administrative agencies, conducting research, drafting pleadings and legal memoranda, negotiations, discovery, and representing clients in arbitration, mediation and litigation motion practice.

**LAW 6414 Section 001: Civil Rights and Social Justice Capstone**
The United States has made significant progress in addressing de jure discrimination, but persistent de facto discrimination and inequality remain. This class focuses on the role of law in making progress against both subtle and overt forms of discrimination in a variety of spheres and settings based on race, ethnicity, class, national origin, gender, sexual orientation, age, disability, and religion. Topics may include the segregation of neighborhoods and schools by race and class; encounters with the police and criminal justice system; how poverty limits access to crucial social goods; the location of environmental hazards near low-income communities and communities of color; unequal pay and opportunities for advancement for women in the workplace; access to adequate child care for working parents; barriers to marriage; and treatment of migrants.

**LAW 6600 Section 001: Professional Responsibility**
Lawyers’ responsibilities to clients, profession, administration of justice, and society. Content/role of formal standards, rules of professional ethics.

**LAW 6605 Health Law**
Organization of health care delivery in the United States; physician-patient relationship; methods of quality control: response to harm and error, including medical malpractice; health care access problems; approaches to cost control; proposals for health care reform.

**LAW 6615 Section 001: Jurisprudence**
This course will be a general survey course of American legal movements and conceptions of the law. The course will examine foundational legal questions: What is law, why are we obligated to follow laws, and when if ever, are we not? What is the Rule of Law? When if ever can we condemn a law as unjust and, if so, must we obey it? We will also examine how different legal movements have attempted to answer these questions from the beginnings of "legal science" and formalism; to the Legal Realists and the responses to them; to the more recent movement to unite law with moral philosophy; to Critical Legal Studies; and responses to the Critical Studies movement. We will compare and contrast these movements with basic conceptions of the law-positivism and natural rights.
LAW 6630 Health Care Decision-Making: Markets, Regulation and Bioethics
This class will focus on health care decision-making. Bioethics has a rich history in jurisprudence and ethical theory. At the same time, medical decisions often involve assumptions about legal outcomes and potential liability, profit-making opportunities, and government regulation. This class will focus on health-care decision-making at the beginning and end of life, the role of informed consent, the influence of potential tort liability, the framework for the introduction of new technologies, and the growing impact of medical tourism. It will include drafting exercises that explore the role of lawyers in shaping health care decisions and policy discussions about emerging issues in health care and bioethics. By the end of the course, students will be able to recognize bioethics issues, identify interested stakeholders, consider alternative ways of including stakeholders in medical decision-making such as protocols for informed consent, recognize the limits of private decision-making, explore the public policy implications of new developments, and propose appropriate legislation or regulation to address emerging issues.

LAW 6709 Section 001: Agriculture & the Environment
Land based food and fiber production and processing is the largest segment of the global and national economy. These activities raise increasingly fundamental environmental questions for every level of government and sector of society. This seminar will address selected environmental issues related to agriculture, including: crop production and conservation, irrigation, drainage, pesticides, and nutrients; livestock operations and soil/water/air quality; open space/habitat preservation; design of federal farm programs; biofuel initiatives; public land utilization; biodiversity; and globalization. Attorneys, scholars, and public officials will be invited classroom guests. Students will prepare papers and may present their topics to the class. Readings will be selected portions of texts, articles, and cases.

LAW 6801 Section 001: Seminar: Death Penalty
Substantive law of capital punishment, procedural aspects of post-conviction proceedings.

LAW 6824 Section 001: Genetics and Assisted Reproduction: Law and Ethics
This seminar will examine the legal and ethical issues posed at the cutting edge of biomedical science, focusing on genetics and assisted reproductive technologies (ART) in human beings. This interdisciplinary seminar will examine the legal, ethical, medical, and scientific issues posed at the cutting edge of biomedical science, focusing on genetics, genomics, and assisted reproductive technologies (ART) in human beings. Topics will include the human genome project; history of eugenics; issues posed by genetic and genomic research; commercialization of genetic research, including issues raised by gene patents; genetic testing, counseling, and screening; prenatal screening and preimplantation
genetic diagnosis; the use of genetics in ART; human gene therapy; pharmacogenetics; the privacy of genetic information; and issues of discrimination. Together, the class will work through the scientific, medical, legal, and ethical issues. In each instance, we will evaluate the legal, ethical, and policy challenges posed, critique current approaches, and explore alternative recommendations.

**LAW 6846 Section 001: Philosophy of Punishment**
This seminar concerns normative justifications for the substantive criminal law and for state systems of punishment for crime. It examines literatures in the philosophy of punishment from the early 19th century (e.g., Kant, Hegel, Bentham) onwards, in contemporary criminal law and punishment theory (many writers), and in social theory (e.g., Durkheim, Weber, Marx, Foucault, Wacquant), concerning justifications for punishing at all, and whom, and how much, and functional questions about the larger social purposes that punishment serves. A focus is on the usefulness of existing paradigms for understanding and justifying such recent developments as restorative justice, community justice, therapeutic jurisprudence, and specialized drug and domestic violence courts.

**LAW 6853 Law, Medicine, and Bioethics**
This seminar examines law and bioethics as means of controlling important biomedical developments, and discusses the relationship of law and bioethics and their role in governing biomedical research, reproductive decision-making, assisted reproduction, genetic testing/screening, genetic manipulation, cloning, the definition of death, use of life-sustaining treatment, and organ transplantation.

**LAW 6854 Seminar: Biotechnology and Law**
Private law aspects of the biotechnology industry. Legal/regulatory issues faced by commercial start-ups.

**LAW 6872 Section 001: Immigration Law**
History of immigration to United States, federal authority to regulate immigration, immigrant visas, non-immigrant visas, deportation, political asylum, citizenship, rights of aliens in the United States, and ethical issues for immigration lawyers.

**LAW 6875 Section 001: Joint Degree Program in Law, Science & Technology Proseminar**
Many of the most challenging issues of the 21st century will be those at the intersection of law and the life sciences. How do we govern research, assess the safety and potential impact of new technologies, and regulate or even ban them? This seminar will explore those questions, examining a wide range of developments in health, environment, and the
life sciences, such as genomics, gene therapy, genetically modified organisms, genetic patents, ecosystems change, environmental health, managed care, and challenges to public health. Weekly presentation will be made by faculty drawn from graduate programs affiliated with the Joint Degree Program in Law, Science & Technology. Faculty will lead discussion of articles on topics that may range from science policy and regulation of genetic engineering to natural resource conservation and international harmonization of pharmaceutical patents. The seminar is required each year for Joint Degree Program students and open to other students by consent of the instructor.

**LAW 6878 Section 001: Regulating Personal Health Information**
Students will explore the legal frameworks that regulate how personal health information may or may not be shared and the competing policy goals that often underlie these frameworks: protecting individual privacy enhancing the quality of care. The seminar has three components. It will survey the myriad laws, regulations, and contractual arrangements that govern the sharing of personal health information e.g., the evolving body of federal rules and regulations relating to the Health Insurance Portability and Accountability Act (HIPAA/HITECH) and recent Medicare and Medicaid Incentive Programs promoting "meaningful use" of Electronic Health Record systems, as well as state-specific disclosure rules. It will also expose students to diverse, real-world experiences with health information-sharing needs and risks. Finally, building on this legal grounding and these contextual "focus sessions," students will have the opportunity to define specific questions related to sharing personal health information, reflect on the impact of applicable rules, and propose changes or additions to them.

**LAW 6879 Mental Health Law**
The course will provide an introduction to the issues involved in the legal system’s handling of mental illness disabilities. The subject areas to be covered will include involuntary civil commitment, hospitalization issues, disposition of the mentally ill criminal offender, rights under the discrimination laws, and government services, and funding mechanisms for those with mental illness.

**LAW 6885 Section 001: Seminar: Current Issues in Environmental & Energy Law**
In-depth coverage of current issues in environmental law. Lectures by visiting environmental law specialists. Hazardous waste disposal, water pollution, toxic torts. Student papers analyze current environmental law issues.

**LAW 6886 Section 001: International Human Rights Law**
Role of lawyers using procedures of the United Nations, Organization of American States, State Department, Congress, U.S. Courts, and nongovernmental organizations to address
international human rights problems. Is there a law of international human rights? How is that law made, changed, and invoked? Problem method used.

LAW 6888 Section 001: Creative Legal Reasoning
This is a discussion based seminar in which the students decide from the facts of actual cases what the law should be. They use logic, instinct, experience, common sense, and all other mental and emotional processes that are the substance of the law and very much involved in its making. The only forbidden ingredient in the discussions is known or suspected law.

LAW 6889 Section 001: Laws of War
This course focuses on two interrelated bodies of law: rules pertaining to the use of force in international law (known as the jus ad bellum) and rules regulating the conduct of hostilities under the laws of international and non-international armed conflict (known as international humanitarian law, the laws of armed conflict, or the jus in bello). The course will cover such issues as the "Just War" theory, its history and its relevance in the modern world; the general prohibition on the use of force under Article 2(4) of the UN Charter; use of force by the UN: collective security and law enforcement actions; individual and collective self-defense; humanitarian intervention; and nuclear weapons in international law. The course will also consider regulation of the means and methods of warfare focusing on the Geneva and Hague laws: the four Geneva conventions protecting the wounded, sick, and shipwrecked, prisoners of war, and civilians; the means and methods of war, including lawful and unlawful weapons and targets; the law of internal armed conflicts; and asymmetric warfare.

LAW 6896 Seminar: Science, Technology, and the Constitution
Challenge that new technologies pose for constitutional protection of individual rights.

LAW 6949 Section 001: Biotechnology & Patent Law
This course emphasizes patent law principles and doctrines as applied to biotechnology, including pharmaceutical, patents. Although there will be some coverage of United States Patent and Trademark Office policies as well as biotechnology patent principles in non-U.S. jurisdictions, the focus will be on U.S. Federal Circuit and Supreme Court case law developments. Topics include patent eligibility of biotechnological inventions including diagnostics and "natural" products such as genes, claim strategies, written description, enablement, utility, best mode including requirements for biological deposits, inventorship, inherent anticipation, obviousness, infringement, and the intersection of patent and FDA regimes for small molecules and biologics.
Medical School

**MED 7598 Section 001: Biomedical Ethics**
In this independent study course, the student is expected to identify a particular health care ethics problem from either the clinical or public policy perspective. Each student will write a substantive paper based upon their arranged practicum experience.

**PHCL 5109 Section 001: Problems in Pharmacology**
Research projects and special problems by arrangement. prereq: Upper div or grad student or instr consent

**SCB 5054 Section 001: Stem Cell Institute Research Seminar and Journal Club**
Students attend weekly Stem Cell Institute research seminars and journal clubs, write brief summaries, participate in journal club, and present original research paper. prereq: Acceptance into stem cell biology [master's prog or PhD minor prog] or instr consent Class Description: The objectives of this course are to expose students to current research in Stem Cell Biology through attendance at weekly seminars and participation in a weekly journal club. Seminars are presented by members of the University of Minnesota research community as well as researchers from elsewhere in the United States and beyond. The journal club provides an opportunity for students to read current primary research papers and to gain insights into the research through discussions of the results and implications of the papers among members of the Stem Cell Institute.

**NSC 5540 Section 002: Survey of Biomedical Neuroscience**
Current topics in biomedical neuroscience, accompanied by supporting, fundamental concepts. Intensive, one week course. prereq: instr consent, intended for members of biomedical community or students with advanced scientific backgrounds

School of Nursing

**Nurs 5141 Ethical Issues in Health Care of Elders** (3 cr; SP-Grad student or nursing sr or #; A-F or S-N or Audit)
Health care related ethical issues that confront elders, their families, health care providers, and society.

**Nurs 5800 Nursing Topics** (check on web for TOPICS courses) (1-4 cr [max 8 cr] SP-#; A-F or S-N or Audit)
Course allows students to study a topic not included in regular courses, or for faculty to offer a course to determine interest in a topic.
Nurs 7202 Section 001: Moral and Ethical Positions and Actions in Nursing
Normative ethics and theoretical underpinnings for positions taken. Implications for subsequent action. Morally defensible positions on health-related issues, corresponding actions from perspective of nursing.

Nurs 8140 Moral and Ethical Positions in Nursing (3 cr; SP-Grad nurs major or #; A-F or S-N or Audit)
Synthesis of ethical positions, from nursing perspective, on health-related issues at individual, group, population, and policy levels. Normative ethics, theoretical basis for positions taken, and contextual implications for subsequent action.

Nurs 8152 Scholarship in Health Care Ethics (3 cr; QP-8011 or equiv; SP-Grad nurs major, 8140 or #; A-F or S-N or Audit)
Analysis/evaluation of philosophical/empirical research in health care ethics with consideration of human diversity.

Pharmacy

PHAR 5200 Section 001: Drugs and the U.S. Healthcare System
This course will expose students to current controversial issues surrounding medications and national healthcare and help students examine their own role as a participant in this system. Students will learn to draw comparisons between medication use systems around the world and analyze other controversies related to access, choice, and quality of healthcare. During this course, students will understand how their choices, ethics, and behavior affect societal decisions surrounding the availability of medications in the U.S. and what their rights are as a citizen-participant during the healthcare debate. This graduate student course prepares students to be informed and responsible participants in debates related to medication use within the U.S. health care system. Medication development, regulation, and distribution in the U.S. are explored along with the business, political, legal, and ethical issues involved.

PHAR 6962: Ethics in Pharmacy Practice
Students in this elective course apply ethical principles and selected schools of ethical thought to discuss and debate ethical dilemmas in pharmacy practice, health care and biomedical research. Students will predominantly spend class time applying the Ethics Problem-Solving Approach to engage each other and faculty in discussions about ethical dilemmas arising in pharmacy practice, health care and biomedical research. In addition, students will spend approximately 23 hours outside of class: 1) Authoring a one-page ethical dilemma case scenario to be discussed in class; 2) Preparing two two-page, and one three-four page written ethics case analyses; 3) Preparing a 10-minute Multicultural Ethics oral presentation on their assigned culture to present in
class; and 4) Working up the ethical dilemma case scenario authored by a classmate (see 1 above), and facilitating a 15-minute class discussion of the case. Scenarios are assigned by the faculty member. Not all student-authored scenarios are used to avoid duplication of themes. This course is delivered via ITV from Duluth.

**Philosophy**

**Phil 5415 Philosophy of Law** (3 cr; SP-1003 or 1004 or 3302 or social science major or #; A-F or S-N or Audit)
Analytical accounts of law and legal obligation.

**Phil 5602 Seminar: Scientific Representation and Explanation** (3 cr; SP-#; A-F or S-N or Audit)
Contemporary issues concerning representation and explanation of scientific facts.

**Phil 5611 Philosophy of the Social Sciences** (3 cr; SP-9 crs of philosophy and/or social science or #; A-F or S-N or Audit)
Criteria for describing and explaining human actions; problems of objectivity, reduction, freedom.

**Phil 8606 Seminar: Philosophy of Medicine and the Biomedical Sciences** (3 cr; SP-#; A-F or S-N or Audit)
Aims and goals of medicine; concepts of health, illness, and disease; nature of reasoning in clinical medicine; theoretical evolution in medicine; and role of values in practice of medicine and health care.

**Phil 8300 Section 001: Workshop in Moral and Political Philosophy**
Topics vary by offering. prereq: [concurrent registration is required (or allowed) in 4xxx moral phil or 4xxx pol phil] instr consent

**Phil 8310 Seminar: Moral Philosophy** (3 cr; SP-4320 or 4330 or 4340 or #; A-F or S-N or Audit)
Concepts/problems relating to ethical discourse. Practical Wisdom Practical wisdom is an important virtue that has received little philosophical attention in recent years. The course will explore relevant literature in virtue ethics, meta-ethics, virtue epistemology and moral psychology.

**Psychology**
PSY 5137 Section 001: Introduction to Behavioral Genetics
Genetic methods for studying human/animal behavior. Emphasizes nature/origin of individual differences in behavior. Twin and adoption methods. Cytogenetics, molecular genetics, linkage/association studies. prereq: 3001W or equiv or instr consent
This course focuses on the application of genetic methods to human and animal behavior. Genetic methods discussed include both traditional methodologies like twin and adoption studies as well as cytogenetic and molecular genetic methods. Behavioral applications covered include: Intelligence and mental retardation, personality, schizophrenia, affective illness, and alcoholism.

PSY 8208 Section 001: Social Psychology: The Self
Social psychological theory and research concerning the self and social behavior. prereq: Psych background especially in personality and soc psych

PSY 8541 Section 001: Multicultural Psychology
Approaches, findings, and controversies in research on psychology of ethnic/racial minorities and other cultural populations. Emphasizes counseling/community applications of theory/research. Lecture, discussion, lab. prereq: instr consent

PSY 8542 Section 001: Professional Standards and Ethics in Clinical Psychology
Ethical principles/codes of conduct for psychologists. Ethical dilemmas faced by researchers, practitioners, teachers. prereq: Counseling or clinical psych grad student or instr consent; Philosophical systems of ethics and their implications for applied psychology (clinical, counseling, industrial & organizational). Practical ethical dilemmas that emerge in applied psychology, and solutions to them. This course is in a discussion format, with assigned readings in behavior science and medical ethics for each class session. There is a midterm examination and an assigned paper to write about an ethical dilemma (student's choice of topic, approved by the instructors.

PSY 8937 Section 001: Seminar in Human Behavioral Genetics
Advanced topics vary with each offering. Sample topics: gene identification in complex human traits, behavioral genetics of alcoholism, twin-family methodology. prereq: 5137 or instr consent

Public Affairs

PA 5106 Section 001: Government, Ethics and the Public Will
Links between core ethical values/formation documents that have shaped democracy in United States or student's homeland. Ethics/agency. Ethics in context of leadership
development. Compose narrative of ethical practice. Prereq: Grad student or instr consent
Ethics is the oldest and arguably the central topic of Western philosophy. Since Aristotle all
serious considerations of effective government and types of prescribed behavior within free
and just societies have taken into account ethical discussions, sensibilities and historical
perspectives. Ethics and morals are not the same. However, ethical approaches that do not
rely on moral sensibilities have little merit in the context of public life, and even less merit in
the curricula of schools of public affairs. An ethical sensibility based on the understanding
of moral ideals is as important in the framing and exercise of government as it is in the
practice of medicine, law or business. This 3-credit course is designed to give students a
combined historical and philosophical perspective on ethics as applied routinely to
governing and the expectations of the public. The readings pose questions relating not only
to ethical ideals but to indifference, ignorance and cynicism as well. Discussions in class
are geared to the readings and, conversely, the readings may be adjusted slightly in order
to meet topics raised in discussion. The reading load is somewhat heavy but is enjoyable
as well. Students should be forewarned that while the instructor wishes to promote a keen
publicly understood ethical awareness it is also true that he entertains no illusions about the
public demand for high ethical standards and practices in government. In many cases the
public simply does not care about the subject. That is both a reality and a frightening reality.
There are two major writing assignments of approximately eight pages, a short initial writing
assignment of two to three pages and a short hour exam based on readings during the first
two thirds of the class. Although Government, Ethics and the Public Will is a 5000 level,
graduate course, undergraduates are welcome with instructor permission.

Public Health

PubH 5017 Culture and Health Behavior (2 cr; QP-Grad or professional school student
or #; SP-Grad or professional school student or #: A-F or S-N or Audit)
Heightens cultural sensitivity regarding public health practice and individual health
behaviors. Cultural diversity and its impact on health behaviors; etic (universal) and emic
(culture-specific) approaches.

PubH 6050 Section 001: Community Health Theory and Practice I
Socioenvironmental factors influencing health-related behavior. Role of groups, institutions,
social structures in encouraging healthy, unhealthy behavior. Role of interventions affecting
social environment. Barriers to interventions. Individual behavior change theories. The goal
of this course is to provide students with the background knowledge in theory and public
health practice to develop, implement, and evaluate intervention programs that will protect
or improve the health of populations by creating behavior change in response to multiple
levels of influence. Learning Objectives: (1) Provide an overview of the public health
approach and the role of community health education. (2) Describe the components of a healthy community. (3) Discuss the importance of community engagement and empowerment in community health education. (4) Explain the importance of ethics in public health practice. (5) Discuss the importance of using conceptual models to plan the implementation and evaluation of interventions. (6) Describe and compare individual, interpersonal, organizational, community, and societal/policy-oriented theories explaining health behavior. (7) Identify the theoretical constructs associated with the major models of health behavior change. (8) Evaluate the strengths and limitations of each model. (9) Create a theory-driven model of the predictive factors of a health behavior. (10) Demonstrate how health behavior change theories may be applied to practical scenarios.

Methods of Instruction: (1) Introduction of topic by instructors or guest expert. (2) Class discussion and group work on application scenarios in accordance with topic of session. (3) Assigned readings. (4) Development of conceptual models. (5) Short assignments (summary and critique of theoretically informed interventions). (6) Final paper and presentation, informed by preliminary assignments. (7) Continual feedback on work from other students, teaching assistant, and instructors.

PubH 6055 Social Inequalities in Health (2 cr; SP-Hlth sci professional school student or hlth sci or soc work or pub affairs grad student or # ; A-F or S-N or Audit)
Extent and causes of social inequalities in health; degree to which our understanding of these inequalities is hampered by methodological limitations in health research. Focuses on individual, community, and policy approaches to reducing social inequalities in health.

PubH 6553 Section 001: Health Care Management Ethics
Ethical issues faced by health care managers as leaders of an organization, members of a profession, and coordinators of clinical processes. Perspectives of managerial, organizational, professional, and clinical ethics. prereq: Public health MPH or MHA or certificate student or instr consent

PubH 6741 Ethics in Public Health: Professional Practice and Policy (1 cr; SP-Public hlth or grad student or #; students are encouraged to take in conjunction with PubH 6742) Through lectures, class discussions, and examination, students will: develop basic skills in ethical analysis; be able to recognize and analyze ethical issues arising in the context of public health and health services; and increase the competence with which they make ethical decisions as issues arise in their practice and professional training, while focusing on moral issues arising in public health practice.

PubH 6742 Ethics in Public Health: Research and Policy (1 cr; SP-Public hlth or grad student or #; students are encouraged to take in conjunction with PubH 6741)
Through lectures, class discussions, and examination, students will: develop basic skills in ethical analysis; be able to recognize and analyze ethical issues arising in the context of public health and health services; and increase the competence with which they make ethical decisions as issues arise in their practice and professional training, while focusing on ethical issues arising in research.

**PubH 6780 Topics: Public Health Administration** (Check on web for TOPICS courses) (max crs 20; 20 repeats allowed; SP–Instr consent; QP–Instr consent)  
Topics specified in the Class Schedule.

**PubH 6920 Section 001: Foundations of Interprofessional Professional Communication and Collaboration**  
Explore nature of/need for interprofessional communication, qualities of successful teams/interprofessional interactions, professional identity, ethics, integrity, values, communication/decision making in interprofessional environment. prereq: MPH student

**College of Science and Engineering**  
**History of Science and Technology**

**HSci 5211 Biology and Culture in the 19th and 20th Centuries** (3 cr; SP–3211; A-F or S-N or Audit)  
Changing conceptions of life and aims and methods of biology; changing relationships between biology and the physical and social sciences; broader intellectual and cultural dimensions of developments in biology.

**BMEN 8335 Section 001: Neuroengineering Practicum**  
Topics/issues in neuroengineering. Ethics, professional conduct, conflicts, plagiarism, copyright, authorship, research design considerations, IRB, intellectual properties, review process, professional presentations, proposal writing. prereq: PhD student in BMEn, EE, ME, or NSci or instr consent

**CEGE 8581 Section 001: Research and Professional Ethics in Water Resources and Environmental Science**  
Ethics of water resources science and environmental engineering research/practice. Societal responsibility, plagiarism, recording-keeping, authorship, confidentiality, conflicts of interest, professional relationships, fraud, reporting misconduct. Meets during first eight weeks of spring semester. prereq: [Environmental engineering or water resource science] grad student or instr consent
MDI 5012 Section 001: Medical Industry Macro Environment
Application of macro environmental analysis to medical device industry. Methods reviewed. Industry-relevant case studies/macro environmental analysis of firms of interest. Political, economic, social, technological, legal, ecological factors that impact medical innovation. Prereq: MDI grad student. Non-MDI graduate students and non-degree graduate students may register for this course with permission of the MDI program.

ME 8001 Section 001: Research Ethics and Professional Practice
Intellectual property, data management, social responsibility, authorship, and plagiarism, conflict of interest, and reporting misconduct. Case studies. Recent newspaper articles.

MOT 8910 Section 001: Corporate Responsibility
Principles of stakeholder management. Ethical framework for responsible management of investors, employees, suppliers, customers, and external community. Moral leadership, trust in organizations, and quality control. New metaphors and techniques for managing the socially responsible organization. Prereq: Grad MOT major

SST 8400 Section 002: Seminar: Science, Technology, and Society
Students participate in ongoing research on interactions involving science, technology, and society from perspectives of history, philosophy, and social study of science, and prepare and present research papers. Prereq: HSci 8111 or [Phil 8601 or Phil 8602 or Phil 8605] or instr consent

SST 8512 Section 001: Partnership in Conflict Management: Security/Privacy Law, Social Responsibility and Ethics
An exploration of challenges to American civil liberties and national security in times of terrorism. Prereq: MSST grad student

Veterinary Medicine

CMB 8134 Section 001: Ethical Conduct of Animal Research
Ethical considerations in the use of animal subjects in agricultural, veterinary, and biomedical research. Federal, state, and University guidelines relating to proper conduct for acquisition and use of animals for laboratory, observational, epidemiological, and clinical research. Regulatory requirements. Bases for proper conduct. Societal impact on scientific investigations utilizing animal subjects. The major objectives for this course are designed to meet federal requirements for training in ethical scientific conduct, particularly as it pertains to use of animal subjects. This course provides 1) a framework for understanding the ethical pros and cons for the use of nonhuman animals in research; 2) information about
resources and regulations regarding the care and use of nonhuman animals; 3) theoretical bases and practical experiences with regard to the purpose and function of regulatory and oversight bodies; and 4) awareness of issues related to biomedical, clinical, and agricultural research.

**PVS 5991 Section 001: Animal Health and Food System Policy and U.S. State government**

**VMED 5920 Section 001: Food Defense: Prepare, Respond, Recover**
Basic principles of preparedness/emergency response. Instructor may substitute topics if timelier topic arises. prereq: Grad or professional student or instr consent

**VMED 5921 Section 001: Seminar in Food Protection and Defense**
Complexities of our food systems. Natural/intentional threats to food security within various industry sectors. Which agencies are responsible for regulating food chains, monitoring food safety, responding to contamination events.

**VMED 8134 Section 001: Ethical Conduct of Animal Research**
Ethical considerations in use of animal subjects in agricultural, veterinary, and biomedical research. Federal, state, and University guidelines relating to proper conduct for acquisition/use of animals for laboratory, observational, epidemiological, and clinical research. Regulatory requirements. Bases for proper conduct. Societal impact on scientific investigations utilizing animal subjects. The major objectives for this course are designed to meet federal requirements for training in ethical scientific conduct, particularly as it pertains to use of animal subjects. This course provides 1) a framework for understanding the ethical pros and cons for the use of nonhuman animals in research; 2) information about resources and regulations regarding the care and use of nonhuman animals; 3) theoretical bases and practical experiences with regard to the purpose and function of regulatory and oversight bodies; and 4) awareness of issues related to biomedical, clinical, and agricultural research.

**VMED 8193 Section 001: Welfare of Farmed Animals**
This course covers topics on the evaluation and assessment of the welfare of farmed animals. Literature review, discussions, and analyses are used to increase skills needed to evaluate methods for improving the welfare of farmed animals in various situations.
PVS 5882 Section 001: Food governance, Policy and Regulation
This course provides an overview of food governance, policy, and regulation in the United States. The roles of legislative bodies and regulatory agencies at local, state, and national levels will be reviewed in order to explore the complexity of food policy. Current issues will be analyzed.

PVS 5883 Section 001: Global Food Systems: Geography, Politics and Trade
This course explores the global distribution of food production and consumption in order to understand the dynamics of food systems including both domestic production and trade. The course provides students an opportunity to expand their knowledge about the drivers of global food systems and the complexity of the issues such as food security, global economic development and the implications of climate change, and sustainability.

PVS 5998 Section 001: Leadership to Address Global Grand Challenges