MONTSERRAT SEMINAR DESCRIPTIONS

2013-2014

The Montserrat Program is grouped into five different thematic dusters: Core Human Questions (C); The Divine (D); Global Society (G); The Natural World (N); and The Self (S). Each duster contains seminars examining the theme from a variety of perspectives.

Core Human Questions

MONT 100C

Matters of Time & Matter (fall)

In this course we consider what cannot be controlled by science. First, what about time itself? Why does time seem to flow and to flow in only one direction (towards the future.) Another aspect of reality that seems out of scientists' control includes apparently random events occurring continually at the atomic and subatomic levels of matter. Finally, science does not control what types of behavior the various forms of matter are capable of. Throughout the semester, we will be considering what impact, if any, what we are learning has on the question raised in the theme of our Core Human Questions cluster how then shall we live?

MONT 101C

Modern Technology & Us (spring)

In this course we will examine several questions related to the pervasive phenomenon of modern technology. What is technology? Does it give humans more or less control in their lives? Is the question of control a technological question? Are technology's unintended side effects chance events or something else? Is there any technological innovation that does not have unintended side effects? Are there other cultures in the world in which people live with technology differently than we do? Can technology change what it means to be human or what it means to live meaningfully? Can we find a better way to live with technology?

MONT 102C

Destiny, Chance, Virtue (fall)

Sometimes chance or fortune seems able to frustrate even our most conscientious attempts to control our lives and our world; while other times our lives seem to be directed by fate or God's Providence which lead us to destinations--figurative and literal--we would never otherwise choose. This seminar examines literary and philosophical works that address the interplay between fate and fortune, with special interest paid to the possibility of human freedom and virtue, which exists in the space between these two inexorable forces. Potential texts include: Sophocles' *Oedipus the King*Nicomachean Ethics, Virgil's Aeneid

On the Freedom of the Will

Lord of the Rings.

MONT 103C

Control, Contingency, Meaning (spring)

The systematic attempt to control chance or contingency through science, technology, and political institutions is one of the distinguishing characteristics of modernity. Nevertheless, contingency and necessity appear persistent, leading many to the conclusion that the desire for control is quixotic. Indeed, --what, in other words, we can

control or change, and what we cannot--remains in flux. This seminar examines books which try to discern the possibilities for, and limitations of, human control, and the potential sources of meaning when

The Prince R.U.R. The

MONT 108C

Staging Chance, Destiny & Fate (fall)

The classical drama of the Greeks and the masterpieces of the English Renaissance share a singular

MONT 113C

Love and Destiny In Music (spring)

Music is a powerful form of expression, one that can transcend barriers of language, time, and place. At the same time, music is often confronted with something unpredictable or a circumstance impervious to lore moments in song, stage, and film where desire and design

are thwarted

Model Christian Discerners (spring)

the biblical and pagan traditions of self-reflec

GLOBAL SOCIETY

MONT 100G

Viet Nam: the Country (fall)

This course explores the ways wars obscure our understanding of the people with whom we share the planet, and with whom we must ultimately make peace. In the first semester we consider Viet Nam, a country that was the site of a past war. During the first weeks of the term we will sample American representations of Viet Nam in film and story, before turning to Vietnamese film and literature, which will be the main focus of the course. We will explore similarities and contrasts as we develop a more complex understanding of Viet Nam and the Vietnamese as both beyond and enmeshed in these various depictions. This course counts toward the Peace and Conflict Studies concentration or Asian Studies concentration.

MONT 101G

Muslim Worlds (spring)

In the second term of this year-long course, we will bring the questions and insights we have developed in looking at the past to bear on looking for the human face obscured by the headlines of the present wars in the Islamic Middle East. Through ethnographies, poetry, film, literature, and brief histories, students will be introduced to the lands and peoples of the region. They will bring this background knowledge to a term-long project examining news sources from and about four countries: Iraq, Afghanistan, Pakistan, and Iran. This course counts toward the Peace and Conflict Studies concentration.

MONT 102G

Ciphers and Heroes (fall)

How are secret codes constructed? What weaknesses allow many of them to be cracked by clever analysts? Welcome to *cryptology*, the scientific study of encoding and decoding secret messages. We will explore the mathematics behind several cryptosystems, while investigating their strengths and weaknesses, and surveying their historical developments, setbacks, and implications. This semester we focus on cryptosystems such as the shift ciphers used by Caesar, the Vigenere cipher used during the Victorian era, and most thrillingly, the ENIGMA cipher used during World War II. Along with the mathematics of these ciphers, we will discover fascinating facts about their creators and the clever analysts who crack the codes, including the Polish and British heroes who cracked the seemingly unbreakable ENIGMA.

MONT 103G

Privacy in the Internet Age (spring)

How does Amazon.com keep your credit card information secure when you order online? What weaknesses can hackers exploit, in their quest to steal your identity online? Secure electronic

Most of these systems are based on the mathematics of elementary number theory, and the stunning development of *public key cryptography*, a revolutionary concept born in the computer revolution of the 1970s. This semester we focus on these modern cryptosystems, the visionaries who created them, and the

MONT 104G

I Mean, Therefore I Eat (fall)

what does this really mean? In what ways does eating contribute to the making of a self or a group? The course explores how specific dietetic decisions reflect a detailed and comprehensive image of a person or a community. We will start by considering the different ways in which foods can mean something to us: how particular foods can be associated with an occasion, a person, a place. Next on the menu will be the ethical, environmental, and political values that our diets reflect. The class will draw upon a wide range of resources, including classical and contemporary philosophical texts, food essays, magazine and newspaper articles, videos and images.

MONT 105G

I Esteem, Therefore I Eat (spring)

The recipe for creating pleasure through food is complex. Start with the palate. Americans hold food experts in high esteem; Italians do not. Are some experts more right than others? Is the quality of a food objective or is it simply a matter of personal taste? Add a dash of art. Some chefs aspire to impress their table guests. But can food be art? Could a cook ever compare to Michelangelo or Leonardo? Stir food's

t. But how should we interpret these facts? Is nutrition a science like

say cell biology?

MONT 106G Boccaccio and the Middle Ages

MONT 109G

Worcester Sketchbook (spring)

This course will serve to use Worcester as both a muse and a resource for travel and observation. We will

place. This hands-on studio course will put the student into the role of traveler as they embark on weekly visits to sites of architecture, landscape and history that will be the inspiration for a variety of drawing processes and techniques. We will also research artist sketchbooks which have served throughout history ent and events, collections of ideas, as well

as places to practice close observation and experimentation.

MONT 110G

Into the Unknown (fall)

Improvements in transportation technology have allowed us to travel to distant parts of the globe and to encounter peoples and places far removed from our own homes. Why is a person driven to venture into new and foreign places? What do they discover along their journey? How does the experience of the voyage challenge how they think about their world and their place within it? We will address these sorts of questions as we examine, through literature, historical travelogues, and film, stories of the journeys taken by a variety of people to unfamiliar regions of their world.

MONT 111G

Exotic Encounters (spring)

Objects, ideas, and traditions travel across the globe much like, and often accompanied by, people. What happens when the unfamiliar appears close to home? Why do some individuals embrace the new while others shun what is alien? How does the arrival of the exotic shape the people among whom it is found, and how might these people, in turn, re-imagine the unfamiliar? In this course, we will examine the movement of unfamiliar objects, traditions, and people to the United States. We will investigate the influence of Indic thought on American writers like Thoreau and the encounters of Beatniks, like Kerouac, with Buddhism. We will also study the trials and successes of Asian immigrant communities. This course counts toward the Asian Studies concentration.

MONT 112G

Bridging the Gaps Between Us (fall)

ounger, or who belongs to a different religion or culture.

Why do these differences make a difference? In this seminar, we will think about what it means to understand another person, and whether and how we can bridge the gaps between us. The course will

MONT 113G

Talking Across Differences (spring)

One important way we get to know each other is by talking. But is language as good a tool of communication as we think it is? Sometimes, putting your thoughts into words seems to distort them. And when it comes to trying to understand someone who speaks a foreign language, is translation really adequate? Philosophers and psychologists have argued that different languages imply different ways of seeing the world. If so, understanding the way another sees the world may require learning her language. In the second half of this course, we will focus on the role of language in understanding each other.

THE NATURAL WORLD

MONT 100N

Drug Design, Action and Abuse (fall)

People use drugs to cure infection, to alter perception, and to influence cellular pathways. We will explore the fundamental biochemistry and pharmacology of drug design and action and examine the regulatory process of drug approval. Through readings and class discussions, we will explore related societal issues such as insurance coverage for prescription drugs, the design of clinical trials, the use of drugs in religious ritual, and how and why a society chooses to control the use of some substances by making them illegal or under physician control, but to promote the use of others. Throughout the course we will develop our ability to read, write and argue about topics of scientific relevance.

MONT 101N

Biotechnology and Ethics (spring)

Advances in technology have changed how we can control our health and bodies, as well as that of our offspring. Is this a blessing or a curse, or a combination of both? We will examine contemporary issues of bioethics through a case study approach. We will begin by grounding ourselves in the language of ethics with critical readings of notable thinkers such as Kant, Hume, Mill and Rawls. We will then draw on our biochemical knowledge from the fall to discuss both the scientific background and ethical implications of topics including informed consent, genetic testing, gene therapy, stem cell research, surrogacy and assisted reproduction, and the allocation of health-care spending and resources.

MONT 102N

Justice in Theory (fall)

We certainly have a problem: the way we live is damaging the environment, and we need that

about existing people? Future

MONT 104N

Our Bodies (fall)

Across the globe, from prehistory to the present, humans have depicted themselves in art. The image has changed with the aspirations of the society and the materials available, such as wood, bronze, marble or paint. Societies developed rituals of food and drink that affected the body. Often they imagined their gods as enhanced people. With scientific advancements, including human dissection, artists acquired an understanding of the physical body; a wide range of personality types and human conditions (gender distinctions, childhood, old age, obesity, or madness) were introduced in art. Both seminars will encourage students to actually participate in making and manipulating imagery through Photoshop and other new technologies. Works of art and landscape on campus, the Worcester Art Museum, and in Boston are part of both semesters.

MONT 105N Our World (spring)

MONT 108N

The Stem Cell Machine (fall)

What are stem cells? Are they the holy grail of medicine, or snake oil? In this course we will explore the biology of stem cells, both in embryonic development, and in the adult and aging organism in the maintenance and repair of tissues. We will discuss why scientists use model organisms to study stem cell biology and how this affects what we know about stem cells. We will develop tools to assess scientific and

THE SELF

MONT 100S

The Meaning of Birth (fall, spring)

What is the American way of birth? How does it shape birth practices, outcomes and experiences? What are the personal, social and ethical implications of hospital births? What role do alternative birth narratives play? How might giving birth impact one

and personal selves? Why do some people choose to be child-free? Is it possible to mourn in the face of birth? What is the social significance of deaths from miscarriage, still birth, or sudden infant death syndrome? Drawing from history, anthropology, and sociology, students will learn to view birth as a social process, consider the politics of post-modern births and birthing, and give thought to their own assumptions about and encounters with birth.

MONT 101S

The Meaning of Death (fall, spring)

What is death, and is it the same for everyone everywhere? Do people in the contemporary West live in denial of death? What is it like to have a job that surrounds you with people who are dead or dying? Why

MONT 104S Visions of Difference (fall)

MONT 109S

Brain & Self (spring)

What can dementia, stroke, and neurological and psychiatric disorders teach us about how the brain creates personal identity and a unified sense of self? This course will explore the neurobiological origins of the self. By examining what goes wrong with the sense of the self in individuals with brain dysfunction, we will explore the link between brain and identity. From remarkable cases of patients who deny parts of their body are their own, to patients failing to recognize their own images in the mirror or thinking their relatives have been replaced by exact duplicates, we will begin to unravel the perplexing question of how rly useful for

those planning a career in the health professions.

MONT 112S

Brain: Peaking Under the Hood (fall)

The brain is an amazingly complex organ, yet follows some simple biological rules. This neuroscience course will examine the working parts of the brain. Neurons similar to other cells in the body, yet are specialized for the processing of information. We will examine how these exquisite machines accomplish the many tasks that make up our everyday experiences. How do neurons create and store memories? A

the brain inform the strategies humans use to solve problems? How do genes and the environment interact to develop brains with a common architecture, but where each one is unique?

MONT 113S

Brain: Taking It On the Road (spring)

In the second half of the year, we will examine how the human brain interacts with the world. Our interpretation of the world around us is shaped by the human senses. The visual system provides more than a camera on the world. What features of the world does the brain highlight? The attention mechanisms of our brains structure and limit our sensory experiences. What are the experiences that our brains think are most important? How does sleep and stress affect the abilities of the brain? How do sex and gender shape the brain? Can the findings of neuroscience give us insight into our understanding of the world around us?

MONT 114S

Adolescent Resilience (fall) The fall semester will focus on how family, peer, and neighborhood rban schools. That is, we will

consider how family and neighborhood stressors, labeling and barriers in the classroom, and peers pose risks to youth development and how adolescents exhibit educational resilience in the face of these challenges. Through examination of the psychological literature on adolescence as well as papers, discussions, and community-based experiences, students will pay particular attention to the roles that relationships, achievement, and engagement play in promoting identity development and success among youth in urban schools.

MONT 115S

Context and Consequence (spring)

The spring semester will take a closer look at the urban school environment. The urban school, like all schools, is complex and chaotic. During the first semester of this yearlong course students examined the many factors that impact the adolescent as he or she navigates these complex institutions. This seminar will examine the broader contextual factors that impact the structure of the urban school and the adolescents that live within its walls. Through an examination of variables such as the neighborhood, socioeconomic status, race and ethnicity and school funding we will explore both the positive and negative

consequences on the urban school and its students. The work in this course will culminate with the question: How does schooling impact the development of self?