

## Course descriptions Spring 18

### COMPUTER INFORMATION SYSTEMS

#### CS 299 Introduction to Programming with Python

##### PREQ: IT 101

This course introduces students to the fundamentals of programming and algorithmic thinking using the Python programming language. Students learn the fundamental constructs and key concepts that are common to all modern programming language using this relatively straightforward, popular, and versatile language. Their understanding is reinforced throughout the course by the development of several standalone applications, in which the importance of writing efficient, clear, and well-structured code is also emphasized. This course is intended for any motivated student interested in learning how to program. No prior knowledge of Python or other programming languages is required.

### ENGLISH AND MEDIA STUDIES

#### MC 300.001 Film, TV, & Advertising: Themes and Practices

This class combines close textual analysis of advertising-themed television and film with a study of the workings of the promotional screen industries. It begins with an analysis of the cinematography and cultural messaging in TV programs and films that depict the advertising industry. Through the lens of these and other visual media, the class analyzes promotional strategies in the film, television, and/or magazine publishing industries. A second grouping of texts highlights a range of established and emerging promotional strategies. Students consider creative and industry strategies through the lens of specific film trailers, title sequences, episode promos, web shorts, and other forms. Beyond these emergent strategies in these areas of media production, the class examines mid-century case studies of short-form content-promotion hybrids produced by Walt Disney, title sequences created by Saul Bass (e.g., for North By Northwest), and iconic advertising campaigns that parallel the faux campaigns depicted in AMC's Mad Men.

### Finance

#### Fi 402A 001 and 002 Mutual Fund Operations & Management

PREQ: (FI 320 or FI 306) & (CC5 or WP)

This course will provide students with a broad understanding of the mutual fund industry as well as the organizational infrastructure necessary to offer retail investment products (mutual funds) to shareholders. Students will first develop an understanding of the history of the industry, the evolution of products offered and how mutual fund advisors are generally organized to deliver investment results. We will then focus on fund qualification requirements and explore the differences between a variety of fund offerings (ex: taxable vs. tax exempt funds, diversified vs. non-diversified, etc.). Students will learn how investment advisors have had to adapt to recent regulatory developments, the financial crisis and various industry scandals. The role of the Valuation Committee and the complexities of the nightly fund valuation process will be a theme throughout the course. Finally, students will end the semester with a group project where they will

analyze a specific fund and present the relevant facts for investment advisory contract approval to a Board of Trustees.

### **FI 402C H01 Sustainable, Responsible, and Impact (SRI) Investing**

PREQ: (FI 320 or FI 306). Honors Program only.

SRI is an investment discipline that considers environmental, social and corporate governance (ESG) criteria to generate long-term competitive financial returns and positive societal impact. According to the US SIF Foundation's 2016 report, there has been 33% growth in SRI investing over the past 2 years, and a 14-fold increase since 1995. This course would focus on various ESG considerations such as climate change, GHG emissions, energy/fuel consumption, water use, waste management, employee relations, human rights, diversity and board issues, and learn about incorporating these ESG issues in investing. In addition, students will learn about various metrics and databases (e.g., Bloomberg, CDP, Sustainalytics) that are used in SRI investing, and utilize them to identify investment opportunities that provide competitive financial returns as well as positive impact on the society at large.

With many notable responsible investors in the Boston area (e.g., Trillium Asset Management, Boston Common Asset Management, Walden Asset Management, Zevin Asset Management, etc.) in addition to growing ESG teams within traditional asset managers (e.g., BlackRock, Vanguard Asset Management, State Street Global Advisors, Fidelity Investments, Eaton Vance, etc.), this course hopes to expand your career opportunities in this exciting new field.

## **GLOBAL STUDIES**

### **GLS240-001 The Empire Strikes Back: Russia & Soviet Successor States**

1991 witnessed one of the most dramatic global events of the century: the official dissolution of the "evil" Soviet Empire. This second "Russian Revolution" changed the world in ways that no one could have predicted. In this course we will analyze the evolution of events since that detrimental year by examining as diverse developments as: the Velvet and Orange revolutions in Georgia and Ukraine respectively, the rise of cult of personality in various republics, ethnic and separatist conflicts in South Ossetia, Crimea and Eastern Ukraine, and the implications of a (re)emerging Russia on its neighbors.

The course will look into socio-political and economic changes in Russia, Eastern Europe (Belarus, Moldova, Ukraine), the Baltics, South Caucasus (Armenia, Azerbaijan and Georgia) and the Central Asian republics. At the end of the course the students will be able to better understand and analyze the politics of former Soviet republics and their relationship with their neighbors, regional powers (Iran, Russia and Turkey) as well as the United States and European countries.

### **GLS 299 H01 Music and Politics (Honors)**

Music has long played an important role in politics. The music to which one is exposed is in many ways a product of the social context in which one finds her or himself. This determines at least in part the political content and messages that one is exposed to through music, and ultimately affects individual political beliefs and behaviors. Musical genres play an important role in defining one's social identity,

thus making music a key factor in the creation of this social construct. In addition, candidates for public office and government officials often use music in the attempt to shape and condition individuals' political views and interactions with the state. Music also often plays an important role in attempts to both change and defend a variety of practices and institutions in American society. For these reasons, the intersections of music and politics merit close examination. As a result of successfully completing this course, students will be able to: (1) comprehend the key role philosophers have assigned to music in the functioning of state and society, (2) understand how music is crucial in many of the ways in which citizens and their government interact, such as patriotism, protest, and the development and transmission of political culture, (3) explain the relationships between music and social identities in the United States, and (4) understand how music has been used to both foster and resist social and political change.

### **GLS 405 E01 Model US Congress: Environmental Politics & Policymaking**

PREQ: class code 4 or higher

Thus course develops an understanding of (1) congressional election outcomes and the effects of the electoral connection; (2) the nature of the representative-constituency relationship; (3) the workings of Congressional institutions, organizational structure, processes, rules and informal norms and its impact on congressional decision making and actions; and (4) the interaction between Congress and other institutions and political actors in the Washington, D.C. policy making community. During the second half of the semester, our class will simulate the U.S. Senate Committee on Environment and Public Works. Students will assume the roles of the Chair, Ranking Member and other committee members and will have responsibility for organizing, scheduling and managing the simulation. The Committee will conduct oversight of the Environmental Protection Agency, hear testimony on one or two bills, and participate in a mark-up of a bill. The roles of the expert witnesses and administration representatives will be played by students in other classes: GLS 230 Politics and Public Policy and NASE 380 Science of Environmental Policy.

## **HISTORY**

### **HI 299 001 History on the Road: EXPLORING MASSACHUSETTS IN FIVE FIELD TRIPS**

**Class meets on 5 Saturdays 2/10 – 3/24. No class on 3/3 or 3/10. Pre-session is 2/3.**

Bentley University is located in a small New England region that has historically exerted a disproportional influence across the entire United States. Since the first English arrival and settlement upon these shores in 1620, important aspects of American history have played out just a few short miles from this campus. This experiential history course transports students beyond lecture room limits to those places for five Saturdays in February and March. You will visit important historic locations here in Waltham, and at nearby Concord, Salem, Cambridge and Plymouth. It was in these towns that talented and energetic men and women established and developed the political, cultural, industrial, educational, scientific and maritime innovations that ultimately shaped our entire nation. Come and join us and get to better know and understand these talented individuals, where they lived and worked, and how in many ways they invented America.

### **HI 392 001 Nazi Germany**

Nazi Germany remains one of 20<sup>th</sup> Century's most horrific experiences. This class probes deep into its formation and politics. It explores the final years of the Austro-Hungarian Empire as they shaped Adolf Hitler's thinking and his anti-Semitism. The course will also examine the Nazi occupation of Europe, its racial policies and the Holocaust.

### **LAW**

#### **LA 199 001 Law and Film**

This course explores the impact and consequences of the ways lawyers and the legal system are depicted on film. Law affects every area of our lives, yet most people know little about the legal system apart from what they see in movies and on TV. In this course, we take a closer look at the impact of those depictions on our understanding and expectations of the legal system. How do those depictions color our views of law and its place in society? How do movies about law and lawyers shape our understanding of the relationship between the legal system and justice? How is justice defined in those films? Through a combination of selected films, textbook readings about the history behind and techniques used in those films, class discussions and written assignments, this course takes a deep dive into the social impact of law and film. In doing so, it identifies and clarifies common misperceptions about the legal system that those films tend to perpetuate.

#### **LA 298 001 Social Justice Law**

Social justice is defined as "... promoting a just society by challenging injustice and valuing diversity." It exists when "all people share a common humanity and therefore have a right to equitable treatment, support for their human rights, and a fair allocation of community resources." In conditions of social justice, people are "not to be discriminated against, nor their welfare and well-being constrained or prejudiced on the basis of gender, sexuality, religion, political affiliations, age, race, belief, disability, location, social class, socioeconomic circumstances, or other characteristic of background or group membership" (Toowoomba Catholic Education, 2006). This course will take a critical look at the laws that developed this notion of social justice. Specifically looking at the past, present and future of human right law in the United States and internationally. We will consider the historical development of human rights in this country, focusing on one of the biggest human rights movements, the Civil Rights Movement. Additionally, we will look at the historical and contemporary issues and laws around women's rights, Immigration rights, LGBT Rights, fighting sexual violence, Genocide prevention and National Security. As a part of their studies students will travel to Atlanta, Georgia during spring break to enrich their understanding of Social justice laws and issues.

## **MARKETING**

### **MK 403 EB1 Luxury Marketing**

PREQ: GB 214

Learn how to create and develop luxury brands in premium industries: fashion, perfume, jewelry, the finest hotels, exclusive real estate, and high-end automobiles.

### **MK 411 001 Digital to Direct: Creating a Direct Marketing Campaign with the US Postal Service**

PREQ: GB 214 & 2 other Marketing courses & (CC7 or WP).

Hands on project to design a direct marketing program and implement a mailing campaign on behalf of a national retail client in partnership with The Postal Service, printers, paper manufacturers and Blue Soho Digital Marketing Company.

## **MATHEMATICS**

### **MA402 H01 Agent Based Modeling**

**PREQ: 3 credits of Math**

MA402H Agent-based Modeling. Agent-based modeling is a relatively new computer simulation technique used to study the behavior of large complex systems involving many individual interacting agents. Examples range over many fields, such as flocking behavior of birds, consumer behavior in supermarkets, voter response to election campaign strategies, the evolution of winning strategies in stock markets, competition between species in a changing ecosystem, and many more. This course will involve learning a computer language, NetLogo, designed specifically for agent-based modeling, using it to build successively more complex models in subject areas of interest to the individual students, and using the models to make valid inferences about the behavior of these systems.

### **MA402A 1GU: Machine Learning (combined with the grad class MA 755)**

***Prerequisite(s): GB 213, MA 402A Data Science or MA347 or Instructors Permission***

Also requires the assumption of working Familiarity with R/Python and willingness to understand the Mathematics involved and the algorithms used.

**Course Description:** In the course we further investigate the topics of learning from and predicting with data MA 347 or MA 402 Data Science. The course starts with the topics of regularization and dimensionality reduction (linear discriminant analysis and principal component analysis) which are methods to reduce feature space complexity. We will cover a selection from the following topics as time permits: support vector machines, neural networks, Bayesian methods, genetic algorithms, spectral clustering and self-organizing maps. In addition, we will learn to use distributed data mining techniques on very large datasets. The course will assume a working familiarity with either of the R or Python languages and a higher level of mathematical maturity than required in the prerequisites.

## **MODERN LANGUAGE**

### **MLFR398 001 Discovering Contemporary France**

Pre-requisite: MLFR202 or permission of the instructor.

This advanced French course is designed to augment students' active communicative command of French, that is, oral and written proficiency, by engaging in specific task-based activities in and beyond the classroom, which are entirely in French. This unique course will ask students to prepare selected historic readings and examine a range of contemporary media materials (film, blogs, short documentaries, news articles, news broadcasts) in order to develop a deeper understanding of the French mindset and its impact on the challenges facing contemporary France today.

### **MLCH 402--Current and Controversial Topics in Chinese**

The course is designed in four steps. Step one: Raise the question and introduce different positions on the issue. Step two: provide a platform for discussions. Step three: coordinate the research and thinking process to prepare for the final debate. Step four: Debate and thoughts exchange. The course is designed to help increase students' awareness and sensitivity to the social issues in China. Most of the issues do not have a right or wrong answer, but instead, we will encourage students' discussions and more in-depth thinking.

## **NATURAL & APPLIED SCIENCE**

### **NASC 199 001 and 002 Environmental Science & Sustainability 4 credit lab science**

This lab-based course is an introduction to environmental sciences, highlighting issues in environmental and ecological sustainability. This course places a strong emphasis on developing critical thinking skills to assess questions such as: how do we decide what to "believe" about environmental issues? How are humans linked to the environment, and can we modify our interactions to decrease our impacts on environmental systems? How can we learn from past environmental problems to solve environmental dilemmas of the present and future? How can sustainable business practices address environmental challenges?

By the end of this course students should: Understand the interconnectedness of natural ecosystems and the role of humans in the environment; Through processes of scientific inquiry, explain environmental impacts of human activities and prevent/minimize future problems; Be introduced to different perspectives on environmental policies and problems (e.g., political, economic, and societal) in order to

define potential solutions; and, as an scientifically informed individual, be able to make responsible decisions about environmental practices in business and society.

We will achieve these course goals through in-class lectures and class activities, laboratory exercises, and field trips. This class will be field-intensive, meaning that we will spend much of our time outdoors (weather permitting).

### **NASE 398 E01 Futurism: Innovation Science & Business**

This course is about the future and how it can be shaped by scientific, technical, and business innovation in the coming decades. Through lectures and readings, students will be introduced to futuristic technologies such as computers with human intelligence, molecular machines, nanotechnologies, human-machine hybrids, genetically engineered crops, autonomous vehicles, advances transportation systems, or the colonization of space as well as the practical challenges inherent in developing successful applications of such technologies. The underlying premise of this class is that the potential of advancing science and technology will only be realized by society if coupled with complementary business models and networks. Through this course, students will research emerging technologies and apply their business skills to identify products that might be developed from these technologies, the critical path for developing such products, business models that would enable development of such products, and the implications of such products for society. This course will challenge students to have informed and critical perspectives on futuristic technologies as well as the creative business skills to be leaders in turning futuristic technologies into products, services, and sustainable businesses.

The theme this semester will be the automobile and transportation of the future based, in part, on the recent report Beyond Traffic by the U.S. Department of Transportation [www.transportation.gov/sites/dot.gov/files/docs/Draft\\_Beyond\\_Traffic\\_Framework.pdf](http://www.transportation.gov/sites/dot.gov/files/docs/Draft_Beyond_Traffic_Framework.pdf) and in conjunction with the Thought Leadership Series A Beyond Traffic 2045: Reimagining Transportation At the Volpe National Transportation Systems Center [www.volpe.dot.gov/events/reimagining-transportation-speaker-series](http://www.volpe.dot.gov/events/reimagining-transportation-speaker-series).

### **NASE 399 001 Innovative Technology & Society**

Innovation in technology is an ever-changing, improving process. A simple look at the latest news cycle reveals an exciting frontier in technological development. Scientists and engineers are harnessing advanced electronic, chemical, and mechanical properties to make revolutionary technologies. This course introduces students to the principles, applications, and societal implications of a selected innovative technology. Students will characterize the types of technologies and the strategies for fabricating and characterizing the materials. In addition, students will perform simple laboratory experiments to explore how the innovative technologies are made and tested. Students will also evaluate the current applications of innovative technologies in many topical areas. Finally, students will evaluate the risks, intellectual property considerations, ethical concerns, business implications, and regulatory issues of innovative technologies. Through structuring a business plan and “pitch” based on an innovative technology,

students will demonstrate a viable consumer need, identify a target market, and explain how to operate and manage a technology-based business.

## **SOCIOLOGY**

### **SO 198-001 Consumption, Health and the Environment**

In this applied course, students will examine health and environmental issues associated with consumption activities. There are many health and environmental impacts associated with consumption activities yet such impacts often remain hidden or obscured in the course of everyday life. Over the course of the semester, students will learn concepts from environmental health, environmental sociology, the sociology of consumption, and public policy. Each student will engage in an original preliminary research project on a contemporary issue related to consumption and environmental health. Students will develop an understanding of the power dynamics and inequalities associated with identifying, defining, managing, and mitigating the health and environmental impacts of consumption activities. Skills, perspectives, and analytic frameworks learned in this course will be useful for students in their roles as individual consumers, citizens, and professionals.

### **SO 199 001 Criminal and Social Justice**

The issue of crime, punishment, and justice are fundamental topics of our daily lives. Discussions of crime pervade our news, entertainment, public policy, and civil discourse. We live in an era of criminalization and mass incarceration, where the US prison population dwarfs that of any other country. Likewise, discussions of justice are linked to our perception of crime and its causes. As our views on crime shifts, so do our beliefs about what to do about it. This course will examine the topics of crime, punishment and justice from a critical perspective. We will question our assumptions about what causes crime, what constitute criminal behavior, and our contemporary approaches to dealing with it. This will include cross-country comparisons and discussions of radical approaches. As a result, students will have a greater understanding and awareness of the complexities of criminal and social justice, and their relationship to both.

### **SO 298 001 Human Trafficking & Global Slavery**

This class will investigate human trafficking and slavery from a number of perspectives including historic, economic, gender, race, religious and political. Students will explore the human factors of exploitation, objectification, alienation, and violence associated with human trafficking. Students will be asked to create and implement awareness and action plans to inform the campus of the scope and daily impact of human trafficking and slavery.

### **SO 299 001 Social Entrepreneurship**

Social entrepreneurship lies at a direct intersection of business and civic. While models such as corporate social responsibility, good corporate citizenship, and business ethics have worked



their way into the business plans of most organizations, social entrepreneurs aim for something deeper- a more holistic approach to creating growth from intersections of business and civic. Social entrepreneurs couple a deep knowledge of social problems, with the entrepreneurial spirit and skills to create sustainable solutions. And from this place of dual drive, the social entrepreneur generally possesses an unstoppable spirit, driven to develop new business models that create better futures for people and planet. During our semester, we will dive into three lines of inquiry: 1) a general outline of the state of the world, in terms of people and planet; 2) critical discussions of current business models and current business responses to the world's problems (CSR, business ethics, giving back, charitable arms, etc.); and 3) a survey of the emerging field of social entrepreneurship, including case studies and best practices.