ADIT137501  Future Tech and Emerging Media
Boston College Summer Session 2017
Summer 2, June 26th - August 4th
Tuesday/Thursdays 6:00 - 9:15pm

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Office Hours: By Appointment

Boston College Mission Statement
Strengthened by more than a century and a half of dedication to academic excellence, Boston College commits itself to the highest standards of teaching and research in undergraduate, graduate and professional programs and to the pursuit of a just society through its own accomplishments, the work of its faculty and staff, and the achievements of its graduates. It seeks both to advance its place among the nation's finest universities and to bring to the company of its distinguished peers and to contemporary society the richness of the Catholic intellectual ideal of a mutually illuminating relationship between religious faith and free intellectual inquiry.

Boston College draws inspiration for its academic societal mission from its distinctive religious tradition. As a Catholic and Jesuit university, it is rooted in a world view that encounters God in all creation and through all human activity, especially in the search for truth in every discipline, in the desire to learn, and in the call to live justly together. In this spirit, the University regards the contribution of different religious traditions and value systems as essential to the fullness of its intellectual life and to the continuous development of its distinctive intellectual heritage.

Course Description
With an emphasis on critical thinking and analysis, this survey course prepares students for a future shaped by high technology and digital media. Students in this course work in teams to compose and present comprehensive reports on emerging technologies that will directly impact their personal and professional lives. Through group discussions and open debates students will closely examine and consider the ethical issues that these technologies raise.

Textbooks & Readings (Required)
Book title: Immersive Ed Virtual Learning Environment Edition

Available for purchase through the BC Bookstore or online through Agora Portal.

Textbooks & Readings (Recommended)

Students collaborate through the ADIT137501 Google Group
Canvas

Canvas is the Learning Management System (LMS) at Boston College, designed to help faculty and students share ideas, collaborate on assignments, discuss course readings and materials, submit assignments, and much more—all online. As a Boston College student, you should familiarize yourself with this important tool. For more information and training resources for using Canvas, click here.

Course Objectives

1. This is an Immersive Education course in which students will be taught the tools (online discussion groups, audio white boards, blogs and virtual worlds) to complete this Immersive Education class and other Immersive Education classes.

2. Students will develop specific skills and competencies evaluating both current and emerging technologies. Technologies addressed in this course include, but are not limited to: Big data; Wearable computing (Fitbit, Apple Watch, Google Glass, etc.); Virtual Reality and Augmented Reality (Facebook Oculus Rift, Google Cardboard, Microsoft HoloLens, etc.); Neuro-technologies (including neural brain interfaces and mind-controlled vehicles, aircraft, and games); Self-driven (driverless) cars, trains and planes; 3D Printing (including human head/face/body scanning and homemade skin and organs); Mobile payment systems and cryptocurrencies (Apple Pay, Bitcoin, etc.); Ultra-high-definition television (4K, 8K and beyond); Personal robotics and drones; and Next-generation mobile devices and apps (future smart phones and tablets).

3. Students will develop critical thinking skills while evaluating and reporting on the hardware and software presented in the course based on the application’s technical merits as well as global appeal.

4. Students will develop an understanding of the impact that these technologies have on the individual (personally), society and culture.

5. Students will demonstrate ethical knowledge related to how these potentially controversial technologies may impact the individual and society at large. Special attention will be given on the ethical use of future technologies and emerging media both on a personal (individual) level and also at the societal (group) level.

Grading

1. Punctual attendance (required) and participation in in-class exercise. **25% of overall grade.**

2. Participation in class discussions, exercises (homework exercises and assignments) and discussion group. **25% of overall grade.**

3. Midterm, Quizzes and Drills. **25% of overall grade.**

4. Final exam. **25% of overall grade.**

The graduate grading system for Summer Session is as follows:

A (4.00), A- (3.67)
B+ (3.33), B (3.00)
B- (2.67), passing but does not count toward degree
C (2.00), passing but not for degree credit
F (.00)
All students can access final grades through Agora after the grading deadline each semester. Transcripts are available through the Office of Student Services.

**Deadlines and Late Work**
In-class assignments are due during the in-class period in which they are assigned, while homework assignments are due at the beginning of the next class period (i.e., at the start of the next class) on the specified dates.

Late assignments will be graded accordingly. Work that is submitted late will receive a late grade penalty of one full letter grade for every 24 hours of time that has elapsed since the work was originally due.

**Course Assignments**
This is a three credit class that meets for 3 hours and 15 minutes.
In addition we will make use of chat sessions on audio whiteboard, google groups, virtual worlds and class blog per outline below.
It is expected that 6 hours per week of your study time out will be spent on out of class assignments and exercises. The nature of these assignments will be in relation to the topic but may vary with topical issues as they arise. Please note that some weeks will require more time and some weeks less time but the average is approximately 6 hours per week over the semester.

**Course Schedule**

<table>
<thead>
<tr>
<th>Date/Week</th>
<th>Topic</th>
<th>Reading/Assignments</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 28</td>
<td>Introduction and Overview</td>
<td>Instructions for online meeting will be sent via BC email</td>
<td>June 29</td>
</tr>
<tr>
<td>June 29</td>
<td>Virtual Worlds and Video Games</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>July 6</td>
</tr>
<tr>
<td>July 6</td>
<td>Video Streaming and Ultra-high-definition Television</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>July 11</td>
</tr>
<tr>
<td>July 11</td>
<td>Augmented Reality (AR) and Virtual Reality (VR) and Wearable Computing</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>July 13</td>
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<tr>
<td>July 13</td>
<td>MIDTERM PROJECT</td>
<td>MIDTERM PROJECT</td>
<td>July 18</td>
</tr>
<tr>
<td>July 18</td>
<td>Neuro-technologies and Affective Computing</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>July 18</td>
</tr>
</tbody>
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Written Work

Summer Session students are expected to prepare professional, polished written work. Written materials must be typed and submitted in the format required by your instructor. Strive for a thorough yet concise style. Cite literature appropriately, using APA, MLA or CLA style per your instructor’s requirements. Develop your thoughts fully, clearly, logically and specifically. Proofread all materials to ensure the use of proper grammar, punctuation and spelling. For writing support, please contact the Connors Family Learning Center.

Attendance

Attending class is an important component of learning. Students are expected to attend all class sessions. When circumstances prevent a student from attending class, the student is responsible for contacting the instructor before the class meets. Students who miss class are still expected to complete all assignments and meet all deadlines. Many instructors grade for participation; if you miss class, you cannot make up participation points associated with that class. Makeup work may be assigned at the discretion of the instructor. If circumstances necessitate excessive absence from class, the student should consider withdrawing from the class.

Students who miss three or more classes in this course are considered to be "in jeopardy of failing" due to excessive absences and must therefore contact the professor to ensure that they can continue taking the course.

Consistent with BC’s commitment to creating a learning environment that is respectful of persons of differing backgrounds, we believe that every reasonable effort should be made to allow members of the university community to observe their religious holidays without jeopardizing their academic status. Students are responsible for reviewing course syllabi as soon as possible, and for communicating with the instructor promptly regarding any possible conflicts with observed religious holidays. Students are responsible for completing all class requirements for days missed due to conflicts with religious holidays.

Accommodation and Accessibility

Boston College is committed to providing accommodations to students, faculty, staff and visitors with disabilities. Specific documentation from the appropriate office is required for students seeking accommodation in Summer Session courses. Advanced notice and formal registration with the appropriate office is required to facilitate this process. There are two separate offices at BC that coordinate services for students with disabilities:
• The Connors Family Learning Center (CFLC) coordinates services for students with LD and ADHD.
• The Disabilities Services Office (DSO) coordinates services for all other disabilities.

Find out more about BC’s commitment to accessibility at www.bc.edu/sites/accessibility.

Scholarship and Academic Integrity
Students in Summer Session courses must produce original work and cite references appropriately. Failure to cite references is plagiarism. Academic dishonesty includes, but is not necessarily limited to, plagiarism, fabrication, facilitating academic dishonesty, cheating on exams or assignments, or submitting the same material or substantially similar material to meet the requirements of more than one course without seeking permission of all instructors concerned. Scholastic misconduct may also involve, but is not necessarily limited to, acts that violate the rights of other students, such as depriving another student of course materials or interfering with another student’s work. Please see the Boston College policy on academic integrity for more information.
Appendix A

Design
How will students make progress on objectives you have chosen for your course? What activities will promote development of those skills, concepts, experiences? How will you and your students check their progress on objectives? What assessments will provide that feedback? Objectives --> Activities --> Assessments --> should be linked

Guidelines
The syllabus is a key communication tool between you and your students. “Your syllabus is the first learning material students encounter in your course. Because of this it is important to include the tone of your class in addition to its form. In addition to its contractual nature, the syllabus represents your initial attempt to form a relationship with your students, to begin the process of community the class will take. Take advantage of that opportunity.” From: the Center for Teaching Excellence at the University of North Carolina, Wilmington (see http://www.uncwil.edu/cte/resources/Best Practices in Syllabus Construction.doc).

There are many models available to help you design this important document.

The Center for Teaching Excellence at Iowa State has materials from a "Learning-Centered Syllabi" workshop. This site helps you put student learning at the center of this important document, including a detailed list of what to include: http://www.celt.iastate.edu/teaching/syllabi.html#intro

A tutorial from the Center for Teaching and Learning at the University of Minnesota will help you construct a syllabus. Many examples are provided: http://www1.umn.edu/ohr/teachlearn/tutorials/syllabus/

The "Teaching Tools and Resources" area of a web site at the University of Nebraska at Lincoln (originally prepared by their Teaching & Learning Center) has many suggestions about lots of aspects of the teaching and learning process -- arranged by topic, easy to browse for ideas. Included are ideas for planning a course, developing a syllabus, motivating students, as well as "101 Things You Can Do the First Three Weeks of Class."

Active learning tools
A great way to get more students engaged in the course material during class is to use Think-Pair-Share when you pose a question to the group. The advantages of this approach, and how to do it, are described in the following article by Susan Ledlow which also includes sample prompts to the class to help implement the approach. http://www.hydroville.org/system/files/team_thinkpairshare.pdf

The following article by Susan Ledlow, found on the web site of the UOEEE Center for Teaching & Learning at Arizona State University, describes an often used cooperative learning approach, the Jigsaw Method, giving very specific instructions for implementation. One of the strengths of the jigsaw is that students collaboratively develop understanding of a piece of complex material and then are placed in the position to explain (teach!) that understanding to others. A synthesis assignment is also often part of the whole process. http://www.hydroville.org/system/files/team_jigsaw.pdf

For a description of the Newsprint Dialogue method, go to the following site at Indiana University-
For a description of the Structured Academic Controversy, go to the following site at the University of Minnesota. Roger and David Johnson are internationally known experts on cooperative learning: http://www.co-operation.org/?page_id=65

More general information on strategies for Active Learning can be found at the following websites:

From a text Tools for Teaching by Barbara Gross Davis, 1993, Jossey-Bass (available in the Center for Faculty Development Library—many chapters are available on line as well including this one on lecturing: http://teaching.berkeley.edu/bgd/delivering.html


Center for Teaching Effectiveness at the University of Delaware: http://cte.udel.edu/instructional-topics/engaging-students.html

Center for Teaching Excellence at the University of California Santa Cruz http://teaching.ucsc.edu/tips/tips-active.html

Center for Teaching and Learning Services at the University of Minnesota: A tutorial on ways to use active learning strategies with PowerPoint presentations; includes 12 active learning strategies. http://www1.umn.edu/ohr/teachlearn/tutorials/powerpoint/index.html

**Classroom Assessment Techniques (CAT)**
The key text about classroom assessment is Angelo, T.A. and K.P. Cross. 1993 Classroom Assessment Techniques: A Handbook for College Teachers. 2nd ed. San Francisco: Jossey-Bass Publishers. This text has detailed descriptions of 50 different CATs including instructions on how to implement them and examples of use in various courses. The text categorizes CATs by the type of goal the CAT helps you assess. Additionally this text contains a self-scorable Teaching Goals Inventory. Available from the Center for Faculty Development Library.

•A partial list of Classroom Assessment Techniques from Iowa State: http://www.celt.iastate.edu/teaching/cat.html
•From the Schreyer Institute for Teaching Excellence at Penn State University—an article introducing Classroom Assessment and discussing several techniques “An Introduction to Classroom Assessment Techniques” by Diane M. Enerson, Kathryn M. Plank, and R. Neill Johnson http://www.schreyerinstitute.psu.edu/pdf/Classroom_Assessment_Techniques_Intro.pdf
•The FLAG (Field-tested Learning Assessment Guide) site, created by the National Institute for Science Education housed at the University of Wisconsin-Madison, provides extensive descriptions of several CATs, including the Minute Paper and Concept Mapping. http://www.flaguide.org/cat/cat.php For the Minute Paper description specifically, go to: http://www.flaguide.org/cat/ minutepapers/ minutepapers1.php
•From the Teaching Effectiveness Program at the University of Oregon: This site gives short descriptions of such CATs as the One-Sentence Summary; Word Journal; Directed Paraphrasing; Application Cards. http://tep.uoregon.edu/pdf/assessment/Ways_to_Assess_Student_Learning_During_Class.pdf
IDEA student centered Teaching Methods
1. Displayed personal interest in students and their learning
2. Found ways to help students answer their own questions
3. Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up-to-date in their work
4. Demonstrated the importance and significance of the subject matter
5. Formed “teams” or “discussion groups” to facilitate learning
6. Made it clear how each topic fit into the course
7. Explained the reasons for criticisms of students’ academic performance
8. Stimulated students to intellectual effort beyond that required by most courses
9. Encouraged students to use multiple resources (e.g., data banks, library holdings, outside experts) to improve understanding
10. Explained course material clearly and concisely
11. Related course material to real life situations
12. Gave tests, projects, etc. that covered the most important points of the course
13. Introduced stimulating ideas about the subject
14. Involved students in “hands on” projects such as research, case studies, or “real life” activities
15. Inspired students to set and achieve goals which really challenged them
16. Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own
17. Provided timely and frequent feedback on tests, reports, projects, etc. to help students learn
18. Asked students to help each other understand ideas or concepts
19. Gave projects, tests, or assignments that required original or creative thinking
20. Encouraged student-faculty interaction outside of class (office visits, phone calls, email, etc.)

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Choose two to three Operationalized Learning Objectives (this list from IDEA)
1. Gaining factual knowledge (terminology, classifications, methods, trends)
2. Learning fundamental principles, generalizations, and theories
3. Learning to apply course material (to improve thinking, problem solving, and decisions)
4. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course
5. Acquiring skills in working with others as a member of a team
6. Developing creative capacities (writing, inventing, designing, performing in art, music, drama, etc.)
7. Gaining a broader understanding and appreciation of intellectual/cultural activity (music, science, literature, etc.)
8. Developing skill in expressing myself orally or in writing
9. Learning how to find and use resources for answering questions or solving problems
10. Developing a clearer understanding of, and commitment to, personal values
11. Learning to analyze and critically evaluate ideas, arguments, and points of view
12. Acquiring an interest in learning more by asking my own questions and seeking answers

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