Please note that this syllabus should be regarded only as a general guide to the course and is subject to change at the instructor’s discretion.

ADIT 137501  Future Technology and New Media
Woods College of Advancing Studies
Summer Session 2, June 28 – August 4, 2016
Tues and Thurs, 6:00-9:15
Instructor Name: Aaron Walsh and Barbara Mikolajczak
BC E-mail: Barbara.mikolajczak@bc.edu
Phone Number: 617-552-3900
Office: St. Mary’s South, Ground Floor
Office Hours: Virtual 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
Attendance at all classes is highly recommended; adding after the first class is difficult.

The pace of today’s exponentially advancing technologies can be overwhelming. Having a deep and comprehensive understanding of these future technologies and emerging forms of media can open the door to a wide range of career opportunities.

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. Students will also participate in group discussions and team debates concerning the ethical issues that these technologies raise.

Future technologies and emerging media addressed in this course include: 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
This course is comprised of entirely online classes. Classes are conducted in an online virtual environment so that students can take portions of this class from the comfort of home or anywhere (a modern computer and reliable Internet connection is required).

This is an Immersive Education course; see ImmersiveEducation.org for details on how online courses are conducted using video game and virtual reality technology.

Note: You MUST have a headset/microphone to take this class. If your computer has a built-in microphone you may use ear buds (such as iPod earbuds) or simply a headset. In any case you can NOT have an "open mic" in this class: the audio you hear MUST come through a headset or ear buds (not through a speaker; the audio is picked up by your microphone in such cases and creates feedback).

No auditors.

Textbooks & Readings (Required)

ONLINE DIGITAL TEXTBOOK

<table>
<thead>
<tr>
<th>Book title: Immersive Ed Virtual Learning Environment Edition</th>
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<tbody>
<tr>
<td>Available for purchase through the BC Bookstore or online through Agora Portal.</td>
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</tbody>
</table>

e-Mail Group (Required)

<table>
<thead>
<tr>
<th>Students collaborate through the ADIT137501 Google Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group name: ADIT 137501</td>
</tr>
<tr>
<td>Group home: <a href="https://groups.google.com/forum/#!forum/adit137501">https://groups.google.com/forum/#!forum/adit137501</a></td>
</tr>
<tr>
<td>Group email: <a href="mailto:adit137501@googlegroups.com">adit137501@googlegroups.com</a></td>
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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 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 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**

The following input will be used in assessing each student’s letter grade for the course:

- Punctual attendance (required).
- Participation in class discussions via audio whiteboard, google groups and virtual worlds.
- Weekly homework assignments posted via blog.
- Midterm
- Final

The undergraduate grading system for Woods College is as follows:

- A (4.00), A- (3.67)
- B+ (3.33), B (3.00), B- (2.67)
- C+ (2.33), C (2.00), C- (1.67)
- D+ (1.33), D (1.00), D- (.67)
- F (.00)

The graduate grading system for Woods College 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. Students who complete course evaluations can access grades earlier, as they are posted.

**Deadlines and Late Work**

Assignments are due at the beginning of the class period on the specified dates.
Late assignments will be graded accordingly.

**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 30</td>
</tr>
<tr>
<td>June 30</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 5</td>
</tr>
<tr>
<td>July 5</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 7</td>
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<tr>
<td>July 7</td>
<td>Augmented Reality (AR) and Virtual Reality (VR)</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>July 12</td>
</tr>
<tr>
<td>July 12</td>
<td>Wearable Computing</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>July 14</td>
</tr>
<tr>
<td>July 14</td>
<td>MIDTERM PROJECT</td>
<td>MIDTERM PROJECT</td>
<td>July 19</td>
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<tr>
<td>July 19</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>
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<tr>
<td>July 21</td>
<td>3D Printing</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>July 26</td>
</tr>
<tr>
<td>July 26</td>
<td>Mobile Payment systems and Crypto Currency</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>July 28</td>
</tr>
<tr>
<td>July 28</td>
<td>Personal Robotics, Drones and Driverless Automobiles/Planes</td>
<td>Approx. 6 hours of reading and assignments will be given in class time and posted online</td>
<td>August 2</td>
</tr>
</tbody>
</table>
August 2

Big Data and Next-Generation Mobile Devices/Apps

Approx. 6 hours of reading and assignments will be given in class time and posted online

August 4

August 4

FINAL PROJECT

FINAL PROJECT

Written Work

Woods College 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.

Makeup and late assignments will be subject to a late penalty relative to the time of the late submissions. Students who miss than 3 classes are strongly encouraged to withdraw from the course and resume when their schedule allows. Contact the instructor as soon as possible after a missed class.

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 Woods College 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 Woods College 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.

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