Innovative Teaching Strategies:
Using technology and innovation to drive better learning
MEDEDU 2230
Even year spring terms

COURSE DIRECTOR: James B. McGee, MD
LOCATION: 349 A&B Scaife Hall
CREDITS: 2
GRADES: Letter Grades
        Class Participation, Discussion 40%
        Project 60%

Course Description: This course is intended to enable students to understand how technology and curricular innovations are successfully developed, implemented and assessed in a medical education environment. This objective is achieved through interactive symposia, small group discussion, mentoring, demonstrations and field trips. Each student engages in active learning through the preparation, discussion, critique, and presentation of a proposal for an education innovation project.

As part of the hands-on learning, this course uses web-based learning technologies to communicate and prepare assignments. Students will review and critique each other’s work throughout the project proposal development cycle.

The course didactic components consist of a balance of interactive lectures, reading assignments, guest speakers, field trips, and online resources.

Class participation is an essential component of this course and 60% of the final grade. Planned and unexpected absences are acceptable but Dr. McGee must be informed in advance of planned absence and in the event of an unexpected absence.
## MEDED 2230 – Innovative Teaching Strategies

### Schedule of Topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>Assignments (prior to class)</th>
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<tbody>
<tr>
<td>Review Provost’s Innovation in Education Award website:</td>
<td>**All reading assignments are to be completed BEFORE each class. Be ready to discuss and critically review.</td>
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<tr>
<td><a href="http://www.pitt.edu/~facaffs/acie/awards.html">http://www.pitt.edu/~facaffs/acie/awards.html</a></td>
<td>Innovation Award documents <a href="http://www.pitt.edu/~facaffs/acie/awards.html">http://www.pitt.edu/~facaffs/acie/awards.html</a></td>
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<tr>
<td>Introduction to course, expectations, grading</td>
<td>AAMC - Effective use of Educational Technology...(PDF)</td>
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<td>and project</td>
<td>Spencer - Learner centered approaches...</td>
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<td>Basic Science of Technology for Education</td>
<td>Harden - Trends and future of postgraduate medical...</td>
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<td>Group discussion of reading assignments</td>
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<td>Education Technology: Where are we now?</td>
<td>Cook - Internet-Based Learning in the Health Professions</td>
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<td>Reading assignments, discussion on critical analysis of eLearning</td>
<td>Cook – Failure of E-Learning Research...</td>
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<td>Ruiz: Impact of E-Learning on Medical Education...</td>
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<td>Designing eLearning for competency and expertise</td>
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<tr>
<td>Discuss topics for Course Project, review examples</td>
<td>Cook - A practical guide to developing web-based learning...</td>
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<td>Email is for Old People - Twitter, FaceBook, Wikipedia, and the</td>
<td>McGee – What educators need to know about Web 2.0 (Med Teacher 2008)</td>
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<td>impact of social media on education</td>
<td>Carnevale – Email is for old people (Chronicle 2007)</td>
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<td>Small group project and discussion</td>
<td>Chretien - Physicians on Twitter (JAMA 2011)</td>
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<td>Simulation for Training and Learning: From actors to virtual worlds</td>
<td>Issenber – Features of high-fidelity simulation... (Med Teach 2005)</td>
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<td>Activity – Creating a virtual patient</td>
<td>Cook – Virtual patients-critical review (Med Edu 2009)</td>
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**Course Learning Objectives**

Upon successful completion of this course participants will be able to,
1. Describe the core technologies used in medical education today.
2. Assess the value of learning technologies for medical education and apply to educational needs.
3. Design and plan an innovation project for medical education, including project justification, methods, implementation and assessment.

**Course Structure**

Knowledge: traditional didactic presentations; primary and review literature
Project-based Learning: each student writes a brief proposal for a technology-based innovation in education
Group Learning: discuss literature; discussion and critical review of project
Experiential Learning: hands-on with eLearning tools, field trips to the WISER simulation center
**Required Project:** Write and present a **Innovation Proposal**

**Introduction**
As the primary required exercise for this Innovative Teaching Strategies course you will write a proposal based loosely on the Provost’s Innovation in Education Award.

This active learning project is intended to give you a chance to synthesize what you learn throughout this course and incorporate the knowledge and skills you have acquired in your other courses. This activity accounts for 60% of your final grade.

**Objectives**
1. Acquire a broad understanding of the use of technology in education including how the various components and stakeholders must work together
2. Develop a complete, beginning to end, perspective of what is required to develop and implement an educational innovation
3. Synthesize technology capabilities with educational goals
4. Be able to critically and objectively evaluate your innovation and those of others

**Instructions**
Please see the actual RFP and examples (from 2010, 2009) from Provost's Innovation in Education Awards website along with the examples. The scope of your project should focus on a innovation rather than a general educational program.

[http://www.pitt.edu/~facaffs/acie/awards.html](http://www.pitt.edu/~facaffs/acie/awards.html)

Format will be condensed compared to the actual award requirements:

1. Abstract – title, abstract, duration (1-2 paragraphs)
2. Body (2 pages or more)
   a. Hypothesis
   b. Rationale
   c. Methods description
   d. Innovative impact on education
   e. Sustainability, and
   f. Evaluation (success criteria)

**Suggestions**
- Begin by discussing your ideas with your colleagues, faculty and experts in the field
- Take advantage of the faculty and students in this course by soliciting feedback during class time and via email (mcgee@medschool.pitt.edu)
- Research the web, medical and educational literature for similar examples and reports on methods, success and failure

**Resources to help you with your project**
- Your Instructor
- Dmitriy Babichenko, Director of Production for Lab for Educational Technology – [dmitriy@medschool.pitt.edu](mailto:dmitriy@medschool.pitt.edu) - contact for free consultation by phone or in person
- CIDDE ([http://www.cidde.pitt.edu/](http://www.cidde.pitt.edu/)) - contact for free consultation

**Grading of your project**
- Your classmates will give an anonymous grade based on your presentation
- I will grade your written proposals and combine with your presentation grades; the written proposal is weighted heavier than the presentation
- This project represents 60% of the overall grade