

**ISAT 655 (Sec 1): Technology Assessment**  
**Fall 2012**

**COURSE AND INSTRUCTOR INFORMATION**

**Meeting Times:** By Agreement and Online  
**Instructor:** Nicole Radziwill, Ph.D., MBA  
**Office:** ISAT/CS 325  
**Phone/SMS:** 703.835.6336 (SMS or Email 24/7)  
**Email:** radziwnm@jmu.edu  
**Office hours:** Monday 8:30pm-midnight or Anytime (24/7) by Skype

**NATURE OF COURSE CONTENT**

This course covers selected topics in technology assessment from the perspective of quality and process improvement.

This course will introduce students to the theory and methods of technology assessment and transfer. Students will apply techniques such as risk analysis, cost-benefit analysis, forecasting, trend impact analysis, and technology sequence analysis to assess the impacts of new technologies on society. In addition, students will study the process of technology innovation, diffusion, and transfer in the context of both developed and developing nations.

**GOALS OF THE COURSE**

**COURSE OBJECTIVES**

By the end of this course, you will learn some of the fundamental concepts that drive strategic and tactical thinking for managers of technology. The learning goals for this course are listed below. You will:

1. ***Understand*** and be able to use basic terminology used by managers in the field *from the perspective of quality and process improvement* such as: economic analysis, information monitoring, decision analysis, technological forecasting, market analysis, performance assessment, risk assessment, and identification of externalities and impacts.
2. ***Describe the key issues, social context, benefits, and limitations*** of techniques available to technology managers for assessment, evaluation, prediction and forecasting related to technology development and change

## **SCHEDULE - (Week Ending)**

Week 1 (8/31) – Henriksen – A Technology Assessment Primer for Management of Technology

Week 2 (9/7) – Russell, Vanclay, Aslin - Technology Assessment in Social Context: The case for a new framework for assessing and shaping technological developments.

Week 3 (9/14)– David Collingridge – The Social Control of Technology

Week 4 (9/21)– David Collingridge – The Social Control of Technology

Week 5 (9/28)– Ford, Mortara, Probert - Disentangling the Complexity of Early-Stage Technology Acquisitions

Week 6 (10/5)– Ellis Mottur - Technology assessment in the war on terrorism and homeland security : the role of OTA

Week 7 (10/12) – Government Roles in Technology Assessment – Office of Technology Assessment, National Institute of Standards and Technology, Defense Advanced Research Projects Agency, etc.

Week 8 (10/19) – Government Roles in Technology Assessment – Office of Technology Assessment, National Institute of Standards and Technology, Defense Advanced Research Projects Agency, etc.

Week 9 (10/26) – Thien Tran - A taxonomic review of methods and tools applied in technology assessment

Week 10 (11/2) – Thien Tran - A taxonomic review of methods and tools applied in technology assessment

Week 11 (11/9) – Mahafza, Componation, Tippett – A Performance-Based Technology Assessment Methodology to Support DOD Acquisition

Week 12 (11/16) – Semester Project Research

Week 13 (11/23) – (Thanksgiving Break) Semester Project Research

Week 14 (11/30) – Semester Project Research

Week 15 (12/7) – (Last Day of Classes) Semester Project Research

Week 16 (12/14) – (Exam Week) Presentation/Submission of Research Findings

## **REQUIREMENTS & POLICIES**

### **REQUIRED TEXTS**

There are several readings from books and journals. I will post the journal articles to our Blackboard site, and you can borrow my copies of the books or purchase your own.

### **ADD/DROP DEADLINES**

All of the dates related to adding, dropping, and withdrawing from this course are in the JMU catalog and are posted on the University Registrar's web site. **YOU ARE RESPONSIBLE FOR KNOWING THESE DATES.** Professors are not required to grant grades of "WP" or "WF" after that date and I do not. If you have an extraordinary situation you may be granted an "I," but only under extraordinary and unanticipated circumstances (that I agree with).

### **COURSE POLICIES AND PROCEDURES**

IN GENERAL, NO LATE WORK WILL BE ACCEPTED. Any accommodations (e.g. for sickness) must be made ahead of time with me before class or the time at which the assignment is due. As long as there is a justifiable reason that I agree with, I will be as flexible as I can to help you complete the requirements for this course. The most important part is *setting my expectations effectively*.

#### **Attendance/Being Late**

Attendance is, in general, required because our class relies on discussions of readings. If you can't attend, please let me know in advance – we may be able to reschedule the class meeting for the week that you have the schedule conflict or sickness. I am willing to be very flexible with such a small class size, as long as we complete 13 classes in the semester.

#### **Working in Groups**

Group work is an important part of the two projects in this course. However, I expect that you complete the final exam completely on your own.

#### **Class Participation and Assigned Reading**

Please read the material before coming to class, otherwise we will have no basis for discussion.

#### **Honor Code**

You are expected to abide by the JMU Honor Code at all times. Examples of academic dishonesty that are violations of the Honor Code include, but are not limited to, the following: turning in work under only your own name that you did not actually do completely yourself (for collaborative work, *always* list the names of your collaborators), plagiarizing other people's words or computer code (and that includes text off the Internet), receiving unauthorized help on an exam, providing unauthorized help on an exam (and that includes talking about an exam before all students have taken it), and misuse of materials that are permitted for an exam. Violations of the JMU Honor Code will be dealt with in accordance with the policy that permits professors, at their own discretion, to assess and penalize students for cheating. All incidents of academic dishonesty will be reported to the Honor Committee, according to the requirements of the university.

## **METHODS OF EVALUATION**

### **GRADING**

1. Weekly/Bi-Weekly Research Synopsis & Discussion Participation – 40%
2. Project - 40%
3. Final Research Presentation - 20%

The bulk of your grade will be based on **participation in weekly or bi-weekly meetings** where you will record what you learn from your readings and why you think it is important to your project.

For the **project**, you will read *complete one significant technology assessment that blends qualitative and quantitative approaches relevant to your research question*. You will also prepare a 30- to 45-minute session where you share the most important points with your classmates, supplemented by any other material that you think is relevant and illuminating to the subject you are presenting. Your classmates will also participate in evaluating your session.

There will be no final exam in this course.

90-100 is an A, 80-89 is a B, 70-79 is a C, 60-69 is a D, below 60 is an F.