

Rochester Institute of Technology

Faculty Learning Community Portfolio

Adjunct Faculty

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Philosophy of Teaching

Conceptualization of Learning

I believe that learning occurs when an individual is able to “connect” new concepts to what they already know or believe. The new concept may be comprised of information or may be process-oriented, such as learning a new analysis approach. Unless a connection happens, memorization occurs – not learning.

Conceptualization of Teaching

My role as a teacher is to facilitate the student’s learning. How this facilitation occurs changes as the student gains mastery of the subject or process. At the beginning of the learning process, I find myself being more directive. As the student gains knowledge, I can become more of a guide with the student becoming an “independent” learner. For example, I cover security assessments during my Secure E-commerce class. During the class discussion, it became clear that the students were focused on how to assess components without consideration of what components needed to be assessed. I was able to get the students to focus on what should be assessed as well as the how the components should be assessed by taking an active role in the discussion and by posing questions. I also provided positive reinforcement when a student responded addressing both aspects of an assessment.

I’ve also found that I need to flex my style based on the student’s background or learning style. For example, when preparing the security awareness training for a large company, I employed a variety of methods – presentations, posters, e-mail messages. The e-mail messages concentrated on the issue, the remedy and the potential cost in business terms of leaving the issue unresolved. The posters used a graphic to build a connection with the familiar and the text highlighted the issue and remedy. The presentations were largely built around analogies; for example, comparing how someone handles the disposal of a grocery list vs. a financial statement and then building the link to how the company classifies information and how the disposal of documents containing various classifications should be handled. Of course, the entire program had to be developed with an understanding of its worldwide audience.

I offer my students in the Secure E-commerce course the opportunity to talk with me one-to-one during office hours twice a week. Students use this time to clarify course material or to discuss other items of interest with me. I allow time at the start and end of lectures for questions. I also have a topic in the online course where students can ask questions about the course. I respond to posted questions and email twice a day.

There are two student surveys – one mid-quarter and one at the end of the quarter. I administer the mid-quarter survey anonymously and the college administers the survey at the end of the quarter. These surveys give me feedback so that I can adjust the course, the assignments and my teaching style. For example, the mid-quarter survey indicated that there was confusion regarding how the legal topics covered in the Secure E-commerce course fit in

with the rest of the material. I introduced the topic during the next week's class discussion and was able to build linkages with the rest of the material. The second time I taught the course, I built these linkages prior to the assigned readings and this seemed to work well based on the scores of the legal question on the final.

Goals for Students

As a result of my teaching, I expect my students not only to learn course content but also to learn how to think about the content. Because technology is constantly changing, the technology learned today will have a limited life span. If the student can learn how to analyze a situation, this can be applied as new techniques and languages appear in the future. This is why understanding the components to be assessed is just as important as understanding how to assess them in the Secure E-commerce course.

Implementation of the Philosophy

I believe that it's critical to ensure that students understand expectations. I accomplished this in the Secure E-commerce course through the use of a detailed syllabus and course schedule. These were available to the students a week prior to the start of the course.

I use discussion questions to help the students make connections between the course material and the "real world". I also invite guest speakers from local companies to discuss how the primary technologies taught in the course are implemented in their company.

The assignments in the Secure E-commerce course are intended to build a connection between the prerequisite courses and the material covered. For example, the assignments require the student to build a security policy, to develop a security assessment plan based on this policy and to use the assessment plan to complete the assessment of the e-commerce site developed in the prerequisite course.

Professional Growth Plan

One of the first actions I took when I was hired to teach the Secure E-commerce course was to ask an experienced Associate Professor to act as my mentor. He has been very helpful and I have continued this relationship.

I attended several training sessions and completed the on-line tutorials to learn the distance teaching software, myCourses. I attend new myCourses training sessions and take new tutorials as they become available.

I schedule a one-to-one session with an on-line teaching advisor to review my course before it starts. After each review I incorporate the suggestions into the course.

I also attend the teaching seminars that RIT offers several times a year. The topics are varied and range from using Second Life in teaching to tips for communicating with all students. In addition, I read *The Adjunct Professor's Guide* by R. Lyons, M. Kysilka and G. Pawlas.

Teaching Metaphor

Teaching is like knitting – a process whereby I take various colored yarns and combine them into a pleasing pattern and useful article. Then, when finished, I cast off allowing the article to function independently.

Project Report

Problem

I am required by the Department of Information Sciences and Technologies to deliver a weekly lecture in addition to providing the course content through myCourses. I am using Adobe Connect to do this. The lectures are recorded and posted in myCourses for those who cannot attend.

I want to include active learning activities during the lectures. However, this is difficult using the chat feature of Adobe Connect. Adobe Connect chat works best if the students only have to type a couple of words.

The use of active learning will allow my students to better engage with the subject matter and improve retention of the material.

Syllabus

The following is my syllabus for 4002-876-90: Secure E-commerce. This is a distance learning course.

Getting Started

Welcome to Secure E-Commerce!

To get started, I recommend you start by carefully reading the **Course Information** and **Course Policies** posted in the **Content** Area. You can use the "Compile for Printing" button in the upper right area of the Content window to select these items and have them all compiled for printing. These documents cover most aspects of the course and will give you a good start to success.

If you have any questions about the course that are not fully explained in these documents, please post your questions to the **Q&A Topic** in the Discussion Area. If another student has the same question, or knows the answer to your question, the Q&A folder supports sharing that information. I will monitor the Q&A folder for new messages, but don't be surprised if another student replies before I do - I encourage it.

And the most important thing I want you to do to get started is to write an introduction for yourself that you can post in the **Introductions Topic** in the Discussion Area. Your introductions will help me get to know the class better, and you will get to know your classmates better too. These introductions are public to the whole class, and in many ways are better than the typical classroom introductions where everyone has a minute to share 25 words about themselves. With the online introductions you can share more thoughtfully about yourself, and the introduction remains in the course to review later as you get to know each other.

Professor Contact Information and Introduction

Instructor: Maureen Baran

- (585) 555 –5555
(home-before 9:00PM-ET)

Office Hours: Tuesday/Thursday 2:00 – 4:00 PM ET

- **email address:** mwbvks@rit.edu

Other times by appointment - Since I'm an Adjunct Faculty member, I don't have an office at RIT. Please feel free to call me at any time between 9:00 AM and 9:00 PM Eastern Time. I will try to return all phone calls by the next business day. I'd also be happy to "chat" with you using instant messaging at times arranged in advance. I am always happy to speak with a student.

Introduction:

Hi!

My name is Maureen Baran. I will be your instructor. You can call me Maureen or Prof. Baran, depending on your comfort level.

Here's my **location information:**

Location: Rochester, NY, USA

Time Zone: Eastern (GMT - 5)

Background:

I am an adjunct faculty member in the IT Department at RIT. I spent 35 years in the IT industry at a large company. I have worked in all types of IT functions from programming through systems analysis and design and project management. I was an IT Security Analyst/Architect for about 11 years and I spent the last several years performing security assessments on the company's e-commerce sites.

I taught Secure E-commerce during the last two spring quarters.

I have a BS in Mathematics, an MBA and a MS in Computer Science (with concentrations in Compiler Construction and Languages).

I obtained my CISSP certification in 1998.

I hope to add some content on Web 2.0 security to the course this quarter.

Future:

I am very excited about my position here at RIT. I hope to teach more courses in the future.

Personal Information:

I am married and live in the Charlotte neighborhood of Rochester, New York. I enjoy traveling, reading and genealogy. I'm an active participant in the Rochester chapter of ISSA.

I look forward to working with you in this class.

Course Objectives

At the completion of the course you be able to:

- Develop an e-commerce security design plan that addresses testing, organizational security, and policies and procedures;
- Analyze e-commerce sites for conformance to best practices and standards in secure e-commerce;
- Develop an assessment plan for an e-commerce site, given its description;
- Use and define common e-commerce security terminology.

This course covers the concepts required to implement a secure e-commerce site. Topics include the assessment of security in a proposed or an existing site, the implications of decisions impacting security and the implementation considerations needed to establish a secure site. It is a theory course on e-commerce security.

Course Prerequisites

The prerequisites for this course are the MS IT Core and the entrance requirements for the program you are in. You need some background in developing a web site with more than just basic HTML or an actual E-commerce application. If you have not taken 4002-875 or equivalent at another school, you need to have experience with a multi-tiered web site that may involve a server, application, database, payment system, etc. You don't need to know all of the topics, but do need experience with multiple tiers. Please contact the instructor if you'd like to discuss your background prior to taking this course.

Role of course in curriculum for:

IT/SD&M: This is one course in the e-commerce concentration.

Course required for graduation: No

Course Text and Materials

Texts:

- Stuttard, Dafydd and Pinto, Marcus. The Web Application Hacker's Handbook, Wiley Publishing, 2008.
- Ford, Warwick, and Baum, Michael S. Secure Electronic Commerce, Prentice Hall, 2001.

Additional Reading Material: I *may* assign additional reading material as we progress through the course if I find something particularly relevant to the topic:

- Other publications and on-line resources as appropriate to the course topic.
- All course material that I write or provide will be in Microsoft Office format or PDF. If you do not have Microsoft Office, there are Microsoft Office readers on the CD provided by On-line Learning. You will also need the Adobe Acrobat Reader program, which is also provided on the CD.

Course Mechanics

It may be helpful to think about the course in terms of a weekly cycle. I have established some general principles to help you plan your week around the online activities in this course.

Exceptions will be posted in the News area, but generally speaking this is how the course will flow:

- Our work week starts on **Sunday** with new material.
- Weekly discussion postings are due by **Saturday at 11:59 PM ET** each week. Discussion topics will close at this time and no further postings will be accepted by myCourses.
- All other assignments for the week should also be completed by **Saturday at 11:59 PM ET**.
- Each week there will be an hour virtual lecture on a variety of course topics using Connect. I'll select a day and time that the majority of us are available. All lectures will be recorded and posted to myCourses.

Course Outline

Security

- Objectives
- Categories of Security Controls
- Risk

Technologies

- Cryptography
- Digital Signatures
- Key Management
- Public Key Infrastructure
 - Public Key Certificates
 - Public/Private Key Pair Management
 - Certificate Issuance
 - Certificate Distribution
 - Certificate Revocation
 - Certification Authority Models
 - Certificate Policies
- Non-repudiation

Legal Environment of E-commerce

- Laws
- Regulations

E-commerce Architecture

E-commerce Assessment

- Scope
- Criteria
- Report
- Handling Residual Risk
- Records Management

Web Application Security

- Core Defense Mechanisms
- Defending against Attacks on Core Defense Mechanisms
- Defending against Attacks on Application Logic
- Defending against Attacks on Compiled Applications
- Preventing Attacks based on Information Disclosure
- Minimizing Source Code Vulnerabilities
- Defending against Attacks on System Architecture and Components

Notice of Accommodation

If you have a "Notice of Accommodation" (NOA), you must provide the instructor with a copy within a week of starting this course. If you provide me with the notice later in the course, it will not be retroactive. (In other words, an NOA is not a license to retake an exam or practical that you have done poorly on.)

Professor Commitment Policies

Expectations for Interactions with Professor

Please post any course related questions in the appropriate forum in the Discussion area. I will respond where appropriate to questions in the Discussion area. If you have a question, there is probably someone else in the class with the same question so don't be afraid to ask. For any personal questions or concerns you can contact me during office hours or email me directly.

Message Reply Goal

I will be logging in to the course at least twice a day and will reply to new messages where appropriate. I check my email once a day and will respond within 24 hours.

Assignment Turn-around Goal

I will post the grades for assignments into the grade book within 7 days of the due date. Participation grades will be posted within 3 days of discussion completion.

Grading Policies

Activity	Completed During	% Toward Final Grade
Discussion Participation	Weeks 1 - 10	18%
Assignment 1	Week 5	25%
Assignment 2	Week 9	25%
On-line Course Evaluation	Week 10	2%
Final Experience	Week 11	30%

Class Participation will be based on your submissions to the course conferences on myCourses.

All submissions (assignments and course conferences) must be done on time. I do not accept late submissions. Each week the discussions will close at the time specified and you will not be able to post.

Your feedback regarding the course and how it is conducted is very important to me. I appreciate feedback throughout the course. However, I realize that individuals may be reluctant to provide it without the cloak of anonymity. A small part of your participation grade will be based on your participation in the On-line Course Evaluation at the end of the quarter. Thanks in advance for your feedback!

Being Realistic About Grades

RIT's grading structure for graduate courses is the same as the grading structure for undergraduate courses: A, B, C, D, F. I do not adjust grades to meet predefined quotas, bell-shaped curves or the like, although I may do an upward adjustment if there are unusual circumstances impacting the class. In this graduate course, the grade of A will be reserved for

work that is clearly outstanding. Based on recent graduate courses I have offered, I expect about 20-30% of the class will receive a grade of A. Actual results may differ depending on individual student performance in the course and the number of students. Good to very good work will receive a grade of B. Work that meets minimum requirements but shows little or no student initiative in going beyond the minimums will earn a grade of C. Work that does not meet minimum requirements will be assigned a grade of D or F.

The only factors that will be considered in determining your grade are those stated above. External issues, such as the need to maintain a 3.0 or 4.0 GPA or the need to receive a specific grade in order to satisfy an employer tuition reimbursement policy will not be considered. Also, I do not assign "extra credit" work for students who wish to improve their grade since it is not fair to other students who may also want to improve their grade.

Discussion Grading Rubric

Part of the grade you will earn in this course is derived from your online participation in the Discussion area. As the instructor, I have tools that summarize the quantity of participation by each student and also allow me to easily review specific messages you have authored so I can assess the quality of your participation. I will use the rubric below to assess your participation each week.

Criteria	Poor: 0	Good: 1	Excellent: 2
Contribution to the learning of the class	Posting presents no new ideas and shallow analysis of concept OR No posting	Posting presents some insights and includes new ideas/application or insight/analysis	Posting supplemented with web/library research; critical evaluation OR Generates questions and opens up new avenues for discussion
Clarity and sentence structure, grammar, punctuation, mechanics, spelling	Lacks clarity; many grammar, punctuation or spelling errors OR No posting	Adequately clear; some grammar, punctuation or spelling errors	Posting is highly polished; no or very few grammar, punctuation or spelling errors

I expect:

- **at least two** substantive comments each week
- **at least two** meaningful replies to the comments of others. These replies can agree or disagree, but must state the reasons for your thoughts
- your participation in the discussion of any question marked "Required".

Note: In some cases I will post optional discussion questions (not marked "Required"). Your participation in their discussion is at your choice. Also, feel free to post regarding other relevant course topics.

Late Submissions

All submissions (assignments and course conferences) must be done on time. I do not accept late submissions. Each week the discussions will close at the time specified and you will not be able to post after that time.

If you are encountering difficulty in meeting course requirements, please contact me immediately. In atypical circumstances, it may be appropriate to grant a no penalty extension to a due date or to grant a grade of Incomplete. Delay in bringing your circumstances to my attention will decrease substantially the likelihood of (or will preclude) you receiving a favorable finding.

You may request an incomplete, or "I" grade, only in cases where exceptional conditions beyond your control, such as accidents, severe illness, family problems, etc., have kept you from completing the course. You *must* alert me to these circumstances as soon as possible--telling me in May that you were sick in March is not acceptable. If your request for an incomplete is granted, you must complete the work for the course within the time limits set by the instructor. The maximum time is two (2) academic quarters. Unfinished "I" grades automatically become "F". *Incomplete grades are not given to students who have simply fallen behind in their work.*

Academic Honesty

Collaborative learning is a large part of this course. The discussions are a vital part of the course experience. You'll also be asked to share your research findings prior to submitting papers. These experiences are intended to help you view the course material from the perspectives of the others enrolled in the course.

The practice of security is a study of grey – not black and white. Multiple perspectives will help expand your understanding by offering multiple viewpoints. It is helpful to discuss the potential effectiveness of a security policy or control or why a particular reference is useful. At the end of the day, though, it is your judgment that should be reflected in the discussions and papers you submit for this course.

Review the university's [Policy on Academic Honesty](#). Please contact the instructor regarding any questions you might have regarding how it applies to this course.

Hacking Policy

During this course you will learn about tools and techniques that can be used to compromise web sites and other users. It is **NOT** appropriate to use these tools and techniques on web sites or web site users unless you have written approval from the web site owner.

This is a theoretical course on E-commerce security. Using the tools/techniques covered is not a course requirement. However, if you'd like to practice using a tool or technique, the following links will lead you to learning tools:

[OWASP WebGoat Project](#)

From Foundstone:

[Hacme Travel](#)

[Hacme Bank](#)

[Hacme Shipping](#)

Sources

The following sources are **NOT** appropriate for use in this course:

- Wikipedia and its derivatives are tertiary sources and are not considered reliable by scholars.

Proposed Solution

I propose to use phone conferencing instead of the chat feature in Adobe Connect. The premiere Global phone conferencing system has been integrated with Adobe Connect and is supported by Online Learning. Its cost is \$.06 per minute paid for by the home department.

The use of phone conferencing will allow students to engage in active learning activities. In addition, it will give them practice participating in phone conferences like they will have to do for their future employers.

Here's an example of an active learning activity that I can conduct during a lecture:

Week #	
1	Reading: Ford and Baum, Security Objectives, p. 94 myCourses Discussion: What are your expectations when you use an e-commerce web site to make a purchase?
2	Lecture: Brief review of security objectives Material: Summarized list of e-commerce expectations from myCourses discussion Activity: Which security objective(s) support each expectation?

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Student Partners

Graduate students in B. Thomas Golisano College of Computing and Information Sciences who register for 4002.876.90 – Secure E-Commerce in spring quarter 2009.

Assessment Plans

There will be two opportunities for student feedback:

1. Mid-quarter course feedback survey administered through myCourses
2. On-line Course Evaluation administered by On-line Learning at the end of the quarter

Another way I can assess the effectiveness of active learning is through the grades on the comprehensive final.

Implementation Timeline

I plan to offer active learning activities as part of my lectures in spring quarter 2009.

Reflections on my Participation in the FLC

This was a very worthwhile experience. The Faculty Learning Community introduced me to other adjunct faculty who I probably wouldn't have met otherwise and it exposed me to additional RIT resources.

The online discussion allowed us to share experiences. This was very useful – both to learn new approaches and to reinforce ones currently being used.

As with all good learning experiences, the Faculty Learning Community has left me with some topics to investigate and activities to complete:

- Investigate how to use TURNITIN.com and incorporate its use into my course material
- Talk with an On-line Learning resource about integrating phone conferencing with Adobe Connect
- Investigate how to use the polling module in Adobe Connect
- Move my references into ENDNOTE
- Develop active learning activities.