

Security Measurement and Testing

Hi guys,

Welcome to my Security Measurement and Testing class!

This class is a bit non-conventional in different aspects.

First of all, it spreads across various academic disciplines from math and statistics to networking and security. It will involve different activities from working with your computers to dealing with many people. I believe it provides more opportunities for the curriculum, bringing it closer to the real life that usually does not recognize set-up borders, and for you as students giving you more options to prepare yourself for your future work or study.

Second, this class is designed as a “blended” course. It means that I will try to employ novel methodologies in teaching this class, again combining traditional teaching deliveries like lectures and class discussions with more work you will be required to do independently and on-line.

The class meeting time in this course will be reduced. But you will have to spend more time on your independent work and on-line study. This way you will have more flexibility with your study: you can do it any time, day or night and any place: the classroom or a sofa in your friend’s apartment, wherever, whenever, whatever it will help you to study more efficiently and achieve better results!

The first thing you have to do is to read this letter and to follow up the instructions. Please, go to the course page on mycourses.rit.edu. Make sure that you do have an access to this page. If you do not and you are enrolled in this class, please, contact ITS immediately

This course will have a lot of activities conducted through mycourses. If you click on the Content bar you will see that all my lecture notes as well as project and assignment specifications are already there. This class is designed as more oriented towards practical work and will have a big project. BUT so far I am not planning the final exams in this class. Please, think about it and get back to me if you do not like it and want to get your finals back on schedule. I am sure we will be able to fix it.

Let us start our course discussion from the goals. Please, click on Learning outcomes and assessment on the content. You will see that my first intention is to advance your computer science knowledge in computer security evaluation and in a practical security system design. We will use our lectures and your project and home work to achieve this goal. You will learn the methods and models employed for computer security assessment. You will learn a few tools used for these purposes. In this part, you will have to learn at least one tool and present it to the class. Your presentations will be scheduled over a few first weeks. Please, read below about it. This activity will help you to advance your presentation and communication skills also.

As you see I did not specify any required textbook for this class for you to buy. However, I want you to use an excellent brochure, practically a book, which was prepared by Cyber Security and Information Assurance Center (formerly IATAC) in 2009. The Cyber Security and Information Systems Information Analysis Center (CSIAC) is a U.S. Department of Defense [Information Analysis Center \(IAC\)](#) sponsored by the [Defense Technical Information Center \(DTIC\)](#), and [Assistant Secretary of Defense Research and Engineering \(ASDR&E\)](#). CSIAC is hosted by [Quanterion Solutions Incorporated](#). The book “Measuring Cyber Security and Information Assurance: State of the Art Report” IATAC, May 2009 is available on line at <https://buildsecurityin.us-cert.gov/swa/downloads/MeasuringCybersecurityIA.PDF> and on mycourses.

I do recommend you to use one computer security book, which you might already have. I recommend either J.M. Kizza Computer Network Security, Springer, (see some text and more info at books.google

http://books.google.com/books?id=HsawoKBLZOwC&dq=Kizza+Computer+network+security&printsec=frontcover&source=bn&hl=en&ei=UTR8TNpDMX6lwef0cnsCw&sa=X&oi=book_result&ct=result&resnum=4&sqi=2&ved=0CDIQ6AEwAw#v=onepage&q&f=false) or M. Bishop Computer Security, Art and Science, Addison-Wesley. The second book will be the closest to this class curriculum, however, I do not want you to spend much money on buying new books. If you have a book on computer security and it has chapters on security evaluation (practically all of them do), you are welcome to use it in this class.

You see that this class will be project oriented with more than a third of all the points assigned for your **project** work. This project is designed as a **group project** and I recommend you to work this way but you can do your project either individually or in small groups of three students. At the end of the class I want all of you to join together in your efforts. The requirements for individual and group projects may differ slightly but generally will be very similar. Naturally, I will be expecting a higher quality submission from a group. Penalties for late submission/resubmission will be different: for individual projects it will be 5% grade reduction per day and for group projects it will be 10% grade reduction per day. As soon as you decide how you will do the project, go to the Groups on mycourses, select Projects and enroll yourself into one group. All group mates should select the same group number. Please, enroll yourself into a group even if you do the project individually. Otherwise, you will not be able to submit your work. If you do your project in a group, please, coordinate your efforts and do it on time. I suggest you to have an initial discussion about your work assignments and to schedule your work to finish it at least a few days before the deadline. However, I am leaving all organizational aspects to you to decide. I have put the project description online. Please, read it and have your questions ready for me.

As I said, you will be required to prepare and present to the class one computer security tool of your choice. Please, read Tools document on mycourses. You can prepare and run your presentation in small groups of two (Ok, may be, three) students. As you see there are seven groups. What I want you to do first is to choose the topic and your partners. After you choose your presentation, please, enroll yourself into the corresponding group on mycourses. To do it, please, click on the Groups bar, then select Tools category (**not** projects at this stage), tick the group you have chosen and do not forget to click on save. If there are already three students enrolled in this group, please, choose another one. You can do it any time from the time you are reading this letter until Wednesday class. **Please, enroll yourself.** To help you to make your decision I have put more information into the Tools document on different tools and also some advise how to prepare your presentation.

One of the features of this blended class will be on-line discussions, which you will be required to participate in. Every student has to participate in an on-line discussion. Your participation will be evaluated as a part of your assessment in this course. All discussion topics are divided into two groups:

1) Discussions of student's TOOLS presentations: there are seven topics here. Every student has to submit his/her contribution within FOUR days after the presentation

2) Project discussions – I am expecting your participation while you are doing a specific project part. You have to submit at least one entry to each project part discussion group. Your participation will be graded as a part of the project assessment. If you do not participate in a

particular project part discussion or your contribution is not adequate, your grade for this project part will be reduced.

Please, read on the Discussions document for more information.

The last assessment component is the tests. Again, I am not planning the finals in this class and I am planning to conduct tests online that might save you some time also. Our first test is currently scheduled on the third week Wednesday. It will be devoted to computer security basics and security policies and quiz you on your knowledge of the topics 1-3. Naturally, you should do your test individually, no consultation is allowed during the test. You should close down ALL other application on your computer before initiating your quiz on mycourses. If you do not, you might run into problems, which I will not be able to help you with.

As you might expect from a blended course, all the submission will be done online through mycourses. PLEASE, PLEASE submit on time in order to loose no points and please, do not wait until the last minute to avoid any problems with the network traffic and the mycourses server bandwidth.

Finally, please, look at the Schedule document, which lists almost all activities. As you see you will have to start submitting your work assignments very soon.

Please, start working from the very beginning of the term.

Please, contact me with any questions, suggestions, etc.

See you in my class on Monday.

Good luck!

L.Reznik