

**Business Analytics and Information Technology**  
**Course Number: 33:136:471**  
**Course Title: Information Systems Security**

## **COURSE DESCRIPTION**

An introduction to the various technical and administrative aspects of Information Security and Assurance. This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features.

The purpose of the course is to provide the student with an overview of the field of Information Security and Assurance. Students will be exposed to the spectrum of Security activities, methods, methodologies, and procedures. Coverage will include inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses and an overview of the Information Security Planning and Staffing functions.

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## **COURSE MATERIALS**

There is no specific book recommendation for this course. Class notes and presentation discussed in lectures will cover the entire course curriculum. I will keep uploading useful resources on the Canvas throughout the semester. It is your responsibility to stay up to date with course materials on Canvas.

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## **LEARNING GOALS AND OBJECTIVES**

This course is designed to help students develop skills and knowledge in the field of security and handle information systems more efficiently. After completing the course, students will be able to:

- Identify and prioritize information assets.
- Identify and prioritize threats to information assets.
- Define an information security strategy and architecture.
- Plan for and respond to intruders in an information system.
- Describe legal and public relations implications of security and privacy issues.
- Present a disaster recovery plan for recovery of information assets after an incident.

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## PREREQUISITES

The students are expected to be well versed with topics covered in Management Information Systems (33:136:370) which is open to all Business school majors. Their understanding of computer technology, including software, hardware, telecommunications and basics of internet will help them in assessing cyber environments and protect information assets.

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## ACADEMIC INTEGRITY

*I do NOT tolerate cheating.* Students are responsible for understanding the RU Academic Integrity Policy (<http://academicintegrity.rutgers.edu/>).

I will strongly enforce this Policy and pursue *all* violations. On all examinations and assignments, students must sign the RU Honor Pledge, which states, “On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment.” I will screen all written assignments through *SafeAssign* or *Turnitin*, plagiarism detection services that compare the work against a large database of past work. Don’t let cheating destroy your hard-earned opportunity to learn. See [business.rutgers.edu/ai](http://business.rutgers.edu/ai) for more details.

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## ATTENDANCE AND PREPARATION POLICY

- Expect me to attend all class sessions. I expect the same of you. If I am to be absent, my department chair or I will send you notice via email and Canvas as far in advance as possible. If you are to be absent, report your absence in advance at <https://sims.rutgers.edu/ssra/>. If your absence is due to religious observance, a Rutgers-approved activity, illness, or family emergency/death and you seek makeup work, also send me an email with full details and supporting documentation within a week of your first absence.
  - For weather emergencies, consult the campus home page. If the campus is open, class will be held.
  - Expect me to arrive on time for each class session. I expect the same of you.
  - Expect me to remain for the entirety of each class session. I expect the same of you.
  - Expect me to prepare properly for each class session. I expect the same of you. Complete all background reading and assignments. You cannot learn if you are not prepared. The minimum expectation is that for each 3-hour class session, you have prepared by studying for at least twice as many hours.
  - Expect me to participate fully in each class session. I expect the same of you. Stay focused and involved. You cannot learn if you are not paying attention.
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## CLASSROOM CONDUCT

- Students are responsible for reviewing the specified chapters covered by the lecture. Please note that you are responsible for the ENTIRE content of each chapter plus any additional handouts, unless otherwise notified. You are not allowed to possess, look at, use, or in any other way derive

advantage from the solutions prepared in prior years, whether these solutions are former students' work or copies of solutions that were made available by instructors.

- You should exchange ideas and engage in a class discussion for the topics (and related papers) discussed in class. Participation is graded, in the sense that informative comments are valued.
- Electronic Devices: In order to minimize the level of distraction, all watches, beepers and cellular phones must be on quiet mode during class meeting times. Students who wish to use a computer/PDA for note taking need prior approval of the instructor since key clicks and other noises can distract other students.
- Recording of lectures by any method requires prior approval of the instructor.
- Email Messages: Remember to put the course number (471) in the subject field of every e-mail message that you send me. E-mail messages that are missing this information are likely to be automatically redirected to a folder the instructor will seldom check, and it is not our responsibility to respond to these.

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## EXAM DATES AND POLICIES

There are 2 exams and 3 quizzes in this course. The dates and covered material are indicated in the schedule. During exams and quizzes the following rules apply:

- If you have a disability that influences testing procedures, provide me an official letter from the Office of Disability Services at the start of the semester.
- No cell phones, smart watches or other electronics are allowed in the testing room.
- Alternate seating; do not sit next to another student or in your usual seat.
- Use the bathroom prior to the exam start; bathroom breaks.
- Your exam will not be accepted unless you sign the Honor Pledge.

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## GRADING POLICY

Course grades are determined as follows:

Final Examination	30%
Midterm Examination	25%
Assignments	20%
Quizzes	20%
Attendance and Class participation	5%

Note: There will be no extra credit assignments, quizzes, or exams. Therefore, please plan to put in your best effort right from the start. Your final grade is not subject to negotiation. If you feel I have made an error, submit your written argument to me within one week of receiving your final grade. Clarify the precise error I made and provide all due supporting documentation. If I have made an error, I will gladly

correct it. But I will adjust grades only if I have made an error. I cannot and will not adjust grades based on consequences, such as hurt pride, lost scholarships, lost tuition reimbursement, lost job opportunities, or dismissals. Do not ask me to do so. It is dishonest to attempt to influence faculty in an effort to obtain a grade that you did not earn, and it will not work.

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**COURSE SCHEDULE (Tentative)**

<b>Topic</b>	<b>Items Due</b>
Introduction	
Threats, Risks, Vulnerabilities	
Cryptography	
Cryptography (Continued)	
Digital Signatures and certificates	Assignment 1
Identification and Authentication	
Information Systems Security	
Internet Security	
<b>Midterm exams</b>	Assignment 2
Security Models	
Database Security	
Cloud Security	
Blockchain	
Cryptocurrency	Assignment 3
<b>Final Exam</b>	

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**SUPPORT SERVICES**

If you need accommodation for a *disability*, obtain a Letter of Accommodation from the Office of Disability Services. The Office of Disability Services at Rutgers, The State University of New Jersey, provides student-centered and student-inclusive programming in compliance with the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments of 2008, Section 504 of the Rehabilitation Act of 1973, Section 508 of the Rehabilitation Act of 1998, and the New Jersey Law Against Discrimination. More information can be found at [ods.rutgers.edu](http://ods.rutgers.edu).

[Rutgers University-New Brunswick ODS phone (848)445-6800 or email [dsoffice@echo.rutgers.edu](mailto:dsoffice@echo.rutgers.edu)]

[Rutgers University-Newark ODS phone (973)353-5375 or email [ods@newark.rutgers.edu](mailto:ods@newark.rutgers.edu)]

If you are ***pregnant***, the Office of Title IX and ADA Compliance is available to assist with any concerns or potential accommodations related to pregnancy.

[Rutgers University-New Brunswick Title IX Coordinator phone (848)932-8200 or email [jackie.moran@rutgers.edu](mailto:jackie.moran@rutgers.edu)]

[Rutgers University-Newark Office of Title IX and ADA Compliance phone (973)353-1906 or email [TitleIX@newark.rutgers.edu](mailto:TitleIX@newark.rutgers.edu)]

If you seek ***religious accommodations***, the Office of the Dean of Students is available to verify absences for religious observance, as needed.

[Rutgers University-New Brunswick Dean of Students phone (848)932-2300 or email [deanofstudents@echo.rutgers.edu](mailto:deanofstudents@echo.rutgers.edu)]

[Rutgers University-Newark Dean of Students phone (973)353-5063 or email [DeanofStudents@newark.rutgers.edu](mailto:DeanofStudents@newark.rutgers.edu)]

If you have experienced any form of ***gender or sex-based discrimination or harassment***, including sexual assault, sexual harassment, relationship violence, or stalking, the Office for Violence Prevention and Victim Assistance provides help and support. More information can be found at <http://vpva.rutgers.edu/>.

[Rutgers University-New Brunswick incident report link: <http://studentconduct.rutgers.edu/concern/>. You may contact the Office for Violence Prevention and Victim Assistance at (848)932-1181]

[Rutgers University-Newark incident report link: [https://cm.maxient.com/reportingform.php?RutgersUniv&layout\\_id=7](https://cm.maxient.com/reportingform.php?RutgersUniv&layout_id=7) . You may also contact the Office of Title IX and ADA Compliance at (973)353-1906 or email at [TitleIX@newark.rutgers.edu](mailto:TitleIX@newark.rutgers.edu). If you wish to speak with a staff member who is confidential and does **not** have a reporting responsibility, you may contact the Office for Violence Prevention and Victim Assistance at (973)353-1918 or email [run.vpva@rutgers.edu](mailto:run.vpva@rutgers.edu)]

If students who have experienced a temporary condition or injury that is adversely affecting their ability to fully participate, you should submit a request via <https://temporaryconditions.rutgers.edu>.

If you are a military ***veteran*** or are on active military duty, you can obtain support through the Office of Veteran and Military Programs and Services. <http://veterans.rutgers.edu/>

If you are in need of ***mental health*** services, please use our readily available services.

[Rutgers University-Newark Counseling Center: <http://counseling.newark.rutgers.edu/>]

[Rutgers Counseling and Psychological Services–New Brunswick: <http://rhscaps.rutgers.edu/>]

If you are in need of ***physical health*** services, please use our readily available services.

[Rutgers Health Services – Newark: <http://health.newark.rutgers.edu/>]

[Rutgers Health Services – New Brunswick: <http://health.rutgers.edu/>]

If you are in need of ***legal*** services, please use our readily available services: <http://rusls.rutgers.edu/>

Students experiencing difficulty in courses due to ***English as a second language (ESL)*** should contact the Program in American Language Studies for supports.

[Rutgers–Newark: [PALS@newark.rutgers.edu](mailto:PALS@newark.rutgers.edu)]

[Rutgers–New Brunswick: [eslpals@english.rutgers.edu](mailto:eslpals@english.rutgers.edu)]

If you are in need of additional ***academic assistance***, please use our readily available services.

[Rutgers University-Newark Learning Center: <http://www.ncas.rutgers.edu/rlc>]

[Rutgers University-Newark Writing Center: <http://www.ncas.rutgers.edu/writingcenter>]

[Rutgers University-New Brunswick Learning Center: <https://rlc.rutgers.edu/>]

[Optional items that many faculty include:

- Students must sign, date, and return a statement declaring that they understand the RU Academic Integrity Policy.

- Students must sign, date, and return a statement declaring that they understand this syllabus.]