

Accounting
Course Number: 22:010:609
**Course Title: Advanced Design &
Development of Information Systems**

COURSE DESCRIPTION

This course builds on its predecessor course: Design and Development of Information Systems. The goal of this course is to understand and evaluate some of the emerging and important technologies currently used in the business environment, and examine their applicability to the public sector. Evaluating and assessing complicated and changing technologies requires a thorough and in-depth understanding of such technologies. Emerging technologies, including but not limited to Big Data, XBRL, data analytics, visualization, and Blockchain, will be the main focus of this course. There will also be a hands-on component to familiarize the students with such topics. Finally, this course introduces some top of the line research in the Accounting Information Systems area as well as the potential applications to the government sector.

COURSE MATERIALS

There is NO required textbook for this course. The breadth and depth of the topics are seldom found in any one textbook, and your research on topics comes from the internet. Typically, you will be provided one or more URLs as a required starting place. In addition, other pertinent materials may be provided to be used as part of your report. The course material, as well as some supplementary material, will be available through the course shell on Canvas. PowerPoint slides and recorded videos will be provided whenever possible.

- Check Canvas and your official Rutgers email account regularly.

LEARNING GOALS AND OBJECTIVES

The course objectives will support the Learning Goals and Objectives for the Master of Accountancy in Governmental Accounting Program in the following areas:

Critical thinking Skills. Master of Accountancy in Governmental Accounting graduates will be able to understand complex business situations and provide solutions to improve current business practices.

Students will demonstrate:

- a. They are able to identify problems in a particular situation.
- b. Students will be able to find innovative solutions.

Persuasive communication. Master of Accountancy in Governmental Accounting graduates will be effective communicators.

Students will demonstrate:

- a. Students will be able to communicate information in a clear concise manner.

b. Students will be able to communicate relatively complex ideas in an understandable manner.

The course objectives include:

1. Become familiar with emerging Information System technologies.
2. Investigate important and widely used technologies, and evaluate them.
3. Understand the importance of security in all aspects of Information Technology, as well as methods and tools for protection.
4. Evaluate the ways in which e-government and general business are similar and dissimilar in the use of information technology and the tools used.
5. Learn various forms of data analytics and their applications in the business and government sectors.

Students develop these skills and knowledge through the following course activities and assignments:

- Weekly assigned readings and recommended optional readings
- Weekly on-line discussions
- Written assignments
- A midterm exam
- A final project.

PREREQUISITES

Design and Development of Information Systems (22:010:604)

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 for more details.

ATTENDANCE AND PREPARATION POLICY

Not Applicable (the course is taught in an asynchronous online mode)

ASSIGNMENT & DISCUSSIONS POLICIES

Each week, a set of assignments are required to be submitted. I will post several questions, of which some are required, as well as several others from which you can make a selection for your response. Completed assignments should be uploaded through the Dropbox (see below). The deadline for the submission of the assignments is (). I will try to provide a variety of both public sector and business enterprises assignments. All the assignments are equally weighted. Your grade will depend on several factors:

1. Correctness
2. Completeness
3. Quality of writing
4. Timeliness: late submission will incur a penalty (25% reduction in your grade)
5. Citation of the sources of information. Copy/Pasting is PLAGIARISM! This is NOT allowed and will entail a great deduction in your grade. You MUST write the assignments in your own words.

There will also be a threaded discussion question each week. The first response to the threaded discussion question is due (), with subsequent postings to be completed by (). Each student is required to comment at least twice in the threaded discussion area. Since the discussion is free flowing, I encourage you to bring other relevant issues and questions as part of your posting. I will provide an interim grade for your work on the assignments and discussions after every three units. Your discussion grade will depend on whether you posted the two posts on time as well as the quality of your posts.

For academic integrity purposes, if you obtain materials from the web for your assignments, please cite the relevant web sites or other references. When quoting directly from these references or web sites, it is important that you enclose your comments in quotes and state so in your responses.

Each week, I will also have several readings assigned. Most of these originate from articles published in the Harvard Business Review, the Government Finance Review and other journals. Since they complement the material in the text, it is important that you review these articles for a real world application of the key concepts and ideas.

CLASSROOM CONDUCT

Not Applicable (the course is taught in an asynchronous online mode)

EXAM DATES AND POLICIES

There are two exams in this course:

Midterm Exam: () to (). It is a timed exam, and you are allowed only ONE attempt.

Final Exam: () to (). It is a timed exam, and you are allowed only ONE attempt.

During exams, 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.
- The exam will be administered online on Canvas. It is a timed exam.
- We will be using Proctortrack for online Proctoring. Therefore, you must take the Onboarding exam prior to the Midterm exam.

- You must show a valid photo ID to take the exam.
- You may resort to any resources such as notes, books, internet, however you **MAY NOT** discuss it with anyone.

GRADING POLICY

Course grades are determined as follows:

| | |
|---------------------------|-----|
| Assignments & Discussions | 40% |
| Midterm Exam | 30% |
| Final Project | 30% |

Final Grade

| | |
|----------|----|
| > 90 | A |
| 85-89.99 | B+ |
| 80-84.99 | B |
| 75-79.99 | C+ |
| 70-74.99 | C |
| 60-69.99 | D |
| <60 | F |

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.

COURSE SCHEDULE

This is a tentative schedule, which means it might change over the course of the semester. However, in the case of any change, you will be given ample time to adjust.

| Wk # | Topic |
|------|--|
| 1 | Class Introduction |
| 2 | Relational Databases & REA |
| 3 | Distributed Systems, Big Data, & Cloud Computing |
| 4 | Blockchain & Smart contracts |

| | |
|-------|--|
| 5 | Cyber Security, Encryption, and Privacy |
| 6 | XBRL and Government Data Legislation |
| 7 | Continuous Auditing and Exception Prioritization |
| | Review & MIDTERM EXAM period |
| | NO CLASS |
| 8 | Data Mining |
| 9 | Basic Analytics: Excel Pivot Tables and Macros |
| 10-11 | Fraud detection & Visualization: Excel & Tableau |
| 12-13 | Robotic Process Automation (RPA) |
| | Final Project (Exact Date & Time TBD) |

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.

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

[Rutgers University-Newark ODS phone (973)353-5375 or email 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]

[Rutgers University-Newark Office of Title IX and ADA Compliance phone (973)353-1906 or email 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]

[Rutgers University-Newark Dean of Students phone (973)353-5063 or email 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 . You may also contact the Office of Title IX and ADA Compliance at (973)353-1906 or email at 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]

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]

[Rutgers–New Brunswick: 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.]