

Professional Accounting
Course Number: 22:835:626
Course Title: Advanced Auditing & Information Systems

COURSE DESCRIPTION

The goal of this course is to introduce the advance concepts and automation tools underlying auditing and accounting information systems. This course is designed to build on the basic principles of auditing/risk management to help students gain an in depth understanding of the audit/risk management process and advanced techniques addressing emerging technologies. This course helps the student develop knowledge needed to understand how accounting information systems work and how they will likely work differently in the future.

COURSE MATERIALS

- Textbook: “Audit Analytics and Continuous Audit: Looking Toward the Future.”, AICPA , New York, NY ISBN: 978-1-94354-608-4 The Rutgers / AICPA Data Analytics Research Initiative will focus on research to support increasing automation and application of analytics in the financial statement audit. Web Link: AICPA “Pink Book” - 2015:
https://www.aicpa.org/interestareas/frc/assuranceadvisoryservices/downloadabledocuments/auditanalytics_lookingtowardfuture.pdf
- Turning Technology Clickers
- Most materials relative to the course will be posted on Canvas. The articles and chapters for each class should be read in advance. It is the responsibility of each student to be prepared by reading the assigned items and to search for related literature in professional publications and over the Web.

LEARNING GOALS AND OBJECTIVES

- This course is designed to help students develop skills and knowledge in the following area(s):
 1. Audit Automation
 2. Audit Analytics
 3. Fraud Prevention / Detection / Investigations
 4. Enterprise Risk Management / Internal Controls
 5. Continuous Reporting / Process Monitoring

6. Auditing/monitoring on advanced technologies such as blockchain/distributed ledgers/Machine Learning/RPA's/etc.

- Students who complete this course will demonstrate the following:

1. Anticipate the future of audit / risk management and respond accordingly;
2. Discuss various advanced analytical methods that can be used in audit;
3. Understand the concept of continuous auditing / monitoring / reporting and how can they be leveraged now to improve the audit profession
4. Describe what XBRL and Blockchain/Smart Contracts are and how they are used now and could be leveraged in the future to enable auditing and monitoring.
5. Use ACL/SAP/Watson Analytics, Talkwalker, etc.. in performing standard analytics testing, risk management and fraud detection;
6. Get an overview of other audit automation software such as SAP GRC, Caseware (Idea), etc...
7. Understand how an internal control system and an enterprise risk management system functions and why they are critical to an effective risk management process.
8. Recognize and discuss the risk of fraud and the motives and techniques used to perpetrate, prevent & detect fraud in an information systems environment.

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

1. Course Lectures
2. Guest Lectures
3. Case Studies
4. Hand-on software tutorials

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

- Expect us 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/TA] an email with full details and supporting documentation [within 3 days of your first absence]. [Explain other aspects of your absence policy in detail; it will save you trouble later.]

- 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 3.5-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

It is important that the classroom environment be conducive to learning for all students. Accordingly, I ask that you do not engage in behaviors that can negatively affect the learning environment for other students such as:

Side conversations with classmates; talking while the professor is speaking (these make it difficult for your classmates to actively listen)

Your pagers, cell phones and other electronic devices ringing during class. (Even more unprofessional: Answering your cell phone)

Preparing to leave class before class is dismissed.

Inattention/non-participation during group discussion and case analysis.

Laptops will be permitted only if used to take notes and follow course material. Sending text messages to friends, reading the paper and other online activities are not permitted. I reserve the right to ban laptops if this occurs.

I realize that most students do not need to be advised on what constitutes poor behavior as listed above and apologizes to those for whom this may be unnecessary. However, experience has shown that for some students, such specification is necessary.

GRADING POLICY

Student grades will be based on four weighted components as follows:

Participation	25%
Assignments / Presentations	20%
Class project	25%
Final Exam.	30%

Class Participation: This is a graduate level course where we develop, share, and question ideas and opinions. Accordingly, I expect you to actively participate in the class discussion. Developing opinions and learning to express those opinions in a group setting is critical to your success as a professional. Although this level of participation may initially be outside your comfort zone, remember that we are on the same team in the learning process, and that we will be dealing with many issues that lack a right answer. Daily class activities provide important feedback to me about how much you know about the

subject matter and your level of effort and preparation. Emphasizing participation allows us to take advantage of the talents and experiences of everyone in the class.

Class participation will be recorded by e-clickers; so please bring your clicker to every class. Specifically, we will ask some clicker questions in class and measure the participation according to the number of the questions you answer and the correctness of your answers.

The grade for participation will vary from 0-25. As a guide, a 25 will be given to a person who attends every class, correctly answers clicker questions, asks good questions, and discusses interesting opinions. A person who does all the above, but only occasionally volunteers thoughtful questions and opinions will receive 10-15 points and a person who attends every day, but rarely volunteers an answer will get 5-10 points. Lack of meaningful participation and sporadic attendance will result in 0 points.

Assignments:

There will be two homework assignments to be handed in. The groups can be gathered voluntarily, each group should include 3-5 people, and the group arrangements need to be posted to the discussion board on Canvas in advance. All homework assignments must be prepared using a word processor. They should be uploaded to the assignments prior to the deadline. No late submission accepted.

Class project:

The final project can be of the group's choice but ideally it would be connected to the Accounting Research course. It would be something like "Audit/Analytics implications of xxx (my project)". The groups for the final project can also be gathered voluntarily, and each group should include 4-6 people. The group arrangements of final project also need to be posted to the discussion board on Canvas in advance. Each final project will "lead"/present a course topic through a presentation of maximum 30 minutes. The projects will be presented as annotated PowerPoint slides. The slides need to be uploaded to Canvas and handed in to the instructors in class. We will evaluate the presentation based on content, organization, originality, and delivery.

Final exam:

The final exam will be a remote exam and last for three hours: the exam will be sent to students via email, and students need to send back their exams in three hours. For exams, you will be responsible for the material covered in the lecture slides, projects and class discussions. Exams will include six essay questions; students need to choose four of them to answer. All the students are expected to take the final exam at the same time. If a student has a valid excuse which complies with University regulations for missing an examination, the student must inform me and obtain permission to miss the examination before the examination. Failure to obtain the necessary permission will result in a zero grade.

You may come during office hours or by appointment to review your exams. After you've received any graded work, if you would like to have any part of the grading reconsidered, please give me a written explanation by the following class period specifying exactly what you want me to reconsider and why you want me to reconsider it.

COURSE SCHEDULE

	Topic	Material
1	<p>Introduction – course overview / syllabus</p> <p>Thoughts on Future of the audit / accounting /risk management,</p> <p>CPA Exam Prep. (Audit - Becker) https://am.becker.com/</p> <p>Intro to ACL</p>	<p>Advanced Audit Class Intro – getting to know you (60 min) -- establish class groups ~5 groups of 4-6 students</p> <p>Thoughts on Future of the audit / accounting / risk management, (2 hrs.)</p> <p>CPA Exam Prep. (Audit - Becker)</p> <p>Intro to ACL Book Intro: “Audit Analytics & Continuous Auditing” AICPA. Overview of Book and group in class discussion plan.</p>
2	<p>Energy Mgmt. – Emotional Intelligence – Prep for the profession!</p> <p>ACL Intro/Demo</p>	<p>ACL Intro/Demo</p> <p>Book Readings/Discussion: “Continuous Auditing – A New View” P’s. 3-49</p>
3	<p>Block Chain / Smart Contracts -- Disruptive Innovation in Accounting/ Audit / Monitoring!</p> <p>ACL – hands on practice continued -- Assignment</p>	<p>Block Chain / Smart Contracts -- Disruptive Innovation in Audit / Monitoring!</p> <p>ACL – hands on practice continued -- Assignment</p> <p>Book Readings/Group Presentation: “Current State Continuous Audit & Monitoring” P. 53-63</p>
4	<p>EY Continuous Auditing & Reporting in public accounting</p> <p>ACL – hands on practice continued -- Assignment</p>	<p>Speaker:</p> <p>ACL – hands on practice continued -- Assignment</p> <p>Book Readings/Group Presentation: “Evolution of Audit – Traditional Approach Future of Audit” P. 71-84</p>
5	<p>TalkWalker Introduction –Big Data Analytics</p> <p>TalkWalker Hands on Training Certification in class</p>	<p>Speaker:</p> <p>Talkwalker Hands on Training Certification in class</p> <p>Book Readings/Group Presentation: “Reimagining Auditing in a Wired World” P. 87-102</p>

	Topic	Material
6	Fraud Lecture: ACFE 2020 Fraud “Report to the Nations” TalkWalker Hands on Training/Certification in class	Fraud Lecture: ACFE 2020 Fraud “Report to the Nations” TalkWalker Hands on Training/Certification in class <i>Book Readings/Group Presentation: “Data Analytics for Financial Statements” P. 105-128</i>
7	Lockheed Martin Presentation on use of Analytics in Industry – Jeff Willingham TalkWalker Hands on Training/Certification in class .	Lockheed Martin Presentation on use of Analytics in Industry – (1.5 hrs.) TalkWalker Hands on Training/Certification in class <i>Book Readings/Group Presentation: “Managing Risk and the Audit Process in a World of Instantaneous Change” P. 129-142</i>
8	RPA for Risk / Auditing & Monitoring Automation Anywhere software demo	RPA for Risk / Auditing & Monitoring - Deck from Andrea R.s Automation Anywhere software demo <i>Book Readings/Group Presentation: Part 2 Case “B”. Implementing CA / CM in Metcash 157-166</i>
9	SAP Presentation GRC software -- SAP GRC Review XML/XBRL Lecture Automation Anywhere	SAP Presentation GRC software -- SAP GRC Review – (1.5 hrs.) XML/XBRL Lecture Automation Anywhere Book Readings/Discussion: Part 2 Case “C”. Increasing Audit Efficiency through continuous branch KPI monitoring P. 169-172
10	Internal control (IC) & ERM – Siemens best practice Additional software support, project reviews, Exam reviews.	Internal control (IC) & ERM – Siemens best practice (1.5 hours) Additional software support, project reviews, Exam reviews.
11	Project presentations with Accounting Research Class -- <u>All Day 9-5 ROOM TBD – Students Should Attend all Presentations</u>	Project presentations with Accounting Research Class –All Day 9-5
12	Final exam	Final exam

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/](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.]