

ACC 369 – Analytical Tools for Accountants

Course Syllabus
Spring Semester 2020

Section: 14187D

Location – BRI 202

Class Sessions – Thursdays, 2:00 – 2:50 PM

Units: 1 unit

Class time: 50 minutes per week

Professor: Professor Julie W. Suh, Ph.D.

Office: ACC 212

E-mail: suhw@marshall.usc.edu

Office Hours: TBD

Course Description

This class will introduce you to the technical tools you will need to pursue a successful career in accounting. The first half of the course will focus on the fundamentals of financial modeling using Microsoft Excel. This will build the analytical thinking and problem solving needed for more advanced tools. The second half will build on this foundation and will focus on analysis using Python and data analysis toolkits in Python, such as Pandas, Numpy, Matplotlib, and Seaborn. Application exercises will be tailored for Accounting majors.

Learning Objectives

Upon completion of this course, you should be able to:

- Build dynamic and efficient financial accounting models using Microsoft Excel (Leventhal Learning Objective 1)
- Apply problem solving skills to material learned in introductory accounting courses (Leventhal Learning Objectives 1 and 2)
- Analyze datasets using the Python programming language and its libraries such as Numpy, Pandas, Matplotlib, and Seaborn (Leventhal Learning Objective 1)
- Use Python and related libraries to solve accounting business problems in audit, tax, and advisory. (Leventhal Learning Objectives 1, 2, and 3)

To achieve these learning objectives, a combination of background reading and technical assignments, interactive discussions, and practice problems will be utilized. Please note: the most important word in the sentence above is “interactive.” The reason is that research on learning indicates it is very difficult to gain anything more than a superficial understanding of material without practice and feedback. Therefore, you should expect our class sessions to incorporate a substantial amount of both.

To demonstrate your achievement of the learning objectives stated above, you will be required to demonstrate your knowledge by individually working problems using in-class and homework assignments as well as individual projects.

Required Materials

The following books are available in the bookstore:

- Julie W. Suh (2016). *Model Like a Boss: An Excel Tutorial for Financial Modeling*. Kendall Hunt Publishing.
- Wes McKinney (2017). *Python for Data Analysis, 2nd Ed.* O'Reilly Media

Lastly, feel free to purchase the book online as this can also result in substantial cost savings.

Grading Policies

The total class grade will be weighted as follows:

	Weight
In-Class Assignments/Participation	20%
Homework Assignments	30%
Midterm Project	25%
Final Project	25%

Final grades represent how you perform in the class relative to other students. Your grade will not be based on a mandated target, but on your performance. The average grade for this class is expected to average about 3.3. Three items are considered when assigning final grades:

1. Your average weighted score as a percentage of the available points for all assignments (the points you receive divided by the number of points possible).
2. The overall average percentage score within the class.
3. Your ranking among all students in the class.

The grade of “W” is allowed only if a student withdraws after the official add period and before the end of the drop period during the semester. The grade of incomplete (IN) can be assigned only if there is work not completed because of a documented illness or unforeseen emergency occurring after the drop period of the semester that prevents the student from completing the semester. An “emergency” is defined as a serious documented illness, or an unforeseen situation that is beyond the student’s control, that prevents a student from completing the semester. Prior to the end of the drop period, the student still has the option of dropping the class so incompletes will not be considered. Arrangements for completing an IN must be initiated by the student and agreed to by the instructor prior to the final examination. All work required to replace the IN with a final grade must be completed within one calendar year from the date the IN was assigned. If the student does not complete the work within the year, the IN will automatically be converted to a grade of F.

Assignments and Grading Detail

Expectations regarding your performance on in-class assignments, homework assignments, and individual project are as follows:

In-class Assignments/Participation

It is important to attend every lecture since we build on material covered in previous lectures. In addition, because this is a class involving technical problem solving skills, every class will have at least one in-class assignment that you will complete on your own during the lecture. This is to ensure that you are able to apply the concepts covered in the class. Failure to attend class will be detrimental towards your final grade.

Since this is a fast-paced class, it is important that you pay attention for the entire class time. Surfing the web, texting, sending emails, etc. will not be allowed; failure to abide by these rules will hurt your participation grade in the class.

Homework Assignments

Part of the learning process in this class will take place on your own, as you struggle and work through problems at home. Since homework assignments are designed to help you deepen your understanding of the class material, it is important to work through the problems without the help of other students (or the web!).

Individual Projects

There are two individual projects for this class. In the first project (Midterm Project), you will be required to build an Excel-based valuation model for a fictional company. In the second project (Final Project), you will be required to produce a report answering specific questions about a particular dataset using tools and skills covered in class.

Add / Drop Process

Students may drop via Web Registration at any time prior to January 31, 2020. Please note that if you drop after January 31, 2010, your transcripts will show a W for the class.

Dates to Remember:

Last day to add classes or drop without a "W"	Friday, January 31, 2020
Last day to drop with "W"	Friday, April 3, 2020

Retention of Graded Coursework

Graded work that has not been returned to you will be retained for one year after the end of the semester. Any other materials not picked up by the end of the semester will be discarded after final grades have been submitted.

Technology Policy

Laptop and Internet usage is not permitted during academic or professional sessions unless otherwise stated by the professor. Use of other personal communication devices, such as cell phones, is considered unprofessional and is not permitted during academic or professional sessions. Upon request, all electronic devices in your possession (e.g., cell / smart phones, tablets, laptops, etc.) must be completely turned off and / or put face down on the desk in front of you. In addition, at certain times (i.e., during exams), you might also be asked to deposit your devices in a designated area in the classroom. Video recording of faculty lectures is not permitted due to copyright infringement regulations. Audio recording is only permitted if approved in advance by the professor. Use of any recorded or distributed material is reserved exclusively for the USC students registered in this class.

Recordings

No student may record any lecture, class discussion or meeting with the professor without the professor's prior express written permission. The word "record" or the act of recording includes, but is not limited to, any and all means by which sound or visual images can be stored, duplicated or retransmitted whether by an electro-mechanical, analog, digital, wire, electronic or other device or any other means of signal encoding. The professor reserves all rights, including copyright, to lectures, course syllabi and related materials, including summaries, PowerPoints, prior exams, answer keys, and all supplementary course materials available to the students enrolled in this class whether posted on Blackboard or otherwise. They may not be reproduced, distributed, copied, or disseminated in any media or in any form, including but not limited to all course note-sharing websites. Exceptions are made for students who have made prior arrangements with DSP and the professor.

USC Statement on Academic Conduct and Support Systems

Academic Conduct:

Students are expected to make themselves aware of and abide by the University community's standards of behavior as articulated in the [Student Conduct Code](#). Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call

studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call

suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call

studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Campus Support & Intervention (CSI) - (213) 740-0411

<https://campussupport.usc.edu/>

A team of professionals here to assist students, faculty, and staff in navigating complex issues. Whether you are here seeking support for yourself or someone else, we are available to help you problem solve, understand options, and connect with resources. Please note that we are not an emergency resource and are not available 24/7.

Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298

equity.usc.edu, titleix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298

usc-advocate.symplcity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710

uscsa.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

Students with Disabilities

Students requesting test-related accommodations will need to share and discuss their DSP recommended accommodation letter/s with their faculty and/or appropriate departmental contact person at least **three weeks** before the date the accommodations will be needed. Additional time may be needed for final exams. Reasonable exceptions will be considered during the first three weeks of the semester as well as for temporary injuries and for students recently diagnosed. Please note that a reasonable period of time is still required for DSP to review documentation and to make a determination whether a requested accommodation will be appropriate.

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this course and require accommodations, you must first register with the Office of Disability Services and Programs (www.usc.edu/disability). DSP provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to your TA) as early in the semester as possible. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: ability@usc.edu.

Emergency Preparedness/Course Continuity

In case of a declared emergency if travel to campus is not feasible, the *USC Emergency Information* web site (<http://emergency.usc.edu/>) will provide safety and other information, including electronic means by which instructors will conduct class using a combination of USC's Blackboard learning management system (blackboard.usc.edu), teleconferencing, and other technologies.

Schedule of Classes and Homework Assignments

Session	Date	Topic	Reading Assignments*	HW Assignments**
1	1/16	Course Introductions /Introduction to Microsoft Excel	Suh Ch. 1	
2	1/23	Introduction to Financial Modeling: Best practices for setting up dynamic financial model in Excel	Suh Ch. 2 - 3	HW 1: Lemonade
3	1/30	Conditionals Used in Audit/Tax	Suh Ch. 4 (up to p. 64)	HW 2: FizzBuzz
4	2/6	Lookup functions and Dynamic Worksheet References Used in Audit/Tax	Suh Ch. 4 (pp. 65-91)	HW 3: Rock Paper Scissor
5	2/13	3-Statement Financial Model - Nordstrom – Part 1	Suh Ch. 4 (pp. 65-91)	HW 4: Battleship Excell!
6	2/20	3-Statement Financial Model – Nordstrom – Part 2	Suh Ch. 8	Work on Project
7	2/27	Goal Seek / Data Tables		Work on Project
8	3/5	Midterm Project Due Introduction to Python Programming/Python Basics	McKinney Ch. 2	Program 1
9	3/12	In-Class Case Study: Applications to Accounting (EY FAAS Group) – Tentative date		EY Case Study
	3/20	SPRING BREAK – NO CLASS		
10	3/26	Flow Control		Program 2
11	4/2	Functions and Dictionaries	McKinney Ch. 3	Program 3
12	4/9	Numpy Basics	McKinney Ch 4	Find Dataset for Final Project/ Program 4
13	4/16	Pandas – Introduction	McKinney Ch. 5	Program 5
14	4/23	Pandas – Applications to Audit/Tax		Work on Final Project
15	4/30	Special Topic – Applications to Accounting		Work on Final Project
	5/7	Final Project Due		

* Reading Assignments should be completed before class on the date listed above.

** HW Assignments are due the following class period (date listed above is the date in which the HW Assignment has been assigned).

Undergraduate Accounting Program Student Learning Objectives

OBJECTIVE 1	Technical Knowledge	Students will demonstrate technical proficiency in the accounting discipline, including the use of technical accounting knowledge to help solve problems and make decisions.
OBJECTIVE 2	Research, Analysis and Critical Thinking	Students will demonstrate the ability to critically analyze, synthesize, and evaluate information for decision making in the local, regional and global business environment.
OBJECTIVE 3	Ethical Decision Making	Students will demonstrate an understanding of ethics, ethical behavior and ethical decision making.
OBJECTIVE 4	Communication	Students will demonstrate the ability to communicate ideas both orally and in writing in a clear, organized and persuasive manner.
OBJECTIVE 5	Leadership, Collaboration and Professionalism	Students will demonstrate leadership skills and the ability to work cooperatively and productively to accomplish established goals.
OBJECTIVE 6	Technology	Students will demonstrate an understanding of technology issues and utilize relevant technology tools and applications to gather and evaluate information, analyze and solve problems, work interactively with other people, and develop and present conclusions.