

ACC 499 – Analytical Tools for Accountants

Course Syllabus
Fall Semester 2018
Section: 14187D
Location – JFF 328
Class Sessions – Tuesdays 3:00 – 3:50 P.M.
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.

STUDENT LEARNING OBJECTIVES

OBJ 1 High	Technical, Conceptual, Problem-Solving Knowledge	Students will expand their critical thinking and problem solving skills learned in introductory and intermediate accounting courses.
OBJ 2 Medium	Research, Analysis, and Critical Thinking	Students will use academic/professional literature to build their knowledge of and analyze complexities of business internal and external accounting requirements.
OBJ 3 Low	Ethical Decision Making	Students will apply ethical principles and professional standards in decision-making.
OBJ 4 Medium	Communication	Students will continue to strengthen their ability to communicate ideas clearly and strategically, after considering the relevant audience, situation and purpose of the communication.
OBJ 5 Low	Leadership, Collaboration, and Professionalism	Students will demonstrate leadership skills and the ability to work cooperatively and productively to accomplish established goals.

Add / Drop Process

Students may drop via Web Registration at any time prior to Thursday, August 30. Please note that if you drop after August 30 your transcripts will show a W for the class.

Dates to Remember:

Last day to add classes or drop without a "W"	Thursday, August 30
Last day to change enrollment from P/NP to Letter Grade	Monday, September 10
Last day to drop with "W"	Monday, October 1

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.

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 enrolled in any class offered by the Leventhal School of Accounting are expected to uphold and adhere to the standards of academic integrity established by the Leventhal School of Accounting Student Honor Code. Students are responsible for obtaining, reading, and understanding the Honor Code System handbook. Students who are found to have violated the Code will be subject to disciplinary action as described in the handbook. For more specific information, please refer to the Student Honor Code System handbook, available in class or from the receptionist in ACC 101.

Support Systems

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.
<https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

Relationship & Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class.
<https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. dsp.usc.edu

Student Support & Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

Diversity at USC – <https://diversity.usc.edu/>

Tab for Events, Programs and Training, Task Force (including representatives for each school), Chronology, Participate, Resources for Students

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.

Provides overall safety to USC community. dps.usc.edu

Students with Disabilities

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	8/21	Course Introductions /Introduction to Microsoft Excel	Suh Ch. 1	
2	8/28	Introduction to Financial Modeling: Best practices for setting up dynamic financial model in Excel	Suh Ch. 2 - 3	Depreciation Schedule Assignment
3	9/4	Conditionals and Toggles Used in Audit/Tax	Suh Ch. 4 (up to p. 64)	Lab 3 in Suh
4	9/11	Lookup functions and Dynamic Worksheet References Used in Audit/Tax	Suh Ch. 4 (pp. 65-91)	Lab 6 in Suh – with OFFSET/MATCH and INDEX/MATCH
5	9/18	What-If Scenarios and Sensitivity Tables in Audit/Tax	Suh Ch. 8	Lab 10 in Suh with data tables
6	9/25	Class Challenge Activity	Suh Ch. 5-6	Work on Midterm Project
7	10/2	Pivot Tables Midterm Project Due		Pivot Table Assignment
8	10/9	Introduction to Python Programming/Python Basics	McKinney Ch. 2	Program 1
8	10/16	Flow Control	McKinney Ch. 2	Program 2
9	10/23	Functions and Dictionaries	McKinney Ch. 3	Program 3
10	10/30	Numpy Basics	McKinney Ch 4	Program 4
11	11/6	Pandas – Part 1	McKinney Ch. 5	Find Dataset for Final Project
12	11/13	Pandas – Part 2		Program 5
13	11/20	Pandas – Applications to Audit/Tax		Work on Final Project
14	11/20	Data visualization with Applications		Work on Final Project
15	11/27	Data visualization with Applications to Accounting		Work on Final Project
	12/7	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).