

ISM 5644

PROGRAMMING FOR ANALYTICS



COURSE INFORMATION

- **Class Meeting Time / Location:**
 - Tuesdays and Thursdays 11:35AM - 2:35PM
 - College of Business RBA 103
- **Course Schedule:** Please see the Course Schedule posted under the Modules Folder on Canvas for a breakdown of all the meeting dates and the topics covered.
- **Credit Hours:** 3 hours
- **Prerequisites:** None



COURSE INSTRUCTOR

Dr. Noyan Ilk

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(850) 644-8216

Office Location: RBB 142

Office Hours: Tuesdays and Thursdays 3PM - 5PM



COURSE DESCRIPTION & OBJECTIVES

This is an introductory course intended to introduce students to the basics of computer programming for business analytics. The course will place special emphasis on utilizing Python programming language for data science and analytics related tasks. The course has two major components. First, it will cover the fundamentals of computing in Python including data types, operators, control structures, functions, and testing and debugging. Then, it will focus on applying these fundamentals on analytics related activities such as importing data, data pre-processing, cleaning and manipulation (e.g., wrangling, munging), algorithm implementation, and handling specialized data types such as text data. Upon successful completion, a student will be able to:

1. Describe Python language fundamentals, including syntax, data types, and control structures.
2. Demonstrate an understanding of business analytics process within the Python computing environment.
3. Demonstrate an understanding of how to apply Python for importing, manipulating and analyzing raw data sets.
4. Perform data analysis and visualization using specialized libraries and packages.



COURSE MATERIALS

Hardware & Software

- A laptop with Anaconda Distribution for Python 3 installed on it.
- Please note that you need to bring your laptop to every class meeting as you will work on in-class lab exercises during class time.

Course Management System

- This course uses the Canvas course management system for content distribution, course assignments and announcements. Students are also highly encouraged to have their Canvas notifications and FSU emails

forwarded to their primary email accounts for any updates about the course materials.

Textbooks

- **Required:** Practice of Computing Using Python, 3rd Edition. William F. Punch and Richard Enbody, Pearson.
- Recommended: Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython, 2nd Edition. Wes McKinney, O'Reilly.



GRADING POLICY

Exams

Assignments and Labs

Project

Grade Appeals

The course will include two non-cumulative exams. Each exam will consist of two parts:

1. The first part will include True/False, Multiple Choice and Short Essay questions. This part of the exam will be **closed book / closed notes**.
2. The second part will consist of coding questions to be answered by writing Python programs. This part will be open book / open notes and students can use any resources available. However, you are **not** allowed to collaborate with any one else.

Both exams will be proctored during class time. Exams are individual effort and you are **not** allowed to collaborate with anyone else. Exams are time-limited and students will be required to complete the entirety of the exam (i.e., both parts) in one sit-in (i.e., once you start the exam, you need to complete both parts in sequence within a specific time limit).

Make-up exams will only be offered for excused absences (see University Attendance Policy below). The instructor reserves the right to offer make-up

exams in an alternate form (i.e. oral, essay, etc.). **The student must notify the instructor at least 24 hours before a missed exam.** Missed exams will be entered as a 0 in grade calculations.

This is a hands-on programming course and you will work on several assignments and lab exercises throughout the semester. Some of these will be worked on during the class time, whereas some others will need to be completed outside the classroom. Solutions for assignments that ask for writing a program must include full working code in order to get full credit. Please regularly check the class website for announcements about the assignment postings / due dates.

All assignments need to be submitted according to the specific instructions provided in the assignment document using the Canvas interface.

One of the course requirements is a semester project. **Detailed information about the project will be given in a separate handout.**

While every effort is made to be fair and accurate, you may disagree on the evaluation of your work. If you believe an error has been made in scoring your submission, you may request to see your graded work during the office hours in the **next five business days** after the grade has been posted. Any requests outside the office hours and beyond five days will not be considered.

LATE SUBMISSIONS

Any assignment turned in after its due time is considered late. Late submissions within 24 hours will be graded with a penalty of 20%.

Submissions that are 24 – 72 hours late will be graded with a penalty of 50%. Submissions beyond those times will not be accepted.

* Note that the leniency with regards to late submissions does not extend to the final deliverables of the semester (e.g., project). Any deliverable submitted during the final grading period (i.e., after the lectures are over and the deadline of the deliverable has passed) will not be considered for grading regardless of the delay period.



GRADING SCHEME

Students will be graded on the basis of exams, assignments, labs, project and their participation record on the discussion board. Grading criteria is given below:

Task	Points
Exam 1	250
Exam 2	250
Long Assignments	4 x 40 = 160
Lab Exercises	10 x 15 = 150
Project	120
Participation	70
Total	1000

Grade	Range	Grade	Range	Grade	Range
		A	930 to 1000	A-	900 to 929

Grade	Range	Grade	Range	Grade	Range
B+	870 to 899	B	830 to 869	B-	800 to 829
C+	770 to 799	C	730 to 769	C-	700 to 729
D+	670 to 699	D	630 to 669	D-	600 to 629
		F	599 and below		



COLLEGE OF BUSINESS POLICIES

Integrity Code

The Florida State University College of Business expects all of its students, faculty and staff to adhere to the highest standards of academic excellence, integrity, and to the norms of a serious intellectual community. We pledge that:

As business students and professionals
 We understand and accept the
 significance of integrity in
 our language, actions, and work

With Seminole pride,
 we choose to be responsible, honest,
 trustworthy, caring, and fair

In business and in life,
 we choose integrity

Students are expected to be familiar with and abide by the **Student Academic Honor Policy**

(<http://fda.fsu.edu/sites/g/files/imported/storage/original/application/0ab8e9de6a98>) which outlines the University's expectations for students' academic work, and the **Student Conduct Code** ([https://dos.fsu.edu/srr/conduct-codes/student-](https://dos.fsu.edu/srr/conduct-codes/student-conduct-code)

[conduct-code](https://dos.fsu.edu/srr/conduct-codes/student-conduct-code)) which informs students about their rights and responsibilities as members of the University community. In addition, the College of Business

expects all members of its community to be familiar with and accept the moral norm of **responsible freedom** as outlined in the **[FSU General Bulletin \(http://registrar.fsu.edu/bulletin/graduate/\)](http://registrar.fsu.edu/bulletin/graduate/)** and to adopt the **[Seminole Creed \(https://dos.fsu.edu/resources/the-seminole-creed\)](https://dos.fsu.edu/resources/the-seminole-creed)**.

Learning Goals

1. Graduates will demonstrate the ability to think critically and manage risk and reward to solve global business problems.
2. Graduates will demonstrate the ability to use technology competently and effectively in global business applications.
3. Graduates will demonstrate in-depth knowledge of core business functions and be able to demonstrate the ability to integrate business functions in organizations.
4. Graduates will demonstrate the ability to communicate effectively, orally and in writing, individually and in teams.
5. Graduates will demonstrate an understanding of and sensitivity to culture, diversity, and professional and ethical responsibilities in business.



UNIVERSITY POLICIES

Academic Honor Policy

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to ". . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University." (**[Florida State](#)**)

University Academic Honor Policy

(<http://fda.fsu.edu/sites/g/files/imported/storage/original/application/0ab8e9de6a98>)

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First Day Attendance Policy (Mandatory)

University-wide policy requires all students to attend the first day of class meeting of all classes for which they are registered. Students who do not attend the first class meeting of a course for which they are registered will be dropped from the course by the academic department that offers the course. This policy applies to all levels of courses and to all campuses and study centers. It remains the student's responsibility to verify course drops and check that fees are adjusted.

Grade Appeals

While every effort is made to be fair and accurate, you may disagree on the evaluation of your work. If you believe an error has been made in scoring your submission, you may request to see your graded work during the office hours in the **next five business days** after the grade has been posted. Any requests outside the office hours and beyond five days will not be considered.

University Attendance Policy

No early or make-up exams will be given except for exceptional cases that are approved by the instructors or university policy before the exam. For excused absences, please see the University Attendance Policy Statement below:

“Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.”

Re-scheduling exams for those reasons will only be at the discretion of the instructor. Exam re-scheduling requests must be done no later than 24 hours after the exam (before the exam if possible). Please note that re-scheduled exams will cover more topics and therefore may be harder.

Americans With Disabilities Act (ADA)

Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; (2) and bring a letter to the instructor indicating the need for accommodation and what type. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided. This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

[Student Disability Resource Center](http://dos.fsu.edu/sdrc/) **[_\(http://dos.fsu.edu/sdrc/\)](http://dos.fsu.edu/sdrc/)**

874 Traditions Way 108

Student Services Building

Florida State University Tallahassee, FL 32306-4167

(850) 644-9566 (voice)

(850) 644-8504 (TDD)

Email: **sdrc@admin.fsu.edu** **[_\(mailto:sdrc@admin.fsu.edu\)](mailto:sdrc@admin.fsu.edu)**

Syllabus Change Policy

Even though all precaution is take in preparing this syllabus, please note that it is subject to change based on the best judgment of the instructor. Please periodically **check website announcements** for possible updates.

Course Schedule

TENTATIVE SCHEDULE:

Unit	Date	Topic
1	10-May	Introduction
2	12-May	Basics of Programming
3	17-May	Control Structures Part I
4	19-May	Control Structures Part II
5	24-May	Data Structures Part I
6	26-May	Data Structures Part II
7	31-May	Exam 1
8	2-Jun	Functions
9	7-Jun	Handling Files
10	9-Jun	Handling Errors
11	14-Jun	Intro. to Pandas
12	16-Jun	Exam 2