WOOSONG UNIVERSITY
ENDICOTT COLLEGE OF INTERNATIONAL STUDIES

Practical Business Python

Fall 2023 **Section: 001**

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Class hours and location:
Section 001: Thursday 13:00-16:00, W19 Room 110
Office Hours:
Section 001: Thursday 11:00-12:00, W19 Room 223

COURSE DESCRIPTION

The Practical Business Python (PBP) course is designed to equip students with the knowledge and skills required to effectively utilize the Python programming language in a business context. Python has become one of the most popular programming languages due to its simplicity, versatility, and extensive library support. This course focuses on practical applications of Python in various business domains, providing hands-on experience and real-world examples.

COURSE OBJECTIVES

Develop a solid understanding of Python programming fundamentals: Students will gain a strong foundation in Python programming, including knowledge of syntax, variables, data types, and control structures. They will be able to write basic Python codes and understand how to use Python to solve business problems.

Familiarize students with essential Python libraries and frameworks for business applications: Participants will become familiar with popular Python libraries such as NumPy, Pandas, Matplotlib, etc. They will learn how to leverage these libraries to manipulate and analyze data, create visualizations, and build web applications.

Apply Python programming skills to solve real-world business problems: Students will learn how to apply Python programming techniques to solve common business problems. They will gain hands-on experience in using Python to analyze data, make data-driven decisions, and automate tasks relevant to various business domains.

Gain hands-on experience through practical exercises and projects: The course will provide students with numerous practical exercises and projects that allow them to apply their knowledge in real-world scenarios. This hands-on approach will enable participants to gain confidence in using Python for practical business applications.

COURSE LOGISTICS

The course consists of lectures, in-class activities, and demonstrations that emphasize hands-on, practical tasks that give students the chance to put what they have learned to the test and improve their skills.

Students finish readings that have been assigned before the class, work on group projects, and take part in activities.

Access to the internet and a computer (laptop) are required.

All the materials will be posted on SMART. Students are expected to regularly check their message box and notice board on SMART.

You will have an access link to the KSS survey. There will be only 3 questions there (What should I **K**eep / **S**tart / **S**top doing during class?) This is the way to get your feedback and suggestions on classes and make some adjustments if needed and possible. It is completely voluntary and anonymous.

COURSE MATERIALS

This course encourages students to learn from a variety of resources (books, web, videos, etc.). Links to needed sources will be referred to, in particular lecture notes.

A selection from

- Joel Grus (2020). Data Science from Scratch
- Wes McKinney (2022). Python for Data Analysis

In addition, please see GitHub repository

COURSE REQUIREMENT AND ASSESSMENT

The relative grading based on the grading curve is applied.
The final grade for the course will be comprised of the following elements:

Class Attendance	20%
In-class assignments	30%
Midterm Examination (Week 8)	20%
Final Examination (Week 15)	30%
Total	100

A score below 40% is not passing.

A. Class Attendance: 20%

This class requires active engagement from students which means you are required to actively participate in class activities. Effective participation involves the following aspects:

Attendance. You cannot engage in activities if you are not in class. As such, 100% attendance

is expected and lesser attendance will affect your overall grade. Students will be using the Woosong Attendance App. Students are solely responsible for the make-up of any missed classes and for obtaining any class materials or assignments which they miss. The instructor may fail any student on the grounds of unacceptable attendance. Please note, that the following will be recorded as partial absences equivalent to one or more recording periods:

- Unexcused late arrivals to class
- Unexcused lengthy absence during class
- Unexcused frequent exits and entries from the class
- Unexcused early departures
- Sleeping in Class

Effective Listening and Contribution. Effective listening is an important managerial skill and it is expected of students that they will demonstrate this skill in class. When the instructor or anybody else is talking, the rest of the class is expected to be silent, considerate and respectful. You can only contribute to a discussion in a meaningful way if you have listened carefully to what has been said, identified key points and respond accordingly. A good-quality comment or contribution is one which is relevant and which adds to the learning of the class. A bigger part of my grading system is class participation, I expect that everybody will participate in the regular class activities.
If there are some unclear topics, it is very important that students ask for clarification.

Please note, that disruptive and disrespectful behaviour in the lectures can easily undermine, diminish, or even destroy a potentially excellent activity and will, because of this, affect your learning and contribution in the lectures. Disruptive or disrespectful behaviour will not be tolerated in class and the instructor reserves the right to discipline any student who has repeatedly disrupted the class or has exhibited disrespectful behaviour in class.

B. In-class assignments: 30%

About 10-11 in-class assignments will be given during the course. These will cover the topics study in-class.

All assignments must be submitted online via the LMS system by the end of particular class. No AI application is allowed.

Any students failing to submit assignments on time will receive either a reduced grade or a zero for that. Please note that if you experience any technical difficulties whilst trying to submit your assignment, please immediately email your assignment to ievysh@wsu.ac.kr (this way I can check the timestamp of submission).

C. The mid-term examination (Week 8): 20%

In week 8, students will have a take-home exam (Data Report). A data file with the relevant questions and instructions would be provided. The assignment would require to provide a Report and relates to cleaning, structuring, and illustrating data. The evaluation would be done on the individual basis. Students would be required to provide the report and all other working files.

D. Final Examination: Group project report (Week 15): 30%

A group project report including the application of analytics principles and methods to a business issue will be required of the students. You are free to choose any related issue and tool (covered through the course though). A 20-minute PPT presentation and also provide the

questions for a 15- minute discussion on the topic. Students must send their PPT to the course instructor for evaluation after the presentation session. Students will be allocated to teams by the instructor (up to 5 people in a group). No AI application is allowed.

ACADEMIC INTEGRITY

Plagiarism and copying. Plagiarism is the act of taking another person's (author, theorist, piece of work) ideas or work and representing it as your own. This includes copying another student's work. Woosong University / Endicott / SolBridge consider plagiarism as a serious breach of academic and professional ethics. Plagiarism, in any form, will NOT be tolerated. Penalties can be as severe as expulsion.

Free riding. A situation in which someone benefits without having to make a fair contribution. Any form of it will not be tolerated.

Cheating. Cheating undermines the reputation of Woosong University / Endicott / SolBridge as well as undermines the values of the degrees earned at these institutions. Therefore, cheating is severely punished. Cheating includes (but is not limited to):

- Copying somebody else's work.
- Eliciting answers from somebody else.
- Changing an answer (or answers) on an assignment or exam for re-grade.
- Misrepresenting a family or personal situation in order to get an extension.
- Using prohibited resources during a test or other academic work.
- Falsifying data or claiming to have done research that you did not do yourself.
- Assisting another student in doing any of the above.

Consequences of Unethical Academic Conduct:

- All instances will be reported to the Woosong University / Endicott / SolBridge disciplinary officer.
- The first instance will result in a "zero" for the assignment in question.
- The second instance will result in a failing grade ("F") for the entire course.
- The third cumulative instance will result in institutional-level disciplinary action which could include expulsion from the schools.

BEHAVIOR AND EXPECTATIONS

When sending an email. In both business and academia environments, it is imperative that you show respect when sending an email (especially when submitting an assignment or exam). This looks like the following:

- Including a subject line (e.g., [Introduction to Business Analytics (Section 00*)] Meeting request).
- Address the professor: "Dear Professor"
- Who are you and which class do you come from? I am _____, my student ID is _____ and I am from *** class Section 00*.
- Explain why you are sending this email. DO NOT attach something with an empty body in the email.
- If you disagree about your grade, respectfully explain why. Please note that you are not entitled to an "A" in virtue of having completed the task correctly – this is a

minimum requirement.

- Make sure to name your attachment correctly and double-check that it is the right attachment.
- Do not expect immediate replies. It usually takes 24 - 48 ours on weekdays and longer on weekends.
- I may not reply on time (so email me in advance).

Grading (technical details). Proper grading takes time, expect grading to take anywhere from 7 – 14 days. Do not expect thorough feedback for every answer – this is impossible to do. Refer to the general comments on your work. If you want to discuss the grades, please visit me during my office hours or contact me to arrange a meeting.

COURSE SCEDULE

The following schedule is not written in stone and is thus subject to change, tailoring the proper understanding of materials.

Week	***Coverage***
1	Overview of the course and logistics: Introduction and Overview. Reading: Course Syllabus; the course surveys; Lecture notes #1
2	Python Language Basics. Reading: Wes (2022): Ch 2; Lecture notes #2 In-class assignment #1
3	Built-In Data Structures, Functions, and Files. Reading: Wes (2022): Ch 3; Lecture notes #3 In-class assignment #2
4	NumPy Basics: Arrays and Vectorized Computation Reading: Wes (2022): Ch 4; Lecture notes #4 In-class assignment #3
5	Getting Started with pandas Reading: Wes (2022): Ch 5; Lecture notes #5 In-class assignment #4
6	Data Loading, Storage, and File Formats Reading: Wes (2022): Ch 6; Lecture notes #6 In-class assignment #5
7	Data Cleaning and Preparation Reading: Wes (2022): Ch 7; Lecture notes #7 In-class assignment #6
8	Mid-term exam
9	Data Wrangling: Join, Combine, and Reshape

	Reading: Wes (2022): Ch 8; Lecture notes #8 In-class assignment #7
10	Plotting and Visualization Reading: Wes (2022): Ch 9; Lecture notes #9 In-class assignment #8
11	Data Aggregation and Group Operations Reading: Pochiraju and Wes (2022): Ch 10; Lecture notes #10 In-class assignment #9
12	Time Series Reading: Wes (2022): Ch 11; Lecture notes #11 In-class assignment #10
13	Introduction to Modeling Libraries Reading: Wes (2022): Ch 12; Lecture notes #12 In-class assignment #11
14	Final exam preparation
15	Final exam Final exam

Note: All assignments, quizzes, and homework will be stipulated in class.
PS: if you find any mistakes / typos, please let me know. Thanks!