SEC 500 - Fundamentals of Computing
Fall 2020
3 credits

Description

This course is intended to introduce students to the field of computing related to the security area. Specifically, basics of computer architectures, operating systems, computational thinking/algorithm design will be provided in small lectures. However, most of the lectures of the course are dedicated to Python programming.

Topics Covered

- ❑ Introduction to computer architectures (by Dr. Erdinç Öztürk)
- ❑ Basics of computational thinking and algorithm design
- ❑ Python: Basic programming structure and concepts: variables, expressions, data types, assignment, operators, input, output.
- ❑ Python: Conditional execution: if statement.
- ❑ Python: Storing more than one value: strings, lists
- ❑ Python: repetition in codes: loops (while, for)
- ❑ Python: Functions, code reuse, parameter passing rules
- ❑ Python: Permanent storage: file I/O
- ❑ Python: Simple GUI (Graphical User Interface) – if time permits
- ❑ Operating System Basics (by Barış Altop)

Instructors

Prof. Dr. Albert Levi, levi@sabanciuniv.edu
Caution: There is another Albert Levi who is a SU graduate, but his name and email may still appear in some databases. Check the email address while you are writing!
Dr. Levi will be teaching computational thinking, Python parts. He is also the coordinator of the course.
Assistant to Python part: K. Tolga Atam, atam@sabanciuniv.edu
Moreover, Computer Architecture part will be given by Dr. Erdinç Öztürk (erdinco@sabanciuniv.edu) and Operating Systems part will be given by Barış Altop (altop@sabanciuniv.edu).

Textbook

No textbook. If needed, some reading materials will be provided.

Schedule

Lectures: Thursday 19:00 – 22:00, Saturday 13:00 – 16:00, Altunizade Building 111-112
Zoom link is: https://sabanciuniv.zoom.us/j/95797040670?pwd=Q3ZJc0p2WWVhaEQ1ZldYdEJVSEF1QT09
Zoom attendees may participate in class verbally; chat questions may not be seen by the instructor during the lecture. Some parts of the lectures will be used as recitation/lab for practicing about Python. The recitations will be given by your TA Tolga remotely but Prof. Levi will be in class.

Programming Assignments

There will be 4-5 programming assignment that will be graded and considered as **takehome exams**. They will be assigned and collected at SUCourse+. You have to submit your own work! If it is not done by you, you will get -100 (minus 100) on the first incident. If you do it again, you will fail the class. In either case, you will be reported to the Dean's office for disciplinary actions.

Grading (subject to change)

- Midterm Exam (35%): November 7, 2020, Saturday, 9:00 – 12:00 (on that day SEC501 will be done in the afternoon).
- Final Exam (40%): to be determined but most probably it is going to be done in an extra hour after all lectures are finished.
- The exams will be conducted in class. Those who opted to attend remotely can take the exams online with camera recording and screen sharing.
- No written makeup exam will be given. In case of a major reason (health, family emergencies, etc.) oral and more difficult makeup exams will be given in Tuzla campus. Business related issues will not be accepted for makeup exams. All makeup exam requests and corresponding reasons must be communicated with Dr. Levi before the exam time.
- Programming Assignments/takehome exams (25%): There will be 4-5 programming assignments (not of equal weight) and all of them will be considered in grading. Functionality of a programming assignment is the main criteria in grading. The grade will not be based on how big/small is the mistake done, but its effect in the result.

We will take attendance and 70% is the minimum to be able to take the final exam.
Lecture notes will be shared via a Google drive folder. Check out SUCourse+

Plagiarism and Cheating will not be tolerated