Fall 2017: CIS 331 - Programming Languages (3 Credits)

MWF 10:10-11:00. SN 227.

Instructor

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Office Hours: MW 1-3, WF 9-10, or by appointment.

Course Description

Topics include formal specification of syntax, semantics, declarations, binding, allocation, data structures and data types, control structures, control and data flow, the implementation and execution of programs, functional, logical, and imperative programming. Other possible topics include object-oriented and service-oriented programming, as well as enterprise language features. Programming projects will provide experience in a number of important language features. Prerequisite: CIS 321.

Mandated Goals/Learning Outcomes

- LEAP goal – Intellectual and practical skills throughout the curriculum.
- Learning outcomes – Critical thinking and creative thinking.

Specific Course Goals

- Learn basics of programming language concepts, structures, and paradigms.
- Get familiar with new programming language features.
- Improve program design and implementation skills through practice.

Tentative Schedules

- Exam 1&2 – 10/11. Exam 3 – 11/8. Final exam – 12 – 2 pm on 12/11.
- Week 1 – 3. Concepts of programming languages. Introduction to Python.
- Week 4 – 6. Python control structures, data structures, and functions.
- Week 7 – 9. Object-oriented programming in Python. Files and exceptions.
- Week 10 – 15. Python libraries and projects. Individual programming projects.
- For detailed schedules and assignments with due dates etc., please visit
  http://webpages.shepherd.edu/zwang/331.html.

Textbook

Recommended Python Introduction Text - "Python Crash Course: A Hands-On, Project-Based Introduction to Programming" by Eric Matthes, No Starch Press, 2015. ISBN: 978-1593276034.

Optional Python Application Review Text with a Focus on Data Analytics - "Introduction to Computation and Programming Using Python: With Application to Understanding Data" by John V. Guttag, MIT Press, 2016. ISBN: 978-0262529624.

Evaluations

- Assignments/Projects – 50%
  No late assignment/project will be accepted without a documented excusable reason. Due dates are posted on the course website. Please start early.
- Three Midterm Exams – 30%
  The first missing midterm exam can be excused with an excusable reason such asan absence with a doctor's written notice. In this case the final exam carries its weight.
- Comprehensive Final Exam – 20%
  A missing final exam receives a zero. No exception.
- Final Grade – A ≥ 90%, B ≥ 80%, C ≥ 70%, D ≥ 60%, F < 60%.

Federally, HEPC, and Shepherd Mandated Policies

Disability Support Services
Disability Support Services at Shepherd University believes that every student should succeed, and works closely with students to meet their needs. Students requesting any disability related accommodation should contact the Disability Coordinator at 304-876-5122. This includes students with learning disabilities needing classroom accommodations, students requesting specific housing accommodations for health-related reasons, and all other disability accommodations. Accommodations need to be documented and provided to instructors. Please see http://www.shepherd.edu/disability for more information.

Academic Integrity
Each student in this course is expected to abide by the Shepherd University Academic Integrity Procedures in the Student Handbook – http://www.shepherd.edu/conduct.

Class Attendance
You must attend your classes regularly and engage in the requirements for each class; otherwise, your financial aid may be revoked either partially or in full. This would result in an amount due by you to the University immediately. Please refer to http://www.shepherd.edu/financialaid for more details.

Shepherd and CME Suggested Policies and Information

Free tutoring scheduling. Please refer to the academic support center's website at http://www.shepherd.edu/academic-support/.

Cell Phone and Text Messaging Policy – Please turn your cell phone off or put it in the silent mode. Please talk outside of the classroom if needed. No texting please.

Students in athletics – It is your responsibility to provide a letter signed by your coach listing all of the days in which you will be absent. Accommodations will be made only if the letter is received from your coach no later than the end of the first week of class.

The instructor reserves the right to update this syllabus, but only when necessary. In this case students will be notified in a reasonable and timely fashion.