La Salle University

MS Computer Information Science/MS Information Technology Leadership

CIS 626 Web Services Development

# INSTRUCTOR

## CONTACT INFORMATION

Instructor: Timothy Highley

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Office Hours: email; or planned discussion

Phone: 215.951.1722

## INSTRUCTOR BIO

I completed my studies at the University of Dayton and the University of Virginia. Currently, I am an associate professor at La Salle University. I have published research in a number of areas, including simulation, computer science education, and predictive prefetching. I teach a wide range of courses for the department, in both the graduate and undergraduate programs, but my primary teaching responsibilities are the programming courses and the more theoretical courses (e.g. Discrete Structures and Language Theory and Design).

## COURSE OVERVIEW

This course focuses on the development of web services for use by many different types of web applications. During the course, students develop basic programming techniques to implement functionality on the server side of the application. The course will use Python as its language of instruction. The first half of the course will focus on Python, and the second half will focus on developing web services using Python.

## COURSE DATES

The course runs from 1/14 to 5/11.

## PREREQUISITES

CIS 621. You should have some programming experience.

## COURSE OBJECTIVES

* Understand client-server architecture
* Explain the interaction between the server applications and the client requests
* Explain and use the development environment
* Invoke general web services
* Design server solutions using 3rd party services
* Build general applications using the development environment
* Generalize the functions to become service requests
* Develop server objects to hold the services
* Invoke the services based on the user request

## REQUIRED TEXTBOOKS AND MATERIALS

### TEXTBOOK

Introduction to Programming Using Python by Y. Daniel Liang   
Pearson Prentice Hall ISBN: 978-0-13-274718-9

### HARDWARE REQUIREMENT

Microphone, ear phones

### SOFTTWARE REQUIREMENT

Use of online resources including Blackboard, Wimba, LiveLab. Installation of Python. Use of Amazon Web Services, boto, and Django.

## RECOMMENDED READING/WEBSITES

Web sites will be added to the course weblinks. You are encouraged to add supplemental links to the class repository.

## TECHNICAL SUPPORT

Technical support information will be provided by academic computing. They may be reached by contacting 215.951.1788. You may also submit a help request by visiting <http://helpdesk.lasalle.edu>

## COURSE STRUCTURE

This course will be set up by giving a learning module for each week of class. You will be asked to read the directions and complete the components of the learning module. For most weeks, the typical learning module format will include most or all of the following:

* A document describing your instructions and goals for the week
* Work that should be completed prior to the weekly Wimba session:
  + Slide presentations to preview, which may also be discussed during the Wimba session
  + Programming examples to view
  + Reading assignment (textbook and/or web sources)
* Wimba session each week. Wimba sessions are planned to be held on Wednesday nights. In general, the major topics will be reviewing the slides and live programming. Students are expected to attend the Wimba session and/or watch the archive.
* Assigned short practice problems to be completed in LiveLab
* Longer programming assignment

All course work (except exams) will be done online. When working online, all discussions, assignments, conversations, and postings that are scheduled and due in a week’s time are expected to be completed in that week. The online week runs from midnight on Monday to 12:01 AM to Sunday evening 11:59 PM the following week. Learning modules will be available for your use by 12:01 AM on Monday. If you have a schedule issue, during the course, you need to contact me.

TENTATIVE COURSE SCHEDULE:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Week | Topic | Reading | Discussions | Programming |
| 1 | Course Introduction; Python: Setup and elementary constructs | Textbook, Chapters 1-3 |  | Assignment 1 |
| 2 | Python: Loops, conditions | Textbook, Chapters 4, 5 |  | Assignment 2 |
| 3 | Python: Functions | Textbook,  Chapter 6 |  | Assignment 3 |
| 4 | Python: Objects and Classes | Textbook, Chapters 7-9 |  | Assignment 4 |
| 5 | Python: Lists | Textbook, Chapters 10-11 |  | Assignment 5 |
| 6 | Python: Inheritance and Polymorphism | Textbook,  Chapter 12 |  | Assignment 6 |
| 7 | Python: Files, Tuples, Sets, Dictionaries | Textbook, Chapters 13, 14 |  | Assignment 7 |
| SPRING BREAK |  |  |  |  |
| 8 | Amazon Web Services |  |  |  |
| 9 – Midterm 3/20 | Amazon Web Services |  |  |  |
| 10 | boto: AWS and Python |  |  |  |
| 11 | boto: AWS and Python |  |  |  |
| 12 | Django: Python Web Framwork |  |  |  |
| 13 | Django: Python Web Framwork |  |  |  |
| 14 | Django: Python Web Framwork |  |  |  |
| 15 | Django: Python Web Framwork |  |  |  |
| 16 – Final 5/8 | (Finals week) |  |  |  |

## COURSE REQUIREMENTS

### PARTICIPATION

Active and informed participation in all in-class and online discussions and exercises, including group lab projects is expected.

### PROJECT/ASSIGNMENT DUE DATES

See schedule.

## LEARNER EXPECTATIONS

Students are expected to:

* Complete all readings and assignments by the due date
* Check the online course material at least 3 times a week (each week runs from Monday – Sunday; new material will be available each Monday at 12:01am)
* Participate actively in both online and in-class discussions
* Take initiative to review suggested reading sources and contribute items of interest to course discussions
* Engage the instructor immediately if any problems arise that may prevent the student from completing the above requirements

The instructor is expected to:

* Post all course materials and assignments in a timely manner
* Make him/herself available by email and/or online chat for student questions or concerns
* Check the course each day and contribute to the online discussion areas
* Provide each student with feedback on their progress in the course
* Grade and return all assignments in a timely manner

## EVALUATION AND ASSESSMENT OF LEARNER PERFORMANCE

Discussion, Online Participation, Practice Problems 20%

Homework Assignments 20%

Project 15%

Midterm 20%

Final Exam 25%

When an assignment is presented, a rubric will be included with the assignment. Students will be able to read the assignment guidelines and the grading expectation form (rubric).

## ACADEMIC HONESTY

A high level of responsibility and academic honesty is expected from our students and it is imperative that a student demonstrates high ethical standards in his/her academic work. Academic dishonesty includes, but is not limited to, submission as one’s own work or material that is not one’s own. Plagiarism from the web or from any other source is unacceptable and will be dealt with under the university’s policy on plagiarism. Students suspected of academic dishonesty are subject to disciplinary actions. Please refer to the LaSalle Student handbook. If you have a question about the authenticity of your work, LaSalle makes available to you a data base service called “Turn It In”. Your instructor will give you all the information to use it. The purpose of this service is to help you identify areas where you might improve our writing and source referencing. La Salle University MS Computer Information Science/MS Information Technology Leadership

## COURSE POLICIES

### LATE WORK POLICY

Complete your work on time.

### COMMUNICATION

Please be aware when you email me with a question or concern to allow 24 hours for a response. In most cases the reply will be much sooner. I believe that prompt and relevant feedback to your questions, concerns, and posts is of extreme importance.

Concerning email, you must put your NAME on the email and YOUR CLASS AND THE ASSIGNMENT OR ISSUE YOU ARE REFERRING TO IN THE SUBJECT LINE OR the reply may be delayed. Please comply with this request to ensure a prompt response from me.

Furthermore, feel free to post questions in discussion threads but address them specifically to me so I know it's something you want me to look at as soon as possible. Another mode of communication is the main discussion board (Water Cooler) in the course which allows us to ask general questions. I will be setting up a synchronous tool that student will be able to use for their own discussion.

### ETIQUETTE

Please understand that there is a certain type of etiquette that must be upheld in the class when posting in discussion areas and when turning in college work. To this end, refrain from slang, derogatory language, caps, and any potentially offensive forms of expression. Hence, when you approach your instructor or other students with questions or comments, you should always maintain a professional tone.

### DISCUSSION BOARD TIPS

* Most times you will be replying to the same topic each week. You will stay within the thread to keep the conversation threaded. This does not mean you cannot start your own topic within a topic. If so, start your own with a unique topic.
* Keep your responses short and to the point. Remember, everyone needs to read all of the posts. Try to keep within two paragraphs.
* Be articulate as you can and at the same time exercise brevity.
* If you want to post something with more than one point, break it up into two posts. This will allow someone to reply to only one point.
* If you post a comment and it does not sound the way you expect it to go back and respond to your own post to clarify your point.
* Go ahead and address someone personally. This is great for creating a sense that you are really “speaking” to that person. In fact, it helps all the readers follow the threads in the discussions easily.
* Feel free to be funny. Everyone likes humor - especially if you are relating to a personal experience.
* Paste Web links into your message to help prove a point or bring attention to a new way of thinking. Just a word of caution: don’t depend on Web links to prove your point, use it as supporting information only.
* You should always be involved in the discussion drawing from your own knowledge base and your own experiences.
* Be aware of your tone – irony doesn’t always work it could be completely misinterpreted. The professor and your classmates can not see your facial expressions online and your comment may be taken the wrong way.
* Your posts should be full sentences. Do not use the new IM language derived from writing instant messages on the Web. Not everyone understands the IM language. Besides your discussion responses are to be thoughtful and critical observations about the subject matter.
* Only use caps for emphasis otherwise it may sound as if you are yelling.
* Be aware of spelling and grammar. Use the same standards that you would in the classroom.
* Criticize the idea, not the person. Be constructive in criticism and offer alternatives.

### GRADES

The intention is to grade assignments within one week after the scheduled due date. I ask that you please refrain from asking questions on grades before the one week window.

### ASSIGNMENT SUBMISSION

Please be certain to turn work into the appropriate area under the appropriate title.