Course Syllabus – Spring-2016

Course Information

Course number: CS/SE 4337-501
Course Title: Organization of Programming Languages
Section number: 501
Credit Hours: 3
Class Schedule: Tues. & Thurs. 5:30pm - 6:45pm.
Classroom: CB3 Building - Floor 1 - Room 1.302

Professor Contact Information

Name: Dr. Ebenezer Oladimeji
Office: ECSS 4.403
Office hours: Thursdays 3:30pm – 5:00pm, or by appointment.
Telephone: (972) 883-4523.
Email: eao015100@utdallas.edu

E-mail: The easiest way to reach me is via e-mail. I make every effort to respond within a few hours. When e-mailing me, please e-mail from your UTD e-mail address. Please include your name, course and section either in the subject or the body of your e-mail (preferably on the first line if not in the subject). This will help me to address your e-mail as quickly as possible.

Teaching Assistant: TBA

Course Prerequisites: (CE 2336 or CS 2336 or TE 2336) with a grade of C or better or CS 3333) **AND**
(CE 2305 or CS 2305 or TE 2305) with a grade of C or better, **AND**
(CS 3340 or SE 3340 or TE 3340 or CE 4304 or EE 4304).

Course Catalog Description

CS 4337 - Organization of Programming Languages (3 semester credit hours) Principles of design and implementation of contemporary programming languages. Formal description including specification of syntax and semantics of programming languages. Language definition structures including binding, scoping, data types, control structures, parameter passing, abstraction mechanism, and run-time considerations. Design issues of imperative languages, object-oriented languages, functional languages and logic languages. Design, implement, and debug programs in various programming language paradigms. (Same as CE 4337) (3-0) S

Student Learning Objectives

After successful completion of this course, the student should be able to:

1. Ability to identify the characteristics of programming paradigms and phases of translation
2. Ability to understand the importance of formal syntax and semantics
3. Ability to understand the different forms of binding, visibility, scoping, and lifetime
4. Ability to understand the semantics of expressions and data types
5. Ability to understand the concepts of data abstraction, control abstraction and various parameter passing mechanisms
6. Understanding of the concepts of encapsulation, information hiding, inheritance, and polymorphism
7. Ability to understand the concepts of first class values, lists and recursion
8. Ability to understand the concepts of the functional programming paradigm and logic programming paradigm
9. Ability to design programs using the functional programming paradigm
10. Ability to design programs using the logic programming paradigm

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Required Textbooks

1. Concepts of Programming Languages, 11th Edition, Robert Sebesta.
   Addison Wesley, © 2016. ISBN-10: 0131394.02 • ISBN-13: 97801313943023

2. Learning PHP, MySQL & JavaScript, 4th Edition, Robin Nixon
   O'Reilly Media, Inc., 2014. ISBN 978-1-4919-1866-1.
   (*Also available online free via UTD ebook => Safari*)

Online Resources & Supplemental Text

- LISP. Common Lisp. http://www.clisp.org/ Reading http://www.apl.jhu.edu/~hall/lisp.html
- SCHEME: http://www.drscheme.org/ Tutorial http://www.scheme.com/tspl2d/
- SML of New Jersey: http://www.smlnj.org/ Tutorials: http://www.smlnj.org/doc/literature.html#tutorial• Elements of ML Programming, ML97 Edition, 2/E Jeffrey D. Ullman, Stanford University © 1998
- PROLOG: http://www.swi-prolog.org/ Tutorials: http://www.swi-prolog.org/
- Logic, Programming and Prolog (2ed) by Ulf Nilsson and Jan Maluszynski
- Lamp/Wamp – Apache, MySQL, PHP. wamp - http://www.wampserver.com/en/
- Python - https://www.python.org/
- UTD eLibrary Safari - http://www.utdallas.edu/library/resources/ebooks/ebooks.php

Course Policies

Grading Criteria: Your final grade will be determined from the following components:

Weekly Activities and Quizzes:	20%
4 Assignments (5% x 4):	20%
3 Tests (20 % x 3):	60%

There will be no extra credit work.

Final letter grades will be based on the following grading scale:

97+ : A+	93-96: A	92-90: A-
87-89: B+	83-86: B	80-82: B-
77-79: C+	73-76: C	70-72: C-
0-69: F		

Make-up Exams: Not allowed (or 20% penalty)
Late Work: Late submission or makeup is not allowed.
    (If imposed, there will be 20% reduction in grade per day [prorated] for any late submission of
    Assignment, and for maximum 3 days.)
Class Attendance: Required; Attendance will be taken
Classroom Citizenship: Respect for your classmates is necessary at all times

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Tentative Course Calendar/Important Dates

Date	Event
12-Jan-16 (Tue.)	First day of class
27-Jan-16 (Wed.)	Census Day
11-Feb-16 (Thu.)	Exam 1
15-Mar-16 (Tue.)	Spring Break (No class)
17-Mar-16 (Thu.)	Spring Break (No class)
24-Mar-16 (Thu.)	Exam 2
28-Apr-16 (Thu.)	Exam 3

Changes to these tentative dates will be announced via eLearning. Dates for the team presentations will be decided after teams are formed.

University Policies and Procedures

For detailed information about University policies and procedures related to this syllabus, please refer to: http://go.utdallas.edu/syllabus-policies.