TENTATIVE SYLLABUS

PROGRAMMING LANGUAGE CONCEPTS
COMP. 301 (1), 2020 FALL

Class Meeting Location	Online via Zoom
Class Meeting Times	MoWeFr 17:00-17:50
Instructor	TEVFİK METİN SEZGİN
Office Hours	Wed 15:00-16:00 or by appointment
Office Location	ENG274
Office Phone	
Email	mtsezgin@ku.edu.tr
Web Address	
Number of Credits	3
ETCS Credit	6
Prerequisites	COMP 200
Language	English

Assistants

Erhan Tezcan	etezcan19@ku.edu.tr	Mon 14:00-15:00
Merve Karakaş	mkarakas16@ku.edu.tr	Tue 11:30-12:30
Melih Özçelik	mozcelik17@ku.edu.tr	Tue 14:00-15:00
Gül Sena Altıntaş	galtintas17@ku.edu.tr	Mon 13:00-14:00
Cem Eteke	ceteke13@ku.edu.tr	Thu 12:00-13:00
Barış Batuhan Topal	baristopal20@ku.edu.tr	Mon 14:00-15:00
Alpay Sabuncuoğlu	asabuncuoglu13@ku.edu.tr	TBD
Harun Şaşmaz	hsasmaz16@ku.edu.tr	TBD

Course Description

Programming languages (i.e. C++, Java, Ada, Lisp, ML, Prolog), concepts and paradigms. Syntax, semantics. Abstraction, encapsulation, type systems, binding, run-time storage, sequencers, concurrency, control. Providing examples from functional, object-oriented and logic programming paradigms.

Course Objectives

Teaching core programming concepts including data representation, procedural representation, grammars, environment models, parsing, evaluation, parameter passing, continuation passing.

Learning Outcomes

Students taking this class will gain fluency in core programming concepts including data representation, procedural representation, grammars, environment models, parsing, evaluation, parameter passing, continuation passing.

Teaching Methods

Lectures.

Course Contents

Session Number	Starting Date	Topics
28	16/09/2019	Inductive Sets of Data Recursively Specified Data Deriving Recursive Programs Auxiliary Procedures and Context Arguments Exercises Data Abstraction Specifying Data via Interfaces Representation Strategies for Data Types Interfaces for Recursive Data Types A Tool for Defining Recursive Data Types Abstract Syntax and Its Representation Expressions Specification and Implementation Strategy LET: A Simple Language PROC: A Language with Procedures LETREC: A Language with Recursive Procedures Scoping and Binding of Variables Eliminating Variable Names Implementing Lexical Addressing State Computational Effects EXPLICIT-REFS: A Language with Explicit References IMPLICIT-REFS: A Language with Implicit References MUTABLE-PAIRS: A Language with Mutable Pairs Parameter-Passing Variations Continuation-Passing Interpreters A Continuation-Passing Interpreter A Trampolined Interpreter Exceptions Threads

Assessment Methods

The course will use catalog grading scale.
All percentages are subject to change within a margin of 5% during the semester. In addition, upto 5% additional bonus points may be added. Total number of quizzes, hence points per quiz will depend on the progress of the class as a whole, although you should expect about 10 quizzes.

Type	Description	Final Grade %
Quiz		20
Project		20
Midterm Test		25
Final Exam		30
Other	Participation and PS attendance	5
Total		**100**

Workload Breakdown

Type	Description	%
Lecture		30
Lab		30
Independent Study		40
Total		**100**

Sources

- http://www.eopl3.com/ **course text**
- https://sites.google.com/a/ku.edu.tr/comp301/ **course web site**

Academic Dishonesty

See the University policy and the declaration.