Department of Computer Science and Engineering
National Institute of Technology Calicut

Kozhikode - 673 601, Kerala, India

Tentative Course Details - Winter 2011-2012
CSU312 Principles of Programming Languages

(The instructor reserves the right to adjust the syllabus when required.)

Lecture:

Lecture Hours	: Mon 11.15am - 12.15pm, Tue 8.00am - 9.00am, Thu 9.00am - 10.00am
Lecture Hall	: ELHC 204/302

Instructor:

Name	: Vineeth Paleri	Saleena N
Office	: CSE201C CSE Building	CSE203A CSE Building
Office Hours	: By appointment	By appointment
Telephone	: 0495-2286802	0495-2286807
Email	: vpaleri@nitc.ac.in	saleena@nitc.ac.in

Course Objective:

- Study underlying concepts and constructs in programming languages in a formal setting - with formal semantics and type systems.
- To prepare one for further study in language design and implementation.

Text Books:

- Benjamin C. Pierce. Types and Programming Languages. MIT Press, 2002.
- David A. Schmidt. Programming Language Semantics. In Allen B. Tucker, Ed. Handbook of Computer Science and Engineering. CRC Press, 1996.
- Michael L. Scott. Programming Language Pragmatics. Elsevier, 2004.

Grading - Exams and Quizzes:

Mid-Term Exam I	:	20%
Mid-Term Exam II	:	20%
Quizzes	:	10%
Final Exam	:	50%

Course Schedule:

	Evaluation	Topic
Week 01		Programming Languages: Concepts and Constructs
Week 02		Untyped Arithmetic Expressions: Introduction
Week 03		Untyped Arithmetic Expressions: Syntax
Week 04	Quiz1	Untyped Arithmetic Expressions: Semantics
Week 05		Untyped Lambda Calculus: Basics
Week 06	Midterm1	
Week 07		Untyped Lambda Calculus: Semantics
Week 08		Programming in Lambda Calculus
Week 09		Typed Arithmetic Expressions: Types and Typing Relations
Week 10	Quiz2	Typed Arithmetic Expressions: Type Safety
Week 11		Simply Typed Lambda Calculus: Function Types
Week 12		Simply Typed Lambda Calculus: Typing Relations
Week 13	Midterm2	
Week 14		Simply Typed Lambda Calculus: Properties of Typing
Week 15		Extensions to Lambda Calculus: Unit Type, Let Bindings
Week 16		Extensions to Lambda Calculus: Pairs, Records
Week 17		Extensions to Lambda Calculus: Sums, Variants
Week 18		Extensions to Lambda Calculus: References, Exceptions (optional)

Grading Policy:

- Grading will be relative.
- Even though the grading will be relative, here is a tentative grade distribution: 90-100: S; 80-89: A; 70-79: B; 60-69: C; 50-59: D; 40-49: E; <40: F.
- There will be 2 quizzes of 5 marks each.
- Absence for exams/quizzes without prior written permission from the instructor will be equivalent to zero marks in the corresponding exam/quiz.
- There will be no makeup exams except in case of genuine reasons. In the event of such exceptional cases, the student must discuss the matter with the instructor and must get written permission before the date of exam.
- All issues regarding valuation of exams and quizzes must be resolved within one week after the marks are announced.

Standard of Conduct:

Each student is expected to adhere to high standards of ethical conduct, especially those related to cheating. Any academic dishonesty will result in zero marks in the corresponding exam or quiz and will be reported to the department council for record keeping and for permission to assign F grade in the course. The department policy on academic integrity can be found at:
http://cse.nitc.ac.in/sites/default/files/Academic-Integrity.pdf