Course Syllabus for CSE 497:
Advanced Programming Languages, Fall 2011

Gang Tan

Aug 30th, 2011

Instructor. Gang Tan, PL 329, 610-7583737, gtan@cse.lehigh.edu. Office hours: Weds 1:30-3pm or by appointment.

Time and location. TTh 2:35-3:50pm; Packard Lab 258.

Course website. A public website at http://www.cse.lehigh.edu/~gtan/teaching/cse497f11/. Supplementary materials will be posted in CourseSite.

Course category Compilers/Languages/Software Systems.

Course summary. The course is designed to acquaint graduate students with basic ideas behind modern programming language design, with a focus on functional languages. Topics include type systems, semantics, type inference, and others. Students are required to have some mathematical maturity including familiarity with proof techniques such as induction.

Textbook. The textbook is Types and Programming Languages by Benjamin Pierce, The MIT Press, 2002. A copy has been put on reserve at the Fairchild-Martindale Library.

Major topics covered.

- Lambda calculus
- Type systems
- Semantics
- Type safety
- Advanced types (e.g., recursive and universal types)
- Type inference
- Continuations
- Dynamic typing
Attendance. Attendance is expected. Students who have legitimate reasons for absence have to inform the instructor before the fact. You are responsible for all material presented in class whether present or not.

Homework. You will periodically receive homework assignments that are to be turned in and will be graded. You may discuss the homework with other students in the class, but you must do your own work; you may not copy someone else’s solution. Homework will be of two types, written assignments and programming assignments. Assignments and their due dates will be announced on the course website.

Late Homework. If you submit your homework within three days of the due date, we will deduct 25% of your score. Within a week, we will deduct 50%. We will not accept homework submissions after a week.

Exams. There will be a midterm exam and a final exam. Students may opt to do a final project instead of the final exam. You need to obtain a B+ or better grade to count this course toward your programming competency requirement.

Missed Exams. Make-up for missed exams will only be granted on a case-by-case basis.

Grading. Homework assignments 50%; Midterm 20%; Final exam/project 25%; Class participation 5%.

Feedback. The success of this course need a mutual communication between course staff and students. We welcome your feedback on anything related to the course, such as course material we covered, teaching techniques, and difficulties in finishing the homework and project. We need your input!

Academic Integrity. Academic integrity is crucial for the pursuit of knowledge. Please refer to Lehigh’s policy of academic integrity.

Accommodations for Students with Disabilities. If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, University Center C212 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.