CS 3304: Comparative Languages/Fall 2003

The goal of CS 3304 is to study historical and current issues in the design, implementation, and application of programming languages. The approach is to comparatively assess language design and implementation options and understand their influence on programming practice and methodology. Examples will be provided from a host of computer languages such as FORTRAN, Pascal, COBOL, C, C++, Java, Scheme, FORTH, Prolog, Modula, Ada, and Smalltalk.

Meeting Times	MWF 12:20-1:10pm, McBryde 126
Instructor	Naren Ramakrishnan, 1-8451, Torg 2160L
	naren@cs.vt.edu, http://www.cs.vt.edu/∼ramakris
Office Hours	Mondays, Wednesdays 2-4pm,
	or walk in any time.
Teaching Assistant	Saverio Perugini
	sperugin@csgrad.cs.vt.edu
Office Hours	Tuesdays, Thursdays 2:30-4:30pm.
Listserv	CS3304_91395@listserv.vt.edu
	(yes, the name is rather long winded.)
Course Web Page	http://courses.cs.vt.edu/∼cs3304

If you are unable to make the above times and need to meet with us, you can setup an alternative time via email. If you need adaptations or accommodations because of a disability (learning disability, attention deficit disorder, psychological, or physical), if you have emergency medical information to share with the instructor, or if you need special arrangements in case the building must be evacuated, please meet with the instructor ASAP.

Pre-requisites: The pre-requisite CS 2604 will be rigorously enforced. No exceptions. In addition, you are expected to have basic background in programming and the ability to code up decent sized projects from specifications.

Evaluation: There will be approximately 10-12 homeworks, which will involve a mix of theoretical questions and small programming puzzles. In addition, there will be four programming assignments, each of which will involve coding up a project in a different language. No late submissions will be accepted. There will be a midterm exam and a final (both closed book and closed notes). Detailed breakdown: homeworks (30%), programming projects (40%), midterm exam (10%), final (20%). The final exam will be comprehensive.

All assignments are designed by the instructor. In addition, the instructor grades both the exams individually. The homeworks and projects are graded by the teaching assistant. If you have an assignment that you feel has been graded incorrectly, please contact us, and we can discuss a re-grading if appropriate.

Keeping in Touch: Please use the listserv actively for discussions and exchanging ideas. Since it is created automatically by a central university system, any student registered in CS 3304 will be added to the mailing list. If you do not receive a test mail from the instructor by the end of the first week of classes, ensure that your email address is properly recorded in the university system.

Workload: The course moves at a very fast pace! The course will appear deceptively simple but, unless you start early, you will be unable to complete the assignments. The projects will involve a fair amount of design, so plan your schedule accordingly.

Electronic Accounts and Programming: You are expected to have accounts on the undergraduate lab network in McBryde Hall or some other equivalent facility. Familiarity with high-level programming is expected, in Windows and UNIX operating systems. You are also expected to be a good coder, and to choose appropriate data structures and algorithm design strategies. Some of the projects can get unwieldly and sound choice of data structures can be useful in completing them on time.

Book: 'Concepts of Programming Languages' by Robert W. Sebesta, Addison-Wesley, **Latest Edition**. This textbook is required. It is broad in coverage and will be a useful addition to your personal library, even if you decide to drop this course. In addition, we will use manuals for various programming languages such as Scheme, PROLOG as they become appropriate. More details on these will be provided as the course progresses.