

Course Information

CSE 307 – Principles of Programming Languages
Summer 2018

Online on SBConnect

Stony Brook University

Instructor: Dr. Paul Fodor

<http://www.cs.stonybrook.edu/~cse307>

Course Description

- *“Presents examples of important programming languages and paradigms such as LISP, ALGOL, ADA , ML, Prolog, and C++. Students write sample programs in some of the languages studied. The languages are used to illustrate programming language constructs such as binding, binding times, data types and implementation, operations (assignment data-type creation, pattern matching), data control, storage management, parameter passing, and operating environment. The suitability of these various languages for particular programming tasks is also covered.”*
- *Prerequisites: CSE 219 or CSE 260, and CSE 220 and the CSE major or permission of instructor.*

General Information

- Meeting Information:
 - Summer 1
(<http://www.stonybrook.edu/summer-session/calendar/>): May 29 – July 7. Lectures: MW 9:30am-12:55pm, online (synchronous on SBConnect). Course Web page: <http://www.cs.stonybrook.edu/~cse307>
- Blackboard will be used for assignments, grades and course material

General Information

- Exams (**in person**) at Stony Brook University
 - Midterm Exam: Wednesday, 6/13/18, 9:30AM-11:30AM, during class time, room Library W4550.
 - Final Exam: Friday, 7/6/18, 9:30AM-11:30AM, during class time, room Library W4550. "Classes follow a Wednesday Schedule on Friday".

Instructor Information

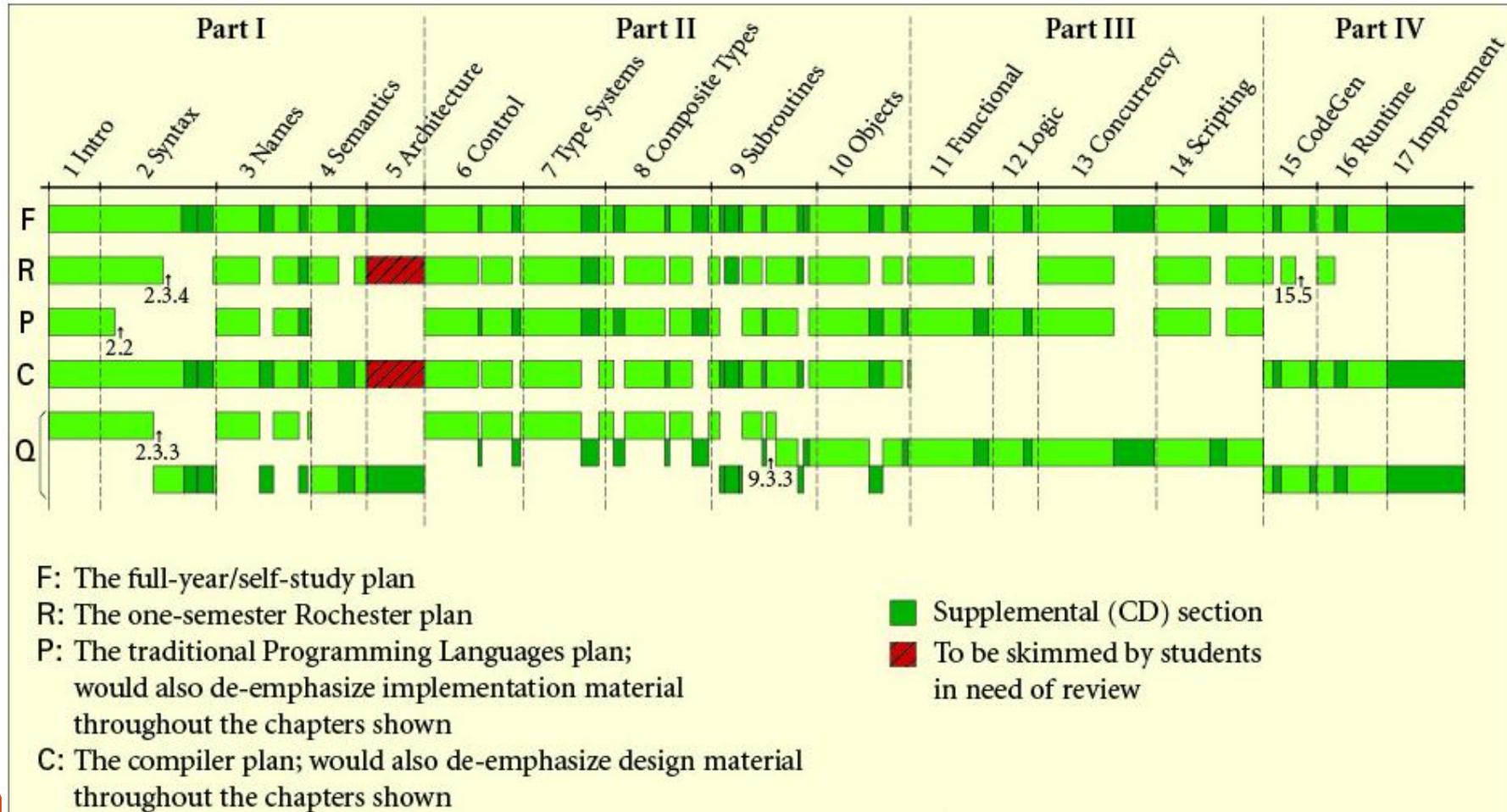
- Dr. Paul Fodor
214 New Computer Science Building
- Office hours: Tuesdays and Thursdays
3:30PM-5:00PM, online (on SBConnect).
- Email: paul (dot) fodor (at) stonybrook (dot) edu
 - Please include “CSE 307” in the email subject and your name in your email correspondence

Official Course Outcomes

- An ability to program in different language paradigms and evaluate their relative benefits.
- Knowledge of, and ability to use, language features used in current programming languages.
- An understanding of the key concepts in the implementation of common features of programming languages.

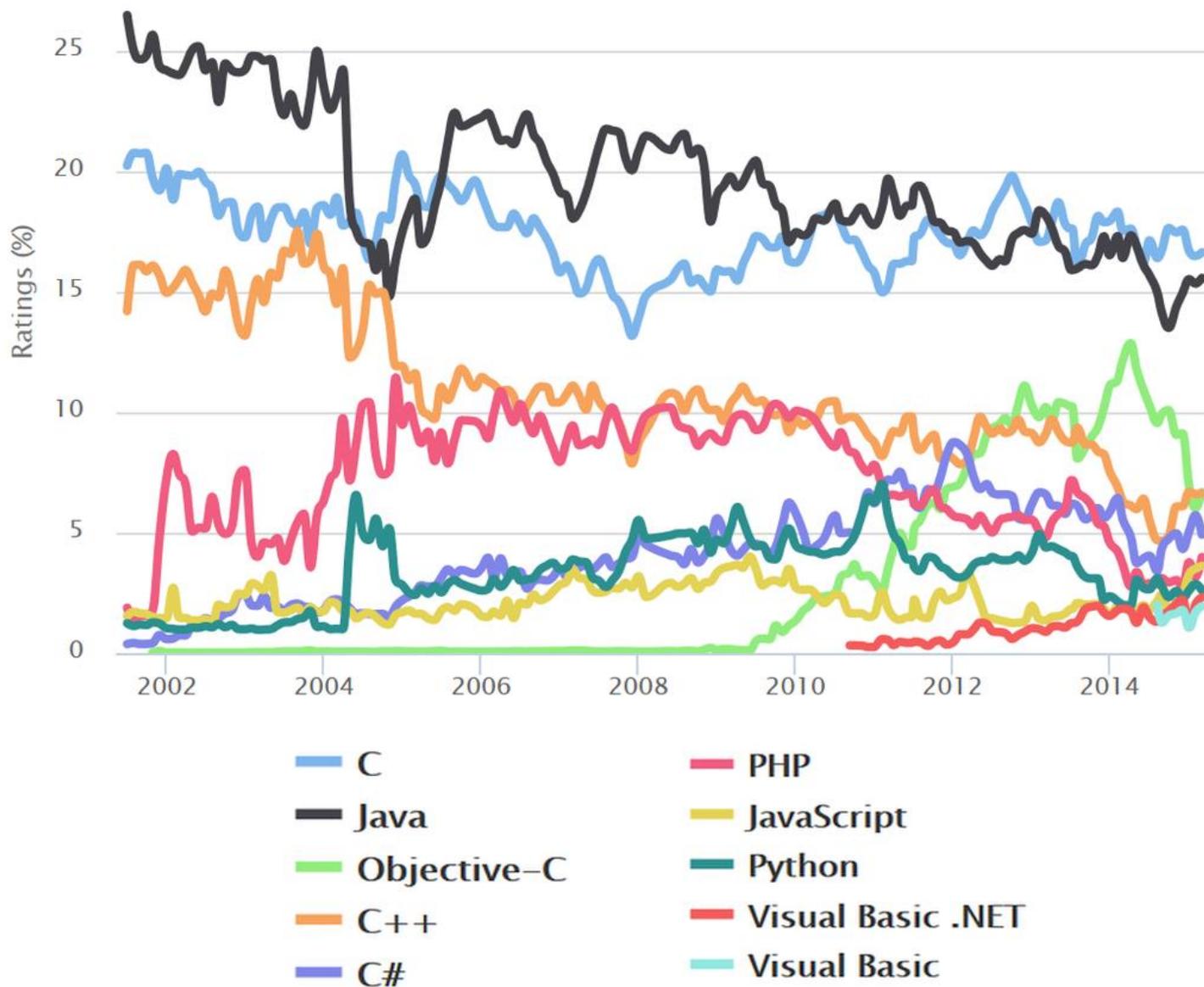
Textbook

- Programming Language Pragmatics by Michael Scott. Fourth Edition, Morgan Kaufmann Publishers, 2015.



Topics

- **Major Topics Covered in Course:**
 - Principles of Language Design
 - Specification of Language Syntax
 - Survey of Procedural and OO Languages
 - Intro. to Functional Programming
 - Intro. to Logic Programming
 - Programming Language Semantics
 - Values; Bindings; Types;
 - Programming Language Constructs
 - Expressions; Statements
 - Procedures and Environments
 - Parameter Passing



https://en.wikipedia.org/wiki/Measuring_programming_language_popularity

Programming languages used in most popular websites*

Websites	Popularity (unique visitors) ^[1]	Front-end (Client-side)	Back-end (Server-side)	Database	Notes
Google.com ^[2]	1,100,000,000	JavaScript	C, C++, Go, ^[3] Java, Python, Dart ^[4]	BigTable, ^[5] MariaDB ^[6]	The most used search engine in the world
YouTube.com	1,000,000,000	JavaScript	C/C++, Python, Java, ^[7] Go ^[8] PHP ^[9]	MySQL, BigTable, MariaDB ^{[6][10]}	The most visited video sharing site
Facebook.com	900,000,000	JavaScript	Hack, PHP, C++, Java, Python, Erlang, D, ^[11] Xhp ^[12]	MySQL, ^[13] HBase Cassandra, ^[14]	The most visited social networking site
Yahoo	750,000,000	JavaScript	JavaScript, ^[15] PHP	MySQL, PostgreSQL ^[16]	Yahoo is presently ^[when?] transitioning to n
Amazon.com	500,000,000	JavaScript	Java, C++, Perl ^[17]	Oracle Database ^[18]	Popular internet shopping site
Wikipedia.org	475,000,000	JavaScript	PHP, Hack	MySQL, MariaDB ^[19]	"MediaWiki" is programmed in PHP, runs c encyclopedia
Twitter.com	290,000,000	JavaScript	C++, Java, Scala, Ruby on Rails ^[20]	MySQL ^[21]	140 characters social network
Bing	285,000,000	JavaScript	ASP.NET	Microsoft SQL Server	
eBay.com	285,000,000	JavaScript	Java, ^[22] JavaScript ^[23]	Oracle Database	Online auction house
MSN.com	280,000,000	JavaScript	ASP.NET	Microsoft SQL Server	An email client, for simple use. Mostly kno
Microsoft	270,000,000				
LinkedIn.com	260,000,000	JavaScript	Java, JavaScript, ^[24] Scala	Voldemort ^[25]	World's largest professional network
Pinterest	250,000,000	JavaScript	Django ^[26] (a Python framework)	MySQL, Redis ^[27]	
Ask.com	245,000,000				
WordPress.com	240,000,000	JavaScript	PHP	MySQL	

https://en.wikipedia.org/wiki/Programming_languages_used_in_most_popular_websites

Assignments

- Homework assignments due on fixed dates and times.
 - **no late submission is permitted**
- All assignments should be submitted electronically
 - Blackboard and textbook Web site

Regrading of Homework/Exams

- Please meet with a TA or the instructor and arrange for regrading.
- **You have one week from the day grades are posted or mailed or announced**
- Late requests will not be entertained

Academic Integrity

- You can discuss general assignment concepts with other students: explaining how to use systems or tools and helping others with high-level design issues
- You **MAY NOT share** assignments, source code or other answers by copying, retyping, looking at, or supplying a file
 - Assignments are subject to manual and automated similarity checking (We do check! and our tools for doing this are much better than cheaters think)
- If you cheat, you will be brought up on academic dishonesty charges - we follow the university policy:
 - <http://www.stonybrook.edu/uaa/academicjudiciary>

Disability

- If you have a physical, psychological, medical or learning disability, contact the DSS office at Room 128 ECC. Phone 632-6748/TDD
- If you are planning to take an exam at DSS office, you need to tell me ahead of time for every exam.
- **All documentation of disability is confidential.**

Catastrophic events

- Major illness, death in family, ...
- Formulate a plan (with your CEAS academic advisor) to get back on track
- Advice
 - Once you start running late, it's really hard to catch up

This is a hard course

- in the summer...

Please

- Please be on time
 - Please show respect for your classmates
 - Please turn off (or use vibrate for) your cellphones
- ...
- On-topic questions are welcome

Welcome
and Enjoy!