

CS 3304

Comparative Languages

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Virginia Tech

About me

Research Interests

- Computer Human Information Interaction,
- Digital Libraries,
- Web Archive, Information Retrieval, Machine Learning and Data Mining, Digital Data Preservation

Course Info

- **Schedule:**
CRN 12809_201901, M W F 10:10 am – 11:00 am, MCB 113
- **Course website:**
<http://people.cs.vt.edu/prsardar/classes/cs3304-Spr19/>
- **My Office hours:**
McBryde Hall 122, M, W 12 pm – 1 pm, and by appointment
- **Prerequisites:**
CS3114 (Data Structures and Algorithms)
- **During the semester:**
Read the reading assignments before each class
Be present and participate in class
Do homework afterward

Course Description

- This course provides an in-depth study of current and historical issues in the design, implementation, and application of programming languages.
- Topics will vary from basic to advance in areas such as syntax, semantics, binding, data abstraction, exception handling, concurrency, and functional, logic and object-oriented programming.
- Some programming will be required to help you get the feel for different types of languages.

Course Objectives

The primary goals of this course:

- To give you the background to be able to evaluate the appropriateness of a programming language to an application
- To exposure to different types of languages, and
- To get you to the point where learning a new programming language is not an effort to be feared.

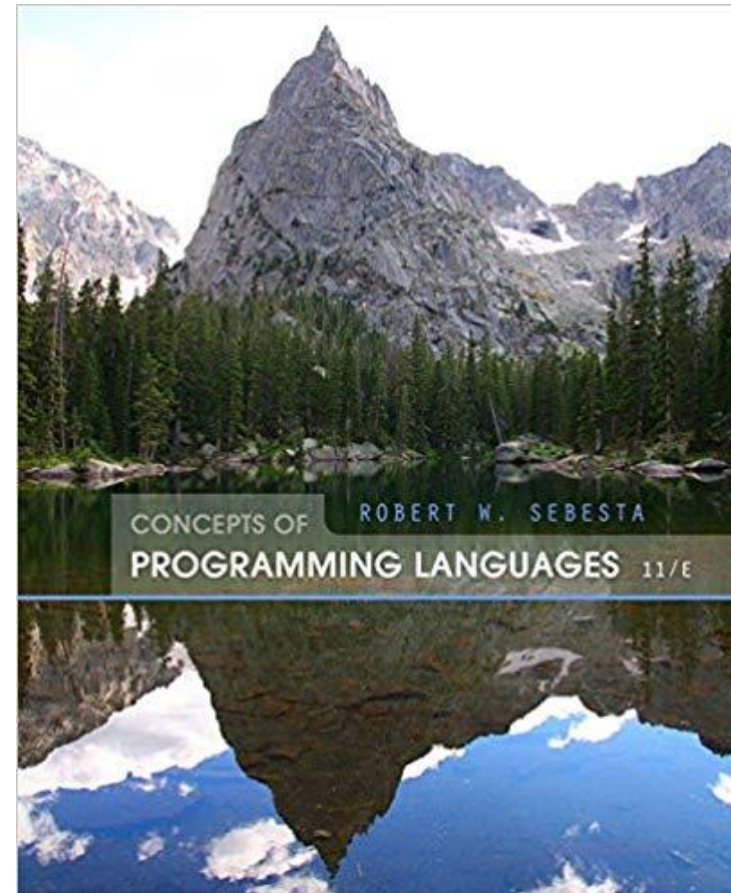
Textbooks and Supplementary Materials

The primary textbooks are: (required)

- Concepts of Programming Languages,
11th edition,
Robert W. Sebesta, Pearson.

Recommended references:

- Programming Language Pragmatics,
4th Edition, Michael L. Scott.



CANVAS

- Homework/Project submission
- Communication/discussion
- Grades

Give yourself plenty of time to figure out how to work in Canvas.

- If you feel like you have an issue that needs clarification, feel free to contact either me or the GTAs.

Graduate Teaching Assistants

GTAs:

– Prerna Juneja

prerna79@vt.edu

– Xianhao Jin

xianhao8@vt.edu

UTA:

– Li Huang

hli4@vt.edu

- No cell phone use in class

Grading Policy

Grading	
Attendance, in-class practice, quiz	10%
Midterm exam	20%
Homework	25%
Programming projects	25%
Final exam	20%

The course final grading scale is

Percentage	93-100	90-92	85-89	80-84	75-79	70-74	65-69	<65
Grade	A	A-	B+	B	C+	C	D	F

Homework

- Submission formats: **PDF (preferred)**, ASCII text, .doc, .docx or any readable format in Microsoft Word.
- Readability, clarity, and grammar are important
- You may not switch partners in the middle of an assignment
- Make one submission for the group
- State the contribution of EACH student to each problem
- No late assignments
- VT Honor code

- **Programming Projects:** submission guidelines will be posted with each project.

Tentative Topics

Topics	Chapter
Introduction and Language Evaluation	Chapter 1
History and Evolution	Chapter 2
Syntax and Semantics	Chapter 3, 4
Names and Typing	Chapter 5
Expressions and Assignment	Chapter 7
Control Structures	Chapter 8
Data Types	Chapter 6
Abstract Data Types (ADTs)	Chapter 11
Subprograms	Chapters 9, 10
Functional Programming	Chapter 14
Logic Programming	Chapter 15