# Course Schedule

## Spring 2021

The schedule is subject to change.

| Course Overview | | | |
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| **Week** | **Topic** | **Reading/ Video** | **Assignment** |
| Week #1   Jan 25 | Introduction to Programming Languages | Review the Syllabus and Schedule  Read [Chapter 1](http://web.archive.org/web/20150301083854/http:/pl.cs.jhu.edu/pl/book/dist/book/book.pdf) (Introduction)  Watch the video "[Most Popular Languages 1965-2019](https://www.youtube.com/watch?v=Og847HVwRSI)"  Review the article "[How programming languages got their names](https://dev.to/scottydocs/how-programming-languages-got-their-names-207e)"  Review the [website](http://tunes.org/wiki/programming_20languages.html) for a detailed list of programming languages with reference links  Work on Homework 1  Submit the Teaming Project Form | HW1 and Project released |
| Week #2 Feb 1 | Language Evaluation and Design Criteria | Review the lecture slides  Read the "Programming Language Preliminaries" notes  Review the practice quiz (answers are also provided) |  |
| Week #3 Feb 8 | Lexical Analysis  Regular Expressions  Finite State Machines | Review the lecture slides  Read Sections 1-2 from "[Lecture Notes on Regular Languages and Finite Automata](https://www.cl.cam.ac.uk/teaching/1011/RLFA/LectureNotes.pdf)" (University of Cambridge)  Review the practice questions about regular expressions and finite automata (answers are also provided) | HW1 due |
| Week #4 Feb 15 | Syntax  BNF grammars  Parse Trees  Abstract Syntax Trees | Review the lecture slides  Read the "Context Free Grammars" notes (Chapter 3 of the book "[Basics of Compiler Design](http://web.archive.org/web/20120915222417/http:/www.diku.dk/hjemmesider/ansatte/torbenm/Basics/basics_lulu2.pdf)").  Read [Chapter 1: Grammars](https://opendsa-server.cs.vt.edu/OpenDSA/Books/PL/html/Grammars1.html)  Read [Specifying Syntax](http://homepage.divms.uiowa.edu/~slonnegr/plf/Book/Chapter1.pdf)  Review the practice questions about BNF and Parse Trees | Project Phase 1 due |
| Week #5  Feb 22 | Functional Programming  Scheme  **2/17 - Deadline to withdraw from course with WP** | Review the lecture slides  Read [Functional Programming with Scheme](http://homepage.divms.uiowa.edu/~slonnegr/plf/Book/AppendixB.pdf)  Review Midterm Instructions and Topics | HW 2 released  **Midterm Exam 1** |
| Week #6  Mar 1 | Semantics  Attribute Grammars  Annotation Parse Trees | Review the lecture slides  Read [Attribute Grammars](http://homepage.divms.uiowa.edu/~slonnegr/plf/Book/Chapter3.pdf)  Review the practice problems and solutions | Project Phase 2 due |
| Week #7 Mar 8 | Axiomatic Semantics | Review the lecture slides  Read [Axiomatic Semantics](http://homepage.divms.uiowa.edu/~slonnegr/plf/Book/Chapter11.pdf)  Review the practice problems and solutions | HW 2 due |
| Week #8 Mar 15 | Axiomatic, Denotational, and Operational Semantics | Review the lecture slides  Watch the [10-minute Overview of k Framework](https://www.youtube.com/watch?v=eSaIKHQOo4c&feature=youtu.be)  Review the [K Framework](https://kframework.org/)  Read [Operational Semantics](http://homepage.divms.uiowa.edu/~slonnegr/plf/Book/Chapter8.pdf)  Read [Denotational Semantics](http://homepage.divms.uiowa.edu/~slonnegr/plf/Book/Chapter9.pdf) | Project Phase 3 due |
| Week #9 Mar 22 | Spring Break | No lecture this week |  |
| Week #10 Mar 29 | Review and midterm 2 | Review the topics for Midterm 2 | Project Phase 4 due (10-15 min presentation of Phases 1-4)  **Midterm Exam 2** |
| Week #11 Apr 5 | Static and Dynamic Binding | Review the lecture slides  Watch the videos with Static and Dynamic Scope Examples  Review the practice problems and solutions | Project Phase 5 due  HW 3 released |
| Week #12 Apr 12 | Symbol Tables | Review the lecture slides  Review the practice problems | Project Phase 6 due |
| Week #13 Apr 19 | LaTeX | Review the lecture slides  Read [LaTeX information on drawing graphics on Overleaf](https://www.overleaf.com/learn/latex/TikZ_package)  Watch the [tutorial for creating LaTeX graphics](https://www.overleaf.com/learn/latex/LaTeX_Graphics_using_TikZ:_A_Tutorial_for_Beginners_(Part_3)%E2%80%94Creating_Flowcharts)  Review the examples for drawing symbol tables and parse trees | HW 3 due |
| Week #14 April 26 | Project Presentations | Work on final project's deliverables and presentation  **Project Presentations** | Project Phase 7 due (Final presentation  of Phases 5-7 up to 15 min ) |
| Finals Week  (TBD) |  | **TBD- Study Day (No class)** |  |
|  | **Final Exam (TBD)** |