



**Project deliverables can receive full credit only if submitted electronically in full at 11:59 p.m. on the day due.** A 25% penalty will be applied if the assignment is not turned in on time. No credit is possible after one week. The instructor may waive one late penalty for students who are punctual in their class attendance.

I award +3% bonus to the first three students who upload their solutions electronically. In order to receive this bonus, your electronic submission must be in order, and your printed submission must be on time and include all required elements.

**Deliverables may be submitted late by approval of the instructor.** The instructor will allow this only for students who formally request permission to submit the program late. The request must be made by email, and should report the number of hours invested, summarize the work completed to date, include a description of problems encountered, and attach your current program listing. The request must be submitted by the original assignment deadline. Requests indicating little effort invested will be denied.

**Electronic devices may not be used during class** except by special arrangement with the instructor.

**Gum chewing** in professional settings is inappropriate and therefore not permitted in class. Compliance with student handbook policies is expected during class.

You may not use **generative AI tools** (i.e. Chat GPT, Bing Chat, Google Bard, etc.) in this course for any assignment without the professor's express permission. Should an AI tool be used with permission, its use must be documented.

Compliance with student handbook policies is expected during class.

## University Policies

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### Attendance Policy

You are expected to attend class and be on time per the standard University attendance policy: <https://home.bju.edu/bju-policies/>. If you come late or leave early, I will record a partial attendance mark if you missed at most 15 minutes of class. If you miss more than 15 minutes of class, you will be marked absent. If you exceed the 3 allowed absences for this class, you may be withdrawn from class.

For planned absences, notify me a week ahead of time by e-mail. Written assignments and scheduled tests should be completed before your planned absence; please contact me to make arrangements for doing so. It is your responsibility to check in advance of a planned absence to verify what is due.

For absences due to illness or emergency, contact me by the end of the day of your absence to indicate the reason for your absence and to arrange for making up any graded work without penalty. In these situations, you will be able to make arrangements for making up tests without penalty for the first occurrence. Each subsequent time a test is missed because of incapacitating illness or emergency, an additional 10 percent grade penalty for that test will be incurred.

### Accommodations for Students with Disabilities

If you have a documented learning disability or if you are impaired in some way (auditory, visual, cognitive, neurological, or physical), please let the instructor know this within the first week of the course so that any necessary adjustments can be made before you get behind.

### Academic Honesty and Integrity Policy

See the Computer Science Department's Academic Integrity Policy:

- <https://cs.bju.edu/academics/policies/academic-integrity-policy/>

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Schedule			
Date	Day	Class	Assignment
Jan. 11	Th	Introduction	
Jan. 16	T	Scanning	
Jan. 18	Th	Scanning	
Jan. 23	T	Syntactic Analysis	Phase 1
Jan. 25	Th	Recursive Descent Parsing ANTLR Parser Generation	Ch. 3 Homework
Jan. 30	T	Grammar Analysis	Ch. 2 Homework
Feb. 1	Th	LL Parsing	Phase 2 Checkpoint
Feb. 6	T	ALL Parsing	Ch. 4 Homework
Feb. 8	Th	Test 1	
Feb. 13	T	ANTLR Tree Processing	Phase 2
Feb. 13 – 16	T-F	<b>Bible Conference</b>	
Feb. 20	T	Symbol Table	
Feb. 22	Th	Semantic Processing	
Feb. 27	T	Code Generation	
Feb. 29	Th	Code Gen – Variables	Phase 3
Mar. 5	T	Code Gen – Control Structures	
Mar. 7	Th	Code Gen – Method Calls	
Mar. 12	T	Code Gen – Debugging	
Mar. 14	Th	<b>Test 2</b>	
Mar. 18-22	M-F	<b>Spring Break</b>	
Mar. 26	T	Code Gen – Runtime Storage	Phase 4
Mar. 28	Th	Semantics – Classes	
Apr. 2	T	Strings Semantics – Inheritance	
Apr. 4	Th	Code Gen - Inheritance	
Apr. 9	T	Garbage Collection	
Apr. 11	Th	Optimization	
Apr. 16	T	Optimization	
Apr. 18	Th	<b>TBA</b>	
Apr. 23	T	Peer Reviews	
Apr. 25	Th	Beyond Compilers	
Apr. 29-May 2	M- Th	<b>Final Exam Week</b>	

## Curriculum Information

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### Context

This course supports the following objectives of the Computer Science and Information Technologies programs:

CS 2. Use appropriate technology as a tool to solve problems in various domains

CS 5. Demonstrate an ability to communicate technological information effectively both in written and oral forms

CS 6. Demonstrate an ability to acquire new knowledge in the computing discipline

### Learning Objectives

Objective	Content	Assessment
Describe the steps and algorithms used by language translators (CS 8)	(Most lectures)	Test 1, 2, Final
Use compiler generation tools to assist in the construction of a compiler (CS 2)	Lecture 1, 3, 8	Project
Recognize the connection of formal models such as finite state automata to language definition through regular expressions (CS 8)	Lecture 2	Test 1
Discuss the types and effectiveness of optimization (CS 8)	Optimization Lecture	Final