

# Seminar: The Language of Proofs.

## General Information

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- Course prefix: CS
- Course number: 8001
- Section: OLP
- CRN: 56749
- Instructor: Gerandy Brito ✉
- Semester: Summer
- Academic year: 2026

## Course Description

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The Language of Proofs is designed to fulfill prerequisites to succeed in the Graduate Algorithms class of the OMSCS program. Students wanting to get introductory training in the formalism of proof writing will find this seminar useful.

## Required Material

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There is no required material for this seminar. We will recommend reading from two main books, which will support your learning experience:

- *Discrete Mathematics and its Applications* by Kenneth H. Rosen.
- *Algorithms* by S. Dasgupta, C. Papadimitriou, and U. Vazirani.

## Learning Outcomes

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By the end of the semester, you will be

- able to translate natural language into formal symbolic logic, and evaluate their truth value.
- able to write proofs using classical strategies including direct proof, proof by contradiction, and proof by contraposition.

- familiar with knowledge assumed pre-req for Graduate Algorithms. This includes big-O notation, binary search, Master Theorem, Dijkstra's Algorithm, and the Satisfiability Problem.

## **Attendance Policy**

The Seminar will meet once a week to discuss a topic relevant for Graduate Algorithm. Sessions are recorded, and you are expected to attend the sessions and/or watch the recordings. This is not a firm requirement, but the seminar is intended as a guided self-study. Students will have access to Ed Discussions to communicate with their peers and the course staff.

## **Grading policy and weighting**

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The seminar is set on a Pass/False scale. To pass, students will need to earn at least 70% over a series of quizzes, released during the semester.

## **Academic Integrity and Student Conduct**

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Students must adhere to Georgia Tech Student Code and Academic Honor Code. When uncovered, violations will be reported to the Office of Student Integrity and the assignment grade becomes 0. Violations will be reported to the Office of Student Integrity (OSI) for review.

## **Accommodations for Disabilities**

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If you have accommodations from the Office of Disability Services, please notify your instructor as soon as possible to discuss your course needs. Accommodations will take effect only after you provide the necessary documentation.

If you need accommodations but haven't set them up yet, contact Disability Services at 404-894-2563, [dsinfo@gatech.edu](mailto:dsinfo@gatech.edu), or visit <http://disabilityservices.gatech.edu>. They help coordinate reasonable accommodations for students with disabilities or temporary health conditions.

Accommodations are established through collaboration between you, your instructor, and Disability Services.