

Advice for
3-2 Combined Plan
CS Students

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Columbia University

Fall 2023

Advising



I am the CS advisor for Combined Plan students

Email me with questions

sedwards@cs.columbia.edu

Advising



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Your “class dean” at the Center for Student Advising (CSA) can advise on non-CS class questions

I know remarkably little about, e.g., English classes

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I know remarkably little about, e.g., English classes

The CS Advising Team can help with other bureaucracy

ug-advising@cs.columbia.edu

Time is of the Essence

You have exactly two years here

You must take 60 points at Columbia



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Typical class is 3 points

$60 \div 3 \div 4 = 5$ classes per semester

“Fifteen (15) to Finish”

Typical load: 4 CS + 1 elective



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Flaking out on classes, for whatever reason, is the number one problem of combined plan students

Extending your time here is nearly impossible

The SEAS Quick Guide

CS website → Academics → BS/BA Programs →
BS in Computer Science (SEAS)

career interest by pursuing additional programs in business administration, medicine, or other professional studies.

DEGREE PROGRAM QUICK GUIDES

BS in Computer Science (SEAS)

- [New BS Curriculum Quick Guide](#) – Students declaring in Spring 2024 or later *must* follow this.
- [Old BS Curriculum Quick Guide](#) – Those who declared prior to Spring 2024, may choose to follow the new curriculum or the old Tracks.

BS in Computer Engineering (SEAS)

CS Degree Requirements

CS Core

24 points

All are required:

1. Intro to CS (COMS 1004)*
2. Data Structures (COMS 3134)*
3. Advanced Programming (COMS 3157)
4. Discrete Math (COMS 3203)*
5. CS Theory (COMS 3261)
6. Fundamentals of Computer Systems (CSEE 3827)
7. Linear Algebra (COMS 3251, ..., or MATH UN2015)
8. Probability (STAT UN1201, ..., or MATH UN2015)

*You already took these three to enter the 3-2 program

CS Degree Requirements

CS Core

24 points

Area Foundation Courses (AFC) 12 points

Select 4 from

COMS W4111 Intro. Databases

COMS W4113 Dist. Systems

COMS W4115 Prog Lang Trans

COMS W4118 Operating Systems

CSEE W4119 Computer Networks

COMS W4152 Engineering SaaS

COMS W4156 Software Engin.

COMS W4160 Computer Graphics

COMS W4167 Comp. Animation

COMS W4170 UI Design

COMS W4181 Security 1

CSOR W4231 Analysis Algo.

COMS W4236 Comp. Complexity

COMS W4701 AI

COMS W4705 Natural Lang Proc.

COMS W4731 Computer Vision

COMS W4733 Robotics

CBMF W4761 Comp. Genomics

COMS W4771 Machine Learning

CSEE W4824 Comp. Architecture

CSEE W4868 SoC Platforms

No substitutions

CS Degree Requirements

CS Core

24 points

Area Foundation Courses (AFC) 12 points

Select 4 from

CS Electives

12 points

4 3000+ COMS / CSXX / XXCS courses, 3+ points

COMS 4995 and COMS 6998 are “topics” courses

Each section is a unique topic

You may take multiple 4995s or 6998s with different topics

CS Degree Requirements

CS Core

24 points

Area Foundation Courses (AFC) 12 points

Select 4 from

CS Electives

12 points

4 3000+ COMS / CSXX / XXCS courses, 3+ points

General Tech. Electives (GTE) 12 points

4 3000+ courses from these departments (3+ points)

Any SEAS department

Astronomy

Biomedical Informatics

Biological Sciences

Chemistry

Earth and Environ. Sciences

Eco, Evo. and Env. Biology

Mathematics

Physics

Psychology

Statistics

Economics

Course Names

COMS W4115 001 Programming Languages and Translators

COMS: Computer Science

CSEE: Joint Computer Science and Electrical Engineering

EECS: Joint EE and CS

CSOR: Joint CS and Operations Research

W: Can be ignored along with “E”

3xxx: Introductory undergraduate level

4xxx: Advanced undergraduate, MS, and PhD

6xxx: Graduate level; undergraduates need
instructor permission

001: Section number

Registering For CS Classes

4000- and 6000-level CS Courses are waitlist-only

Everybody joins the department- or instructor-managed waitlist

Students are enrolled based on **need**, not order in line

3-2 students often get priority because they are under significant time pressure

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“Blocked”: you can only join the waitlist

“Restricted”: you likely won't ever be allowed to enroll

Waiving Core Classes

If you took an acceptable equivalent course elsewhere, you can have the requirement waived for

- ▶ Linear Algebra
- ▶ Probability
- ▶ CS Theory (COMS 3261)
DFAs, NFAs, CFGs, Turing Machines, $O()$, P vs NP
- ▶ Fundamentals of Computer Systems (CSEE 3827)
Digital Design and Computer Architecture
Often separate classes elsewhere
- ▶ Advanced Programming COMS 3157
Systems Programming in C: threads and sockets

Waivers **do not** affect the 60 point requirement

You already have Intro to CS, Data Structures, and Discrete Math waived

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- ▶ Submit import requests through
<http://mice.cs.columbia.edu> (accounts coming)
- ▶ For help, email ug-advising@cs.columbia.edu

Double-Majoring and Minorng

In a word: **don't**

3-2 students don't have the time to complete another program's requirements

Future employers and graduate schools don't care

Do well in your CS courses; take electives for the rest

Better to do an independent project with a professor whom you can impress



Graduating



Columbia Student Services Online (SSOL)
<https://ssol.columbia.edu>

Among other things, has a Degree Audit Report (DAR)

An unreliable indicator of your progress

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Not to worry → CS Advising and I clear you to graduate

We follow your transcript and waived classes

Your Degree Progress Checklist

CS website → Academics → BS/BA Programs →
BS in Computer Science (SEAS) Checklist

DEGREE PROGRESS CHECKLISTS & CLEARANCE FORMS

BS in Computer Science (SEAS) Checklist

Access the Clearance Form via Google Docs. **Make a copy of this form** and enter your completed and/or planned courses. Name the file "Your Name UNI – SEAS BS Graduation Clearance Form" **Share with Lionmail so your advisors can review it.** Email ug-advising@cs.columbia.edu or your Faculty Advisor the link!

You can use this same form to check progress prior to graduation and update it each semester.

- **SEAS BS Checklist/Clearance Form – Spring 2024 and beyond**
- SEAS BS Checklist/Clearance Form – Tracks (Pre 2024)
- OLD Excel Progress Checklist



Computer Science

SEAS BS Graduation Clearance Form

February 2024

2021-2022 Bulletin

Name:

UNI:

CS Core Requirements:

Course	Semester and year	Grade	Substitution or Waiver <i>(specify course & faculty who approved)</i>
COMS W1004/1007: Intro CS or Honors			
COMS W3134/3137: Data Structures			
COMS W3157: Adv Programming			
COMS W3203: Discrete Math			
Linear Algebra Requirement: Select ▾			
COMS W3261: Comp Sci Theory			
CSEE W3827: Fund Computer Systems			
Probability Requirement: Select ▾			

NOTE: *Math 2015 Linear Algebra and Probability* may simultaneously satisfy both linear algebra and probability requirements without the need to take additional classes thus reducing the total number of points required.

4 Area Foundation Courses

Select from the dropdown menus, then enter the semester taken and grade earned.

Semester Completed

Grade



SEAS BS Gradua...



Request edit access



File Edit View Tools Help

- New
- Open Ctrl+O
- Make a copy**
- Share
- Email
- Download
- Rename
- Move
- Add shortcut to Drive
- Move to trash
- Version history

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Cor
SEA
Nam
UNI
CS C
Cours
COM
COM
COM
COM
Linea
COM
CSEE
Prob

Grade	Substitution or Waiver <i>(specify course & faculty who approved)</i>

NOTE: A
to take
4 Ar

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