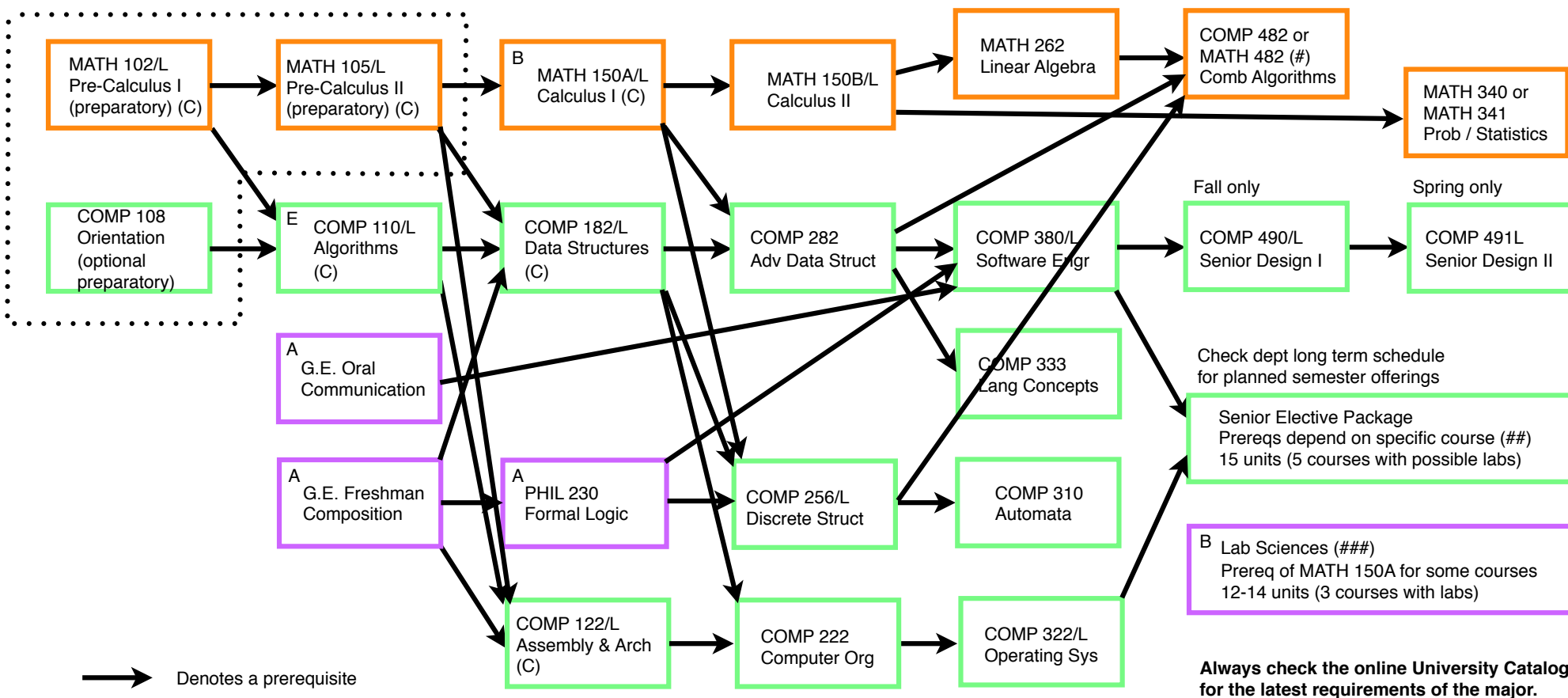


CSU Northridge, Computer Science Department

COMPUTER SCIENCE MAJOR

2019-20 Catalog Requirements



Always check the online University Catalog for the latest requirements of the major.

Must receive "C-" or better in all courses attempted at CSUN that are required by major unless otherwise stated; courses marked with (C) require "C" or better when taken at CSUN. All transfer courses must be "C" or better. The "C" or better requirement in MATH 102/L, 105/L and 150A/L is to satisfy COMP 110/L, 122/L, 182/L and 282 prerequisites.

A B E

Denotes major requirement that also satisfies G.E. Section A, B or E.

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Placement in courses leading to major requirements is dependent on high school preparation, MPT scores and current computer programming skills. Consult with an academic advisor for proper placement.

(#) MATH 482 has as one of its prerequisites MATH 262; COMP 482 does not have MATH 262 as one of its prerequisites.

(##) Check senior electives for their prerequisites, many require just COMP 380/L, some require just COMP 322/L, some require both COMP 322/L and COMP 380/L, and a few require COMP 310.

A Graduation Evaluation is required 2 to 3 semesters prior to planned date of graduation.

(###) Starting with 2019-2020, computer science majors under General Education Plan E are required to complete either BIOL 106/L or GEOL 110/112 if they wish to have the science requirements in the major also satisfy GE requirements.

Computer Science B.S. degree (120 units)

The required units are divided into:

Computer Science Core	
Lower Division.....	20 units
Upper Division.....	21 units
Mathematics.....	16 units
Formal Logic.....	3 units
Lab Sciences.....	12-14 units
Senior Electives in Computer Science.....	15 units
General Education/U.S. History/Government....	30 units
Free Elective Units.....	1-3 units

Lab Science Requirements (12-14 units)

Select one of the following **two semester lab science course sequences** 8-10 units

Physics 220A, 220AL, 220B, 220BL
Chemistry 101, 101L, 102, 102L (prerequisite of CHEM 100 might be required)
Biology 106, 106L, 107, 107L

Select an additional **third lab science course** from a field of study different from the one selected above..... 4-5 units

Biology 106, 106L	Geology 101, 102 (lab)
Chemistry 101, 101L	Geology 110, 112 (lab)
Geography 101, 102 (lab)	Physics 220A, 220AL
Geography 103, 105 (lab)	

Note: majors under General Education Plan E are required to complete either BIOL 106/L or GEOL 110/112 if they wish to have the science requirements in the major also satisfy G.E. requirements.

Senior Electives in Computer Science (15 units)

Areas of emphasis:

Artificial Intelligence	Data Mining and Analytics
Computer Graphics/Multimedia	Object Oriented Programming/Design
Computer Networks and Security	Operating Systems
Embedded Applications	Software Engineering
Human/Computer Interface	Web Engineering

Computer Science majors are required to take 15 units of senior electives. A student may wish to discuss their career goals with an advisor prior to selecting their senior electives. The advisor will suggest appropriate sequences of courses for the student to select from. All 400 and 500 level COMP courses (with the exception of 450, 482, 490, 491, 494, 496ALG and 499) and MATH 481A are pre-approved for inclusion as Senior Electives. Requests for inclusion of a 400 or 500 level course as a senior elective that does not meet the requirements stated above must be approved by the student's advisor and the Department Chair prior to enrollment in the course.

A First Year Sequence for Freshmen Needing Preparatory Courses (Taken as part of the preparatory sequence appearing on the other page. The preparatory sequence may extend the four-year program by a year. Check with your academic advisor regarding the proper course sequence.)

Semester 1:	Semester 2:
MATH 102	MATH 104
Stretch English	Stretch English or G.E. Fresh. Comp.
G.E. course	COMP 108
G.E. course	G.E. course

Grade and Degree Requirements in the Major

(Current catalog year course prerequisite requirements apply to all major course work not yet completed; major degree requirements are determined by the catalog year of the major; always apply the higher of the two standards.)

A. Transfer courses

"C" or better for all transfer courses

B. Courses taken at CSUN - rules depend on the academic year of the University

Catalog of your major [2015-2016 means from August 2015 through July 2016]; consult with the Dept Office if your catalog year is not listed; although every attempt has been made to accurately represent the following information, your responsibility is to follow the rules that appear in the appropriate University Catalog for the year of your major appearing in your DPR report.

- 2003-2006 Catalog years:** "C" or better in each of the eight courses required by the pre-major (this includes the G.E. A.1 and A.4 courses) and "C-" or better in all remaining courses required by the major ("C" or better in prerequisite math courses)
- 2006-2010 Catalog years:** Same grade requirements as 2003-2006 but major is reduced to 120 units when combined with G.E. Plan R and seven course pre-major
- 2010-2015 Catalog years:** Same grade requirements as 2003-2006; COMP 490/L & 491L replaced COMP 450, COMP 256/L replaced MATH 326, COMP 232 renumbered as COMP 333
- 2015-2016 Catalog year:** "C-" or better in all courses required by the major unless explicit course prerequisite requires "C" or better; pre-major removed; MATH 340 added as alternative to MATH 341; COMP 380/L prerequisites changed to COMP 282, PHIL 230 and GE oral comm; COMP 333 prerequisites changed to COMP 282
- 2016-2019 Catalog years:** COMP 482 created as alternative to MATH 482; changes to prerequisites for lower division MATH courses.
- 2019-2020 Catalog year:** campus adoption of G. E. Plan E requires students to take a life science course resulting in computer science majors having to complete either BIOL 106/L or GEOL 110/112 if they wish to have science requirements of major satisfy G.E. science.

C. Overall GPA requirements (to stay in good academic standing and for graduate)

- 2.0 or higher overall GPA for all courses taken at CSUN
- 2.0 or higher overall GPA for all courses taken (combination of CSUN & transfer)
- 2.0 or higher overall GPA for all upper division courses required by the major