

COMPUTER SCIENCE (CS TRACK) ROADMAPS

MILESTONES:

1. CMPS 221, 222, and 223 SHOULD be completed by the end of the FIRST year, if possible.
2. MATH 203 (third quarter Calculus) and at least one of MATH 330 or MATH 340 SHOULD be completed by the end of the second year, if possible. The reason for this is that most mathematics courses fall into the 9:30am-12:20pm timeblock and they will conflict with some upper-division computer science courses. If the student has to start with MATH 190/191 or MATH 192 then the mathematics schedule will be very tight in the first two years.
3. The Physics sequence, PHYS 221, 222 SHOULD be completed by the end of the second year, if possible. The reason for this is that this sequence falls in the 12:20pm-3:10pm timeblock and will conflict with some upper-division computer science courses. The sequence can be started in Fall or Winter.
4. MATH 204 and 330 are offered in Fall and Spring only.
5. MATH 340 is offered in Fall and Winter only.
6. CMPS 295, 320, and 360 are offered every OTHER quarter.
7. CENG 320 MUST be completed by the first quarter of the third year.

FRESHMAN ENTERING in ODD YEAR (e.g. 2011/12)

Odd			
Year 1	Fall (18)	Winter (15)	Spring (20)
	A2 - ENGL 110 B4 - MATH 201 CMPS 221 CMPS 150/CMPS 215 (1) CSUB 101 (2)	A1 - COMM 108 MATH 202 CMPS 222	A3 MATH 203 CMPS 223 CMPS 295
Even			
Year 2	Fall (16)	Winter (16)	Spring (15)
	B1,B3 - PHYS 221 (6) CMPS 312 Algorithms MATH 340	PHYS 222 (6) CMPS 350 Prog. Lang. CMPS 224	CMPS 335 Soft. Eng. MATH 330 C1
Odd			
Year 3	Fall (15)	Winter (15)	Spring (15)
	CENG 320 Digital C. CMPS 342 Database B2 - BIOL 100/201	CMPS 321 Comp. Arch. CMPS 376 Comp. Network C2	D1 D3 - PLSI 101 C3
Even			
Year 4	Fall (15)	Winter (15)	Spring (15)
	CMPS 360 Oper. Sys. Theme II - Phil 316 US History Reqt.	CMPS 356 AI Theme III D2 - ECON 202	CS Elective GRE CS 490

FRESHMAN ENTERING in EVEN YEAR (e.g. 2012/13)

Even			
Year 1	Fall (18)	Winter (20)	Spring (15)
	A2 - ENGL 110 B4 - MATH 201 CMPS 221 CMPS 150/CMPS 215 (1) CSUB 101 (2)	A1 - COMM 108 MATH 202 CMPS 222 CMPS 295	A3 MATH 203 CMPS 223
Odd			
Year 2	Fall (16)	Winter (16)	Spring (15)
	B1,B3 - PHYS 221 (6) CMPS 312 Algorithms MATH 340	PHYS 222 (6) CMPS 350 Prog. Lang. CMPS 224	CMPS 335 Soft. Eng. MATH 330 CENG 320 Digital C.
Even			
Year 3	Fall (15)	Winter (15)	Spring (15)
	C1 CMPS 342 Database B2 - BIOL 100/201	CMPS 321 Comp. Arch. CMPS 356 AI C2	CMPS 360 Oper. Sys. D3 - PLSI 101 C3
Odd			
Year 4	Fall (15)	Winter (15)	Spring (15)
	D1 Theme II - Phil 316 US History Reqt.	CMPS 376 Comp. Network Theme III D2 - ECON 202	CS Elective GRE CS 490

BAKERSFIELD COLLEGE EQUIVALENT REQUIRED COURSES

BAKERSFIELD COLLEGE	CSU BAKERSFIELD CS CMPS
ENGR B19C/C++ or COMS B25 COMS B35 COMS B27 N/A	CMPS 221 CMPS 222 and CMPS 223 CMPS 224 CMPS 295
PHYS 4A,4B	B1,B3 - PHYS 221,222
MATH 6A MATH 6B MATH 6C MATH 6D MATH 6E	MATH 201 MATH 202 MATH 203 plus MATH 204 (MATH 205 is optional at CSUB) MATH 330
COMM B1 ENGL B1a PHIL B7,B9 or ENGL B2 BIOL B3a or BIOL B11 ECON B1 or ECON B2 HIST B17a and POLS B1	A1 A2 A3 B2 D2 US Hist and D3 State Gov't

COMPUTER SCIENCE (CS TRACK) 2011/13 DEGREE REQUIREMENT CHECKLIST

Lower Division (26-30)

- _____ CMPS 150 (1) or CMPS 215
- _____ CMPS 221 Programming Fundamentals
- _____ CMPS 222 Object-Oriented Programming
- _____ CMPS 223 Data Structures and Algorithms
- _____ CMPS 224 Assembly Language Programming
- _____ CMPS 295 Discrete Structures

Upper Division required (50)

- _____ CMPS 312 Algorithm Analysis and Design
- _____ CENG 320 Digital Circuits
- _____ CMPS 321 Computer Architecture
- _____ CMPS 335 Software Engineering
- _____ CMPS 342 Database Systems
- _____ CMPS 350 Programming Languages
- _____ CMPS 356 Artificial Intelligence
- _____ CMPS 360 Operating Systems
- _____ CMPS 376 Computer Networks
- _____ CENG 490 Senior Project in Computer Science

Upper Division electives CMPS (select 1 400-level course or CMPS 371) (5)

Cognate Requirements (37)

- _____ MATH 201 Calculus I (satisfies B4)
- _____ MATH 202 Calculus II
- _____ MATH 203 Calculus III
- _____ MATH 330 Linear Algebra
- _____ MATH 340 Probability
- _____ PHYS 221 Classical Physics I - Mechanics (6 - satisfies B1, B3)
- _____ PHYS 222 Classical Physics II - Thermodynamics and E&M (6)

Lower Division General Education (55)

- _____ A1 - COMM 108
- _____ A2 - ENGL 110
- _____ A3
- _____ B2 - BIOL 100
- _____ C1, _____ C2, _____ C3
- _____ US History Requirement
- _____ D1
- _____ D2 ECON 202 (Macroeconomics)
- _____ D3 PLSI 101 (also satisfies State Government Requirement)

Upper Division General Education (15)

- _____ Theme I - waived for CMPS and CENG majors
- _____ Theme II - PHIL 316 (Ethics)
- _____ Theme III
- _____ Gender, Race, or Ethnicity (GRE)