**COMPUTER SCIENCE (CIS TRACK) 2013-15 DEGREE REQUIREMENT CHECKLIST**

**QUARTER UNITS: 180  CORE UNITS: 113**

### Lower Division (26)
- CMPS 211 Internet Programming and Web Design
- CMPS 150 (1) and CMPS 221 Programming Fundamentals
- CMPS 222 Object-Oriented Programming
- CMPS 223 Data Structures and Algorithms
- CMPS 295 Discrete Structures

### Upper Division required (52)
- CMPS 312 Algorithm Analysis and Design
- CMPS 335 Software Engineering
- CMPS 342 Database Systems
- CMPS 350 Programming Languages
- CMPS 356 Artificial Intelligence
- CMPS 360 Operating Systems
- CMPS 371 Computer Graphics
- CMPS 376 Computer Networks
- CMPS 394 Java: Client, Server, and Internet Programming
- CMPS 490A Senior Project I (3) and CMPS 490B Senior Project II (4)

### Advanced Elective (select 1 course from: CMPS 435, 442, 450, 456, 460, 471, or 476) (5)

### Other Electives (select 20 units of approved courses) (20)

### Additional Units (select 10 units of general university courses) (10)

### Cognate Requirements (10)
- MATH 140 Elementary Statistics (satisfies B4), or a higher-level (e.g. MATH 20x) math course
- MATH 192 Pre-Calculus II, or a higher-level (e.g. MATH 20x) math course

### Lower Division General Education (47)
- CSUB 101 (2)
- A1 - COMM 108
- A2 - ENGL 110
- A3
- B1,B3
- B2 - waived by NSME B-Comm (04-19-2013)
- C1, C2
- C3 - doublecounted by US History - CARS (03-21-2013)

### Upper Division General Education (10)
- Theme I - substituted by CMPS 490A&B - Senior Project I&II above
- Theme II - PHIL 316 (Ethics)
- Theme III - waived by CARS (03-21-2013)
- Gender, Race, and Ethnicity (GRE)
- COMM 304 Recommended or pass GWAR exam (0)