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|  | **Computer Science (Computer Information Systems) 2013-15 Catalog Advising Checklist** | |  | Name: |  |
|  | **Quarter Units: 180** | **Core Units: 112** |  | ID #: |  |

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| Lower Division Core (26) | | |  |
|  |  | CMPS 150 - Introduction to Unix (1) [see Q2S notes] | Advising Notes: |
|  |  | CMPS 211 - Internet Programming and Web Design [CMPS 2680] |  |
|  |  | CMPS 221 - Programming Fundamentals (grade of C- or better) [see Q2S notes] |
|  |  | CMPS 222 - Object-Oriented Programming (grade of C- or better) [see Q2S notes] |
|  |  | CMPS 223 - Data Structures and Algorithms (grade of C- or better) [see Q2S notes] |
|  |  | CMPS 295 - Discrete Structures [CMPS 2120] |
| Upper Division Core (51) | | |
|  |  | CMPS 312 - Algorithm Analysis and Design [CMPS 3120] |
|  |  | CMPS 335 - Software Engineering [CMPS 3350] |
|  |  | CMPS 342 - Database Systems [CMPS 3420] |
|  |  | CMPS 350 - Programming Languages [CMPS 3500] |
|  |  | CMPS 356 - Artificial Intelligence [CMPS 3560] |
|  |  | CMPS 360 - Operating Systems [CMPS 3600] |
|  |  | CMPS 371 - Computer Graphics [CMPS 3480] |
|  |  | CMPS 376 - Computer Networks [CMPS 3620] |
|  |  | CMPS 394 - Client, Server, Internet, and Hand-held Device Progr. [CMPS 3390] |
|  |  | CMPS 490A - Senior Project I (3) [CMPS 4910] |
|  |  | CMPS 490B - Senior Project II (3) [CMPS 4928] |
| Advanced Elective Course (5) - Choose from CMPS 435, 442, 450, 456, 460, 471, 476 | | |
|  |  | CMPS |
| General Elective Courses (20) | | |
| Choose from CMPS 215, 216, 224, or any other 300-/400-level CMPS or ECE course. | | |
| A minor may be used to offset some elective units with consent of a department advisor. | | |
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| Cognate Requirements (15) | | |
|  |  | MATH 140 - Elementary Statistics (or MATH 201 or higher) [MATH 1209 or 2200] |
|  |  | MATH 192 - Pre-calculus II (or MATH 201 or higher) {MATH 1040 or 1060] |
|  |  | PHIL 316 - Professional Ethics [PHIL 3318] |
| Additional Units (any university units) (8-13) | | |
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| General Education and University Requirements (50-57) | | |
|  |  | Foreign Language Requirement - 2 yrs. high school or 1 college course |
|  |  | CSUB 101 - Introduction to CSUB (2) |
|  |  | A1 - Recommend COMM 108 (grade of C- or better) |
|  |  | A2 - ENGL 110 (grade of C- or better) |
|  |  | A3 (grade of C- or better) |  |
|  |  | B1/B3 | Q2S Transition Notes: |
|  |  | B2/B3 - Waived for Computer Science majors | Programming sequence:  CMPS 2010 is CMPS 150+221+Half 222  CMPS 2020 is Half CMPS 222+All 223  Elementary Statistics cognate:  Either MATH 1209 or 2200 can be used for the MATH 140 requirement, but MATH 2200 is strongly recommended.  Pre-calculus II cognate:  Use either the combined pre-calculus course (MATH 1040) or stand-along pre-calculus II course (MATH 1060)  GE: Go to https://www.csub.edu/ge |
|  |  | B4 - Satisfied by MATH 140 or 192 (or higher) with grade of C- or better |
|  |  | C1 |
|  |  | C2, C4, or C5 |
|  |  | C3 - US History double-counts for C3 for Computer Science majors |
|  |  | US History for American Institutions (AI) requirement |
|  |  | D3/Government for AI requirement - Recommend PLSI 101 |
|  |  | Area D - 5 units waived for Computer Science majors |
|  |  | D1, D2, D4, or D5 |
|  |  | Theme 1 - Met by completing CMPS 490A & B |
|  |  | Theme 2 - Satisfied by PHIL 316 |
|  |  | Theme 3 - Waived for Computer Science majors |
|  |  | Gender, Race, and Ethnicity (GRE) (3-5) |
|  |  | GWAR - Pass exam or get C- or better incourse (COMM 304 - Tech. Writing recommended for course) |