Students apply for certification into the Bachelor of Science in Computer Science degree program after completing the following courses with a grade of C or better: Cpt S 121,122; Math 171, 172, 216; Phil 201; Phys 201.

No courses listed in this schedule of study may be taken on a pass/fail basis. All listed CptS courses, pre-requisites to these courses, and required electives must be completed with a grade of C or better. This policy applies to transfer courses as well as courses completed at WSU.

Requirements apply to all students certified after August 1, 2015. Students that certified prior to this date have the option to switch. Email your advisor from your WSU email address to make the switch, include your WSU ID number.

Requests for transfer credit for EECS courses must include a complete syllabus from the transfer institution.

**First Semester 15 credits**
- *CptS 121 Program Design & Development* 4
- *Phil 201 Elementary Logic [QUAN]* 3
- *Math 171 Calculus I* 4
- FL 203 4

**Second Semester 14 Credits**
- *CptS 122 Data Structures* 4
- FL 204 4
- *Math 172 Calculus II* 4
- *Math 216 Discrete* 3

**Third Semester 14 or 15 Credits**
- CptS 223 Advanced Data Structures 3
- CptS 260 Intro Computer Architecture 3
- *Phys 201 Engineering Physics [PSCI]* 4
- Math 220 Linear Algebra 2
- Math 273 Calculus III or
  - Math 301 Intro Math Reasoning 2 or 3

**Fourth Semester 16 Credits**
- CptS 302 Social & Professional Issues 3
- CptS 355 Program Language Design 3
- Phys 202 Engineering Physics 4
- Engl 298 3
- EconS 198 (subs for Honors 270) 3

**Fifth Semester 16 Credits**
- Cpts 317 Automata 3
- Cpts 322 Software Engineering Principles I 3
- Cpts 360 Systems Programming 4
- Stat 360 Applied Probability 3
- Honors 290 3

**Sixth Semester 15 Credits**
- Cpts 350 Design/Analysis Algorithms (formerly Cpts 450) 3
- *Cpts Track Elective* 3
- *Cpts Track Elective* 3
- Honors 370 3
- Honors 380 3

**Seventh Semester 16 Credits**
- Cpts 421 Software Design Project I 3
- *Cpts Track Elective* 3
- 1*Cpts Free Electives 3
- 2*Cpts Free Electives 3
- Honors 390 3

**Eighth Semester 15 Credits**
- Cpts 423 Software Design Project II [CAPS] 3
- *Cpts Track Elective* 3
- *Cpts Track Elective* 3
- 2*Cpts Free Electives 3
- 2*Cpts Free Electives 3

**COMPLETE WRITING PORTFOLIO**
- After 60 credit hours
- [http://www.juniorportfolio.wsu.edu/](http://www.juniorportfolio.wsu.edu/)

**COMPLETE EXIT INTERVIEW AND SURVEY**
- Must be complete for degree to be awarded
- Information provided during last 3 weeks of the semester

1Track Electives are listed on the back

*Requirement for certification

Unofficial document: always refer to the university catalog
Tracks: Consist of five courses (15 credits). A five-course sequence ensures there is a “substantial body” of coursework in a given track.

General Track
Required:
• CptS 323 Software Design
• CptS 460 Operating Systems
At least one course from:
• CptS 440 Artificial Intelligence
• CptS 443 Human-computer Interaction
• CptS 471 Computational Genomics
At least two courses from:
• CptS 427 Security
• CptS 451 Databases (prereq CptS 224)
• CptS 452 Compilers
• CptS 455 Networks

Software Engineering Track
Required:
• CptS 323 Software Design
• CptS 422 Software Engineering II (Testing)
At least three from the following:
• CptS 427 Security
• CptS 443 Human-computer Interaction
• CptS 451 Databases (prereq CptS 224)
• CptS 452 Compilers
• CptS 460 Operating Systems
• CptS 481 Python Software Construction (prereq CptS 224)
• CptS 483 Web Development

Systems and Networking Track
Required:
• CptS 455 Networks
• CptS 460 Operating Systems
At least three courses from:
• CptS 427 Security
• CptS 452 Compilers
• CptS 453 Graph Theory
• CptS 464 Distributed Systems
• CptS 466 Embedded Systems
• CptS 483 Concurrent Programming
• CptS 483 Introduction to Parallel Computing
• EE 324 Fundamentals of Digital Systems

Artificial Intelligence Track (coming in Fall 2016)
Required:
• CptS 440 Artificial Intelligence
• Applied Machine Learning (new course, use CptS 570 for now)
At least three courses from:
• CptS 483 Gerontology I (new undergraduate course, first offering Fall 2015)
• CptS 486(?) Gerontology II (new undergraduate course, first offering Spring 2016)
• CptS 483 Robotics
• Reinforcement Learning (current grad course, undergrad version will be offered Spring 2016)
• CptS 451 Databases (prereq CptS 224)
• High-Performance Computing (details to come)

Free Electives (prerequisites must also be met):
Four additional (12 credits) “free” technical electives must be taken within EECS or (outside of department if approved).
Choose from 300, 400, or 500 level courses in math, science, engineering, or in another department by approval.
All 300+ level CptS and EE courses are approved as Free Electives, but may not also be used as a Track Elective.
Below is a list of other preapproved electives.

CE 463 Engineering Administration
DTC 335 Digital Animation: Story, Narration and Production
Math 401 Introduction to Analysis
Math 402 Introduction to Analysis II
Math 415 Intermediate Differential Equations
Math 420 Linear Algebra
Math 421 Algebraic Structures
Math 440 Applied Mathematics I
Math 441 Applied Mathematics II

NOTE: Upper-division courses in other disciplines may be used for Free Electives with permission. Contact the CptS advisor if you are interested in taking a course that is not included on the above list.

Honors 290 is not required of students who have taken one of the following: Math 172, Chem 115, Phys 205 or 206.