Computer Science Minor Requirements

- A minor in Computer Science (CS) consists of a minimum of 18 hours of CS coursework with at least 6 hours at the 3000-4000 level.
- Students must have a 3.0 or higher TTU GPA to minor in CS.
- CS minor students require the approval of the CS Undergraduate Academic Advisor. For permits and questions, you may email the current advisor and/or call 806-834-1062.

**CS Core Curriculum Courses**

<table>
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<tr>
<th>Course #</th>
<th>Description</th>
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| CS 1411  | Programming Principles I  
Prereq: Dept. Approval                                                                                       |
| CS 1382  | Discrete Computational Structures  
Prereq: CS 1411                                                                                                       |
| CS 1412  | Programming Principles  
Prereq: CS 1411                                                                                                       |
| CS 2413  | Data Structures  
Prereq: CS 1412                                                                                                       |
| CS 2350  | Computer Organization and Assembly Language Programming  
Prereq: CS 1412 and ECE 2372                                                                                           |
| CS 2365  | Object Oriented Programming  
Prereq: CS 2413                                                                                                       |
| CS 3361  | Concepts of Programming Languages  
Prereq: CS 2413                                                                                                       |
| CS 3364  | Design and Analysis of Algorithms  
Prereq: CS 1382, CS 2413, and MATH 2360 (linear algebra)                                                               |
| CS 3365  | Software Engineering I  
Prereq: CS 2413, CS 2365, MATH 3342 (Statistics) *or equivalent*                                                          |
| CS 3375  | Computer Architecture  
Prereq: CS 2350 or ECE 3362                                                                                           |
| CS 3383  | Theory of Automata  
Prereq: CS 1382                                                                                                       |
| CS 4352  | Operating Systems  
Prereq: CS 3364 and CS 3375                                                                                           |
| CS 4354  | Concepts of Database Systems  
Prereq: CS 3364                                                                                                       |
| CS 4365  | Software Engineering II  
Prereq: CS 3365                                                                                                       |
| MATH 4330| Mathematical Computing (will take place of 3 hours of needed CS 3000-4000 level)  
Prereq: Consent of Undergraduate Programming Director of MATH dept.  
*course needs to be evaluated each semester by CS dept. to determine transferability* |

*Other courses may count as equivalents with departmental approval*

*CS electives may be taken for credit to a CS minor, however availability varies per semester and courses of interest are not guaranteed to be offered in the desired semester*

*Minor course selection excludes CSs 1300, 1303, 1305, and 4366*

*Tutoring is available in the Learning Center, Room 080 of Holden Hall*

*Having a background in the languages of C, C++, Java, and Python before starting CS courses will help immensely. The library, CS dept., and internet all have resources to help in this goal. We see increased student success if they don’t have to learn both the theory and language at the same time. A dedicated course is not needed, but we would push for at least a cursory familiarization*

*CS is very math oriented; although the department does not require minor students to progress in math to complete the minor, it is in the student’s best interest to have, at the very least, a good foundation in Algebra and a small knowledge of Calculus materials.*

The current advisor can be reached at  
thomas.kirwan@ttu.edu

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