College of Engineering



Jeremy Morris Assistant Professor of Practice Dept. of Computer Science & Engineering

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February 12, 2024

To: Arts & Sciences Curriculum Committee

Re: Changes to CIS Minor

We are requesting the following changes to the CIS Minor program, effective Summer 2024: Change the name of the minor to Computer Science (CS) Remove the requirement for CSE 2501 from the list of required courses for the minor Alter the list of recommended courses for minors to take as electives

The CSE faculty unanimously approved these changes.

Rationale for the name change: The Computer & Information Science minor (CIS) as currently constructed does not contain any actual Information Science within it. All of the required coursework is pure Computer Science. To better serve students enrolling in the minor, and those who read their transcripts, a decision was made to change the name of the minor to be the Computer Science minor, which more accurately reflects its contents.

Rationale for the removal of CSE 2501: Our minor is a comparatively large one with a requirement of 17 credit hours for students. One of the current required courses is a 1 credit hour ethics course that fulfils a role as a professional ethics course for our major students. This is a class designed to be taught in small sections to CIS & CSE majors who will become practitioners in various computing fields. In recent years enrollments in our major have grown quite large and the capacity of these courses has been strained. Because of our enrollment issues, and the need for majors to take this course, we have been waiving this requirement for minors due to their inability to actually enroll in any sections of this course. We would like to make this change permanent for all minors as we feel that the 16 hour minor is sufficient to give students the breadth of coverage we want to see in a minor. For students in the minor who are interested in the topics of this course we suggest PHIL 2338 as an alternative.

Rationale for the changes to our suggested elective courses: We previously listed a number of "tracks" that our minors could take. Unfortunately these tracks often contained courses that had pre-requisite requirements that our minor students could not attain without additional coursework that took them well beyond the coursework for a minor. Additionally, due to enrollment pressures as discussed above many of these pre-requisite courses were courses that minor students were consistently shut out of. In place of the tracks we now prefer to recommend a selection of courses that we can guarantee that students pursuing the minor will be able to enroll in. Minor students can still enroll in any CSE course for which they meet the pre-requisites, but the courses listed as recommended present a broad coverage of Computer Science topics, but also are courses that we can make guarantees that minors will be able to enroll in.

I have included both the new and current curriculum sheets for our minor with changes tracked.

If you have any further questions, please contact me at morris.343@osu.edu.

Syn Sincerely,

Jeremy Morris Assistant Professor of Practice Computer Science & Engineering CSE Undergraduate Studies Committee Chair

CURRENT

The Ohio State University College of Engineering

Computer and Information Science (CPTRINF-MN)

Department of Computer Science & Engineering, 395 Dreese Laboratories, 2015 Neil Avenue	Computer and Information Science minor program guidelines	
Columbus, OH 43210-1277; 614-292-1900 http://cse.osu.edu	Required for graduation No	
Students interested in applying computing principles and practices in another discipline (in which they may be completing a major degree program) should consider completing the Computer & Information Science (CIS) Minor program. The program described below applies to students who begin the minor courses in Spring 2015 or	 <u>Credit hours required</u> A minimum of 17 cr hrs. 1000 level courses shall not be counted in the minor. At least 6 cr hrs need to be at the 3000 level or above. <u>Transfer and EM Credit Hours Allowed</u> A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination toward the minor. 	
later. Students pursuing the minor do not have priority enrollment in CSE courses.	<u>Overlap with the GE</u> A student is permitted to overlap up to 6 cr hrs between the GE and the minor <u>Overlap with the Major and Additional Minor(s)</u>	
A. Prerequisites for the Minor: CSE 1222: Introduction to Computer Programming in C++ (3 cr hrs); <i>or</i> CSE 1223: Introduction to Computer Programming in Lava (3 cr hrs)	 The minor must be in a different subject than the major. The minor must contain a minimum of 12 hours distinct from the major and/or additional minors. 	
Java (3 cr hrs) B. Requirements for the Minor (min 17 cr hrs): 1. <u>Required courses (11 credit hours)</u> : a. Software: CSE 2122, Data Structures Using C++, (3 cr hrs); <i>or</i> CSE 2123, Data Structures Using Java (3 cr hrs). b. Foundations:	 <u>Grades Required</u> Minimum C- for a course to be listed on the minor. Minimum 2.00 cumulative GPA for all minor course work Course work graded Pass/Non-Pass cannot count on the minor. No more than 3 cr hrs of course work graded Satisfactory/Unsatisfactory may count towards the minor. 	
CSE 2321, Foundations I: Discrete Structures (3 cr hrs)	X193 Credits No more than 3 cr hrs	
 CSE 3430, Overview of Computer Systems For Non-Majors (4 cr hrs) 	<u>Minor Approval</u> Please meet with an academic advisor in the CSE Advising Office (374 Dreese).	
 d. Computing Ethics: CSE 2501, Social, Ethical, and Professional Issues in Computing (1 cr hr) 2. <u>Elective courses (minimum: 6 cr hrs)</u>: Must be chosen from CSE 2331, and CSE courses at the 3000-level or above; 	<u>Filing the Minor Program Form</u> Students are encouraged to have their major advisor or college/school counselor add the minor to their record as soon as they start taking courses toward the minor. The minor program form <i>must</i> be filed at least by the time the graduation application is submitted to a college/school counselor.	
 ii. Not more than 2 cr hrs of CSE 425X courses; iii. The following tracks are recommended: Graphics: CSE 3541, 3902 AI: CSE 3521; one of CSE 5522, 5523, 5524, 5525, 5526 	<u>Changing the Minor</u> Once the minor program is filed in the college office, any changes must be approved by the academic unit offering the minor.	
 Networking: CSE 3461; one of CSE 3901, 4471, 5462, 5472, 5473 Software Engineering: CSE 3231; one of 3232, 5234 	College of Arts and Sciences Curriculum and Assessment Services 154 Denney Hall, 164 Annie & John Glenn Ave http://artsandsciences.osu.edu	
 Databases: CSE 3241, 5242 Programming languages: CSE 3341; one of 3231, 3901 Theory: CSE 2331; one of 3321, 5351, 5361 Several of the courses listed under (2.iii) have additional prerequisites. 	Received 2/27/12 DH Updated 1/31/14 DH Rev approved CAA 11/4/15 Update 6/9/21 DH	

The Ohio State University College of Engineering

Computer and Information Science Com	puter Science (CPTRINF-MN COMPSCI-MN)	
Department of Computer Science & Engineering,	• 4471 – Information Security	
395 Dreese Laboratories, 2015 Neil Avenue	• 5052 – AI for non-majors	
Columbus, OH 43210-1277; 614-292-1900	Several of the courses listed under (2.iii) have	
https://cse.osu.edu	additional prerequisites.	Field Code Changed
	Computer and Information Science Computer	
Students interested in applying computing principles and	Science minor program guidelines	
practices in another discipline (in which they may be		
completing a major degree program) should consider	Credit hours required A minimum of 17 16 cr hrs. 1000 level	
completing the Computer & Information Science (CIS)	courses shall not be counted in the minor. At least 6 cr hrs	
Computer Science (CS) Minor program. The program	need to be at the 3000 level or above.	
described below applies to students who begin the		
minor courses in Spring 2015 Summer 2024 or later.	Transfer and EM Credit Hours Allowed	
	A student is permitted to count up to 6 total hours of transfer	
Students pursuing the minor do not have priority	credit and/or credit by examination toward the minor.	
enrollment in CSE courses.	Overlap with the GE A student is permitted to overlap up to	
A. Prerequisites for the Minor:	6 cr hrs between the GE and the minor	
CSE 1222: Introduction to Computer Programming in	o er his between the GE and the hintor	
C++ (3 cr hrs); <i>or</i>	Overlap with the Major and Additional Minor(s)	
CSE 1223: Introduction to Computer Programming in	• The minor must be in a different subject than the	
Java (3 cr hrs)	major.	
	The minor must contain a minimum of 12 hours	
B. Requirements for the Minor (min <u>17-16</u> cr hrs):	distinct from the major and/or additional minors.	
1. <u>Required courses (11 10 credit hours)</u> :	Creates Dequired	
a. Software:	 <u>Grades Required</u> Minimum C- for a course to be listed on the minor. 	
CSE 2122, Data Structures Using C++, (3 cr hrs);	 Minimum 2.00 cumulative GPA for all minor course work 	
or	 Course work graded Pass/Non-Pass cannot count on 	
CSE 2123, Data Structures Using Java (3 cr hrs).	the minor.	
b. Foundations:	• No more than 3 cr hrs of course work graded	
CSE 2321, Foundations I: Discrete Structures (3	Satisfactory/Unsatisfactory may count towards the	
cr hrs)	minor.	
c. Systems: CSE 3430, Overview of Computer Systems For		
Non-Majors (4 cr hrs)	X193 Credits No more than 3 cr hrs	
d. Computing Ethics:	Miner Americal Disco servit the CC Hedenser ducts Advising	
CSE 2501, Social, Ethical, and Professional	<u>Minor Approval</u> Please email the CS Undergraduate Advising Office at compsciadvising@osu.edu to request a minor	
Issues in Computing (1 cr hr)	program form meet with an academic advisor in the CSE	
2. <u>Elective courses (minimum: 6 cr hrs)</u> :	Advising Office (374 Dreese).	
i. Must be chosen from CSE 2331, and CSE		
courses at the 3000-level or above;	Filing the Minor Program Form Students are encouraged to	
ii. Not more than 2 cr hrs of CSE 425X courses;	have their major advisor or college/school advisor add the	
iii. The following tracks courses are recommended:	minor to their record after completion of MATH 1151	
• Graphics: CSE 3541, 3902	(Calculus 1) and either CSE 1222 or 1223. as soon as they	
• <u>AI: CSE 3521; one of CSE 5522, 5523,</u>	start taking courses toward the minor. The minor program form <i>must</i> be filed at least by the time the graduation	
5524, 5525, 5526	application is submitted to a college/school advisor.	
 Networking: CSE 3461; one of CSE 3901, 	approaction is submitted to a conego senior advisor.	
4 471, 5462, 5472, 5473	Changing the Minor Once the minor program is filed in the	
 Software Engineering: CSE 3231; one of 	college office, any changes must be approved by the academic	
3232, 5234	unit offering the minor.	
• Databases: CSE 3241, 5242		
 Programming languages: CSE 3341; one of 3231, 3901 		
• Theory: CSE 2331; one of 3321, 5351, 5361	College of Arts and Sciences Curriculum and Assessment Services	
 Theory. CSE 2351, 018 01 3321, 3351, 3301 2331 – Foundations II 	306 Dulles Hall, 230 Annie & John Glenn Ave	
 <u>2551 – Foundations II</u> <u>3241 - Introduction to Database Systems</u> 	http://artsandsciences.osu.edu	
- 5211 Introduction to Database Systems		

Received 2/27/12 DH Updated 1/31/14 DH Rev approved CAA 11/4/15 Update 6/9/21B DH

The Ohio State University College of Engineering

Computer Science (COMPSCI-MN)

Department of Computer Science & Engineering, 395 Dreese Laboratories, 2015 Neil Avenue Columbus, OH 43210-1277; 614-292-1900 https://cse.osu.edu

Students interested in applying computing principles and practices in another discipline (in which they may be completing a major degree program) should consider completing the Computer Science (CS) Minor program. The program described below applies to students who begin the minor courses in Summer 2024 or later.

Students pursuing the minor do not have priority enrollment in CSE courses.

A. Prerequisites for the Minor:

CSE 1222: Introduction to Computer Programming in C++ (3 cr hrs); *or*

CSE 1223: Introduction to Computer Programming in Java (3 cr hrs)

B. Requirements for the Minor (min 16 cr hrs):

- 1. <u>Required courses (10 credit hours)</u>:
 - a. Software: CSE 2122, Data Structures Using C++, (3 cr hrs); *or*

CSE 2123, Data Structures Using Java (3 cr hrs).

- b. Foundations: CSE 2321, Foundations I: Discrete Structures (3 cr hrs)
- c. Systems:

CSE 3430, Overview of Computer Systems For Non-Majors (4 cr hrs)

- 2. <u>Elective courses (minimum: 6 cr hrs)</u>:
 - i. Must be chosen from CSE 2331, and CSE courses at the 3000-level or above;
 - ii. Not more than 2 cr hrs of CSE 425X courses;
 - iii. The following courses are recommended:
 - 2331 Foundations II
 - 3241 Introduction to Database Systems
 - 4471 Information Security
 - 5052 AI for non-majors

Computer Science minor program guidelines

<u>Credit hours required</u> A minimum of 16 cr hrs. 1000 level courses shall not be counted in the minor. At least 6 cr hrs need to be at the 3000 level or above.

Transfer and EM Credit Hours Allowed

A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination toward the minor.

<u>Overlap with the GE</u> A student is permitted to overlap up to 6 cr hrs between the GE and the minor

Overlap with the Major and Additional Minor(s)

- The minor must be in a different subject than the major.
- The minor must contain a minimum of 12 hours distinct from the major and/or additional minors.

Grades Required

- Minimum C- for a course to be listed on the minor.
- Minimum 2.00 cumulative GPA for all minor course work
- Course work graded Pass/Non-Pass cannot count on the minor.
- No more than 3 cr hrs of course work graded Satisfactory/Unsatisfactory may count towards the minor.

X193 Credits No more than 3 cr hrs

<u>Minor Approval</u> Please email the CS Undergraduate Advising Office at <u>compsciadvising@osu.edu</u> to request a minor program form

Filing the Minor Program Form Students are encouraged to have their major advisor or college/school advisor add the minor to their record after completion of MATH 1151 (Calculus 1) and either CSE 1222 or 1223. The minor program form *must* be filed at least by the time the graduation application is submitted to a college/school advisor.

<u>Changing the Minor</u> Once the minor program is filed in the college office, any changes must be approved by the academic unit offering the minor.

College of Arts and Sciences Curriculum and Assessment Services 306 Dulles Hall, 230 Annie & John Glenn Ave.. http://artsandsciences.osu.edu

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