



Memo

To: Randy Smith, Vice Provost for Academic Programs

From: Rosie Quinzon-Bonello, Assistant Dean for Curriculum and Assessment

Date: Feb 14, 2024

Re: Informational Item – Revision to the Information & Computation Assurance Specialization (ICA) in the Computer Science and Engineering undergraduate program.

On February 12, 2024, the College of Engineering Committee for Academic Affairs reviewed and approved the proposal to revise the Information & Computation Assurance Specialization (ICA) in the Computer Science and Engineering undergraduate program. As a designated National Center for Academic Excellence (NCAE) in Cybersecurity education, CSE's ICA specialization was required to align with recently updated NCAE's Program of Study (POS).

This program change will affect all CSE students entering OSU Autumn 2024 and beyond. Current students pursuing the ICA specialization will be allowed to complete the specialization under its current requirement or opt into the new format.

Details for this revision can be found in the attached proposal.

Thank you,

Rosie Quinzon-Bonello



February 2, 2024

To: Boyd Panton, CCAA Chair

Re: Change to CSE Program

We are requesting the following change to the CSE Program effective Summer of 2024:

Update our CSE Specialization sheet with new requirements for students taking the Information & Computation Assurance Specialization

The CSE Faculty voted unanimously to approve this change on 1/29/2024.

Currently students in our CSE program are required to select a Specialization as part of their degree. Our list of specializations includes a program for Information and Computation Assurance. We are also designated as a National Center for Academic Excellence in Cybersecurity education and as part of this designation our Information and Computation Assurance (ICA) specialization is required to align with the NCAE's Program of Study (POS). The requirements for this coursework has recently changed and we need to update our ICA Specialization to keep them in alignment. We would like to have this change in our ICA specialization effective for students entering the University starting Autumn of 2024.

This specialization plan now requires more courses than the previous iteration. Specializations in our department generally require 3 courses (usually 9 credit hours) while this specialization will require 6 courses (19 credit hours). However, 3 of the required courses (CSE 3241, 3461, and 3901 - marked in green on the new specialization sheet) overlap with required course choices that students need for the major. This specialization path dictates which of the choices in each of the three related "pick lists" the students taking this specialization must take rather than being extra coursework. This leaves 3 courses (9 hours) of specialization coursework that does not overlap with other requirements, which is consistent with our other specializations. As such this change will not impact the number of credit hours required for students in this specialization to graduate.

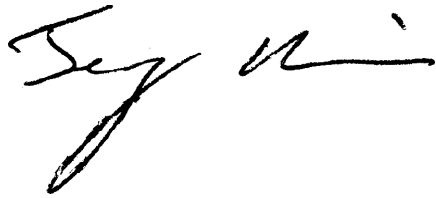
Students enrolled before Autumn of 2024 will be allowed to complete the specialization under the current requirements. They will also be allowed to opt-in to the new requirements if they choose to have a set of coursework that is consistent with current cybersecurity guidelines. Since as described above the extra courses in the specialization involve student choice of pick-list courses that students in the ICA specialization were already encouraged to take this should not be a burden on students who choose to opt-in to this new path.

I have included both the new and current Specialization information sheets for our CSE program so you can see the changes.

Link to more information about CS&E's designation as a CAE-CD: <https://cse.osu.edu/current-students/undergraduate/it-entrepreneurship/center-academic-excellence-cybersecurity-education-cae-cd>

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

Sincerely,

A handwritten signature in black ink, appearing to read "Jeremy Morris". The signature is written in a cursive style with a long, sweeping underline.

Jeremy Morris
Assistant Professor of Practice Computer Science & Engineering



BS CIS/CSE Specialization Options

The BS CIS/CSE major must select and complete one of the following specialized options. The courses listed below may dictate CSE core choices and technical elective choices. To declare or change focus area please see the CSE academic advisors in DL 376. For questions about course content or selection please see your assigned faculty advisor.

Artificial Intelligence (AIT)

Required Courses

		Hours
CSE 3521	Survey of Artificial Intelligence I: Basic Techniques	3

Choose two of the following:

CSE 5523	Machine Learning and Statistical Pattern Recognition	3
CSE 5524	Computer Vision for Human-Computer Interaction	3
CSE 5525	Foundations of Speech and Language Processing	3
CSE 5526	Introduction to Neural Networks	3
CSE 5243	Introduction to Data Mining	3
CSE 5914	Capstone: Knowledge-Based Systems	4

Computer Graphics and Game Design (CGG)

Required Courses

CSE 3541	Computer Game and Animation Techniques	3
CSE 3902	Project: Design, Development, and Documentation of Interactive Systems	4

Choose one of the following:

CSE 5542	Real-Time Rendering	3
CSE 5543	Geometric Modeling	3
CSE 5544	Introduction to Data Visualization	3
CSE 5545	Advanced Computer Graphics	3
CSE 5546	Virtual Reality	3
CSE 5912	Capstone Design: Game Design and Development	4
CSE 5913	Capstone Design: Computer Animation	4

Database Systems and Data Analytics (DBA)

Required Courses

CSE 3241	Introduction to Database Systems	3
CSE 5242	Advanced Database Management Systems	3

Choose one of the following:

CSE 5243	Introduction to Data Mining	3
CSE 5523	Machine Learning and Statistical Pattern Recognition	3

Information and Computation Assurance (ICA)

Required Courses

CSE 3461	Computer Networking and Internet Technologies	3
CSE 4471	Information Security	3

Choose one of the following:

CSE 5472	Information Security Projects	3
CSE 5473	Network Security	3

Additional Recommended Courses: CSE 3901, 5351, 5432; relevant courses in business, economics or law



Computer Networking (CNT)

Required Courses

CSE 3461	Computer Networking and Internet Technologies	3
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Choose two of the following:

CSE 5432	Mobile Handset Systems and Networking	3
CSE 5462	Network Programming	3
CSE 5463	Introduction to Wireless Networking	3
CSE 5472	Information Security Projects	3
CSE 5473	Network Security	3

Additional Recommended Courses: CSE 3901, 5351

Computer Systems (CSY)

Required Courses

CSE 3421	Introduction to Computer Architecture	3
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Choose one of the following:

CSE 5433	Operating Systems Laboratory	3
CSE 5441	Introduction to Parallel Computing	3

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CSE 3461	Computer Networking and Internet Technologies	3
CSE 5243	Introduction to Data Mining	3

Additional Recommended Courses: CSE 5434, 6421*, 6431*, 6441*

Software Engineering (SWS)

Required Courses

CSE 3231	Software Engineering Techniques	3
CSE 3232	Software Requirements Analysis	3

Choose one of the following:

CSE 3321	Automata and Formal Languages	3
CSE 5234	Distributed Enterprise Computing	3
CSE 5235	Applied Enterprise Architectures and Services	3
CSE 5236	Mobile Application Development	3

Individualized Option (IND)

Required Courses

Students should consult with their faculty advisors to identify the most reasonable set of courses that would be appropriate, given their specific interests.

*Courses only available by petition

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Information and Computation Assurance (ICA)

Required Courses

CSE 3241	Introduction to Database Systems	3
CSE 3461	Computer Networking and Internet Technologies	3
CSE 3901	Project: Design, Development, and Documentation of Web Applications	4
CSE 4471	Information Security	3
CSE 5473	Network Security	3
CSE 5474	Software Security	3

Additional Recommended Courses: CSE 5351, CSE 5472



Computer Networking (CNT)

Required Courses

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CSE 5463	Introduction to Wireless Networking	3
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CSE 5473	Network Security	3

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