

1. College and Academic Unit: CEIAS / Informatics, Computing and Cyber Systems

2. Course subject and number: CYB 126 Units: 4
[See upper and lower division undergraduate course definitions.](#)

3. Course Title: SECURE DESIGN I
(max 100 characters including spaces)

4. Catalog course description (max.200 words, excluding requisites):

Introduction to the foundations of computer software and digital hardware and defensive design strategies. Topics include programming, digital logic design, state machines, input validation, error handling, and bug mitigation.

Section I

Attach the proposed Syllabus of Record. Use the [Syllabus Requirements and Template](#) to ensure you have addressed syllabus aspects that will be reviewed by the College Curriculum and Assessment Committees. For topics courses, include a Syllabus of Record and a “sample topic” syllabus.

5. Justification for new course:

Describe how the course is related to short- and long-term plans of the academic unit. Ensure your description addresses at least one of the following:

- Improvements to the program (aligning curriculum to new or current curriculum standards or expectations, improving degree program progression, integration of learning from one course to another),
- Requirements or recommendations set forth by the program’s periodic review, or in preparation for its next review (addressing improvements based on input from external reviewers, industry trends, new or changing governmental regulations or external accreditation requirements),
- Academic unit goals identified in a unit’s Annual Report on Curriculum & Assessment,
- Evidence and assessment findings (assessments of student learning, needs assessments, student or employer surveys, comparisons to other programs in the field),
- Other important aspects of the academic unit and student learning not identified above.

This is a first course in secure design that introduces programming and digital logic from a security perspective. This supports a new program, BS in Cybersecurity, and aligns with ABET and ACM recommendations on teaching programming, Boolean and digital logic, and security. Specific alignment with program outcomes is described in the syllabus.

6. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes No

If yes, list and include the appropriate plan proposal.

Cybersecurity; B.S., Cybersecurity Minor

7. Proposed [Co-convene](#) with: _____

8. Proposed [Cross-list](#) with: _____

9. Proposed Prerequisites: _____

If prerequisites, list each pre-requisite and provide a clear description of how each pre-requisite supports the learning in the course.

10. Proposed Co requisites: _____

If co requisites, list each co-requisite and provide a clear description of how each co-requisite supports the learning in the course.

Questions 11-12 for Undergraduate Courses only:

11a. Is this course being proposed for Liberal Studies designation? Yes No

If yes, which [Liberal Studies Designation](#):

Aesthetic and Humanistic Inquiry Cultural Understanding Science
Social and Political Worlds Senior Capstone Junior Level Writing Course

If yes, which [Essential Skill](#):

(For Senior Capstone courses, please select 2 skills; For Junior Level Writing Courses, please select "Effective Writing"):

Critical Thinking Effective Writing Oral Communication
Scientific Inquiry Quantitative Reasoning Creative or Aesthetic Thinking

11b. Justification for proposed Liberal Studies Designation:

Describe how the new course addresses the [purpose](#) of the Liberal Studies Distribution Block, the Junior Level Writing Requirement, or the Senior Capstone course. Explain why this course belongs in the proposed area. **Explicitly reference** the specific ways in which the concepts, discourses, theories, methodological issues, and/or analytical tools of the Liberal Studies Requirement are addressed in this course. This may be copied and pasted from the Syllabus of Record's Course Purpose. At minimum, a summary of this information **must be provided** in the Syllabus of Record's Course Purpose.

12a. Is this course being proposed for Diversity Designation? Yes No

If yes, which [Diversity Designation](#):

US Ethnic Diversity Global Diversity

12b. Justification for proposed Diversity designation: