Framingham State University

Program Assessment Plan for Computer Science 2023-2028

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1) PROGRAM MISSION STATEMENT

The Department of Computer Science's mission is to educate students with up-to-date curricula and pedagogy in computer science and information systems, provide theoretical and hands-on training for designing, implementing, and analyzing software and information systems, and provide training for developing effective communication skills, understanding professional, social, and ethical responsibilities for pursuit of successful careers.

2) PROGRAM LEARNING OBJECTIVES

1) Analyze a problem and identify and define the appropriate computing requirements.
2) Design a computer-based system, process, component or program to meet specifications.
3) Implement and test a computer-based design using current techniques, skills, and tools.
4) Apply mathematical foundations, algorithmic principles, and computer science theory in the design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
5) Function effectively in teams to accomplish a common goal.
6) Understand professional, ethical, legal, security and social issues and responsibilities.
7) Use oral and written communication effectively.
8) Recognize the need for continuing professional development.

3) LEARNING OPPORTUNITIES

COURSE/Program Learning Objectives	Obj 1	Obj 2	Obj 3	Obj 4	Obj 5	Obj 6	Obj 7	Obj 8
CSCI 108 HTML and Javascript	L	L	L	N	S	N	M	N
CSCI 120 Introduction to Information Technology	L	N	N	N	M	N	M	N
CSCI 130 Computer Science I Using Java	L	S	S		L			
CSCI 200 CS Professional Seminar						L	L	M
CSCI 215 Computer Science II Using Java	M	S	S	N	M	N	M	L
CSCI 258 Introduction to Operating Systems Using UNIX™	M	L	S	N	N	L	L	L
CSCI 271 Data Structures	M	S	S	S	M	N	M	L
CSCI 317 Discrete Structures	N	N	N	N	M	N	M	N
CSCI 347 Analysis of Algorithms	S	S	L	S	M	L	M	N
CSCI 352 Computer Architecture & Assembly Language	L	L	L					
CSCI 360 Database Management	L	S	S		S		S	
CSCI 362 Software Engineering	S	S	S	M	S	S	S	S
CSCI 460 Theory of Computing	S	S	L	S	L	N	M	L
CSCI 465 Operating Systems Internals	S	S	S	N	N	L	L	L
CSCI 477 Computer Networking	M	S	L	N	N	L	L	L
CSG Electives (3 @300 or above)								
CSCI 300 Artificial Intelligence	M	M	L	M	M	L	M	L
CSCI 303 Web and Mobile Applications	M	M	M		L			L
CSCI 308 Python Programming	M	M	S					S
CSCI 325 Mobile App Development	M	M	M		L			L
CSCI 333 Object-Oriented Programming using C++	L	L	L					S
CSCI 340 UNIX System Administration	M	M	M	N	N	L	L	L
CSCI 345 Computer and Network Security	L	L	L		L	M	L	L
CSCI 373 Advanced Web Technologies	M	M	M					S

Instruction	Learning (development)
(N)None	(I) Introduced
(L)Limited	(R) Reinforced
(M)Moderate	(M) Mastered
(S)Substantial	(A) Assessed

Highlighted Course/Cells used for Assessment

4) ASSESSMENT METHODS AND TIMELINE

Indicate when and how program learning objectives will be assessed. Refer to the curriculum map to draft a student learning outcomes assessment timeline. It is recommended that you outline a 5-year plan for assessment in which you will assess all of your PLOs.

Academic Years	Outcome(s)/ Objective(s)	Course(s)	Assessment Evidence (direct/indirect)	Assessment Method	Responsibility
WHEN	WHICH outcome(s)/objectives will you examine in each period (Use number)?	WHERE will you look for evidence of student learning (i.e., list course(s) that will generate evidence for each objective.	WHAT student work or other evidence will you examine in order to assess each objective?	HOW will you look at the evidence; what means will you use to analyze the evidence collected for each objective	WHO will oversee collecting, analyzing, reporting, results? List names or titles.
Year 1 2023/24	1, 2	1 – CSCI 362 2 – CSCI 360, 362	Final Exams/Projects	Rubric	Satish Penmatsa, David Keil, Mike Nourai
Year 2 2024/25	7, 8	7 – CSCI 362 8 – CSCI 308, 362	Final Exams/Projects Student Surveys	Rubric	Satish Penmatsa, David Keil, Mike Nourai
Year 3 2025/26	5, 6	5 – CSCI 360, 362 6 – CSCI 362	Final Exams/Projects/ Student Surveys	Rubric	Satish Penmatsa, David Keil, Mike Nourai
Year 4 2026/27	3, 4	3 – CSCI 308, 362, 465 4 – CSCI 347, 460	Final Exams/Projects/ Summary Quizzes	Rubric	Satish Penmatsa, David Keil, Mike Nourai
Year 5 2027/28	Re-assess one or more objectives	Re-consider one or more courses	Final Exams/Projects/ Student Surveys/Summary Quizzes	Rubric	Satish Penmatsa, David Keil, Mike Nourai

Program Size and Sampling Technique

a. State the number of students in the program or the number who graduate each year.
   - Number of Students: ~160, Number of graduates per year: ~20

b. Describe the sampling technique to be used.
   - Convenience Sampling: Artifacts will be selected based on availability

5) PLAN FOR ANALYZING RESULTS

- List who is responsible for distributing results and who will receive results?
  - The department assessment committee will send the results to the FSU Office of Institutional Effectiveness
- State how and at which forums discussion of results will take place.
  - Departmental meetings at end of each semester and before start of each semester

6) DISTRIBUTION. The program will distribute or publish these items in the following ways:

	Distribution Method					
ITEM	**FSU Catalog** (provide section title)	**Website** (provide URL)	**Annual Reports**	**Brochures**	**Course Syllabi**	**Other** (please describe, e.g. department meeting, advising session)
Program Mission		https://www.framingham.edu/academics/colleges/science-technology-engineering-and-mathematics/computer-science/				
Program Learning Objectives		https://www.framingham.edu/academics/colleges/science-technology-engineering-and-mathematics/computer-science/			X	
Learning Opportunities (Curriculum Map)			X			
Assessment Plan			X			

Attach any rubrics or instrumentation that you plan to use for assessment of Program Learning Objectives

Rubrics well be sent as designed during the respective AYs.

[1] If you have questions or need assistance, please contact Dr. Mark Nicholas, Director of Assessment at mnicholas1@framingham.edu or 508-626-4670

2 Accredited programs can provide supplemental documents that indicate the answers to these questions as long as specific page references are provided in each cell of the tables in this form. When the answers are not accessible in that way, please cut and paste into your assessment plan.

Credits: This Template was developed using ideas from templates developed at University of Rhode Island and University of Hawaii in Manoa.