Informatics Program
2020 through 2025 Assessment Plan
for the IU Kokomo BS in Informatics

Contents

I. Introduction and mission statements

The Bachelor of Science degree in Informatics is one of the Bachelor degrees currently offered within the IU Kokomo School of Sciences. The degree was initiated in the fall of 2006 and replaced the prior Computer Information Systems (CIS) program.

Mission Statement: There is a great need and opportunity for professionals trained in state-of-the-art information technology and applied computing, including interdisciplinary areas, with an emphasis on the social, organizational, and human issues of technology. The Informatics degree equips students with problem-solving, critical thinking, computational thinking, and communication skills. The Informatics core courses and cognate specialty courses ensure that graduates will have the required knowledge concerning the design, development, implementation, and evaluation of information systems in different application areas.

Informatics is committed to student learning, innovation, regional engagement, and the interdisciplinary application of technology. These goals are consistent with IU Kokomo's mission to "…enhance the educational and professional attainment of the residents of North Central Indiana…"

The Informatics program goals at IU Kokomo are:

Goal A: Apply Problem-Solving Skills to Solve Programming Problems
Goal B: Demonstrate Communication and Teamwork Skills
Goal C: Gather and Organize Information to Design Organizational Information Systems
Goal D: Analyze Social, Organizational, and Ethical Implications of Information Integration

II. Program goals and learning outcomes

Goal A: Apply Problem-Solving Skills to Solve Programming Problems

Student Learning Outcomes:

A1. Students will design solutions to programming problems and utilize basic programming logic structures for the solution's implementation (flowchart, pseudo code, sequential, decision, and repetition structures).

A2. Students will utilize basic data structures and algorithms to design, develop, and test computer programs.

A3. Students will analyze, design, and develop a working solution to a business information problem that performs essential business functions.

Goal B: Demonstrate Communication and Teamwork Skills

Student Learning Outcomes:

B1. Students will communicate effectively in collaborative teams to solve, document, and orally present a solution to a technical problem.

B2. Students will demonstrate the ability and communication skills to function effectively in teams to achieve a common goal

Goal C: Gather and Organize Information to Design Organizational Information Systems

Student Learning Outcomes:

C1. Students will utilize digital representations of information for presentation and/or processing.

C2. Students will organize and categorize information in a database to improve understanding and information sharing.

C3. Students will apply interaction design techniques, including user/contextual issues, while designing and developing a usable information system.

Goal D: Analyze Social, Organizational, and Ethical Implications of Information Integration

Student Learning Outcomes:

D1. Students will analyze the social, ethical, and legal implications/impacts of technology use on individuals and the society.

D2. Students will analyze the social and organizational issues surrounding the implementation and use of information systems in modern organizational contexts.

III. Curriculum Map

Informatics courses:

1. INFO-I 101: Introduction to Informatics
2. INFO-I 201: Mathematical Foundations of Informatics
3. INFO-I 202: Social Informatics
4. INFO-I 210: Information Infrastructure I (Introduction to Computer Programming)
5. INFO-I 211: Information Infrastructure II (Object-Oriented Programming)
6. INFO-I 213: Website Design and Development
7. INFO-I 300: Interaction Design / Human-Computer Interaction
8. INFO-I 303: Organizational Informatics
9. INFO-I 308: Information Representation
10. INFO-I 450: Design of an Information System (Capstone Part 1)
11. INFO-I 451: Development of an Information System (Capstone Part 2)

The following summary provides an overview of the alignment of each learning outcome to the curriculum. This indicates where Outcomes are introduced (I), expanded upon (E), and reinforced (R).

Student Learning Outcomes Students will ...		**I 101**	**I 201**	**I 202**	**I 210**	**I 211**	**I 213**	**I 300**	**I 303**	**I 308**	**I 450**	**I 451**
A1	Design solutions to programming problems and utilize basic programming logic structures for solution's implementation (flowchart, pseudo code, sequential, decision, and repetition structures)	I	I		E	R				R		R
A2	Utilize basic data structures and algorithms to design, develop, and test computer programs				I	E				R		R
A3	Analyze, design, and develop a working solution to a business information problem that performs essential business functions				I	I	E	R			R	R
B1	Communicate effectively in collaborative teams to solve, document, and orally present a solution to a technical problem	I		I		I	E	E	E	E	R	R
B2	Demonstrate the ability and communication skills to function effectively in teams to achieve a common goal	I	I	I	E	E	E	R	R	R	R	R
C1	Utilize digital representations of information for presentation and/or processing	I	I		E	E				R		
C2	Organize and categorize information in a database to improve understanding and information sharing	I								R		R
C3	Apply interaction design techniques including user/contextual issues while						I	E			R	R

	designing and developing a usable information system											
D1	Analyze the social, ethical, and legal implications/impacts of technology use on individuals and the society	I		E				E	E		R	
D2	Analyze the social and organizational issues surrounding the implementation and use of information systems in modern organizational contexts	I		E					R		R	

III. Assessment Plan

Academic Year 2020-2021	
Student Learning Outcomes	Outcome A1: Students will design solutions to programming problems and utilize basic programming logic structures for solution's implementation (flowchart, pseudo code, sequential, decision, and repetition structures)
Measure Description	Informatics students enrolled in the spring 2021 offering of INFO-I 210 will be evaluated. In I210, programming assignments will be used for this assessment evaluation. The programs will be assessed in terms of following best programming practices as well as the functionalities of the program they write
Benchmark/Target	The level of performance where students create programs that follow coding standards, run and implement all of the requirements as specified in the problem specifications document will be considered acceptable. We expect that 70% of students will provide programs that are correctly coded, function properly, and implements the requirements or implement more than required.

External Program Review	The Informatics program is planning to conduct an external program review during fall 2021

Academic Year 2021-2022	
Student Learning Outcomes	Outcome A2: Students will utilize basic data structures and algorithms to design, develop, and test computer programs. Outcome A3: Students will analyze, design, and develop a working solution to a business information problem that performs essential business functions.
Measure Description	Informatics students enrolled in the spring 2022 offering of INFO-I 308 will be evaluated for outcome A2. In I308, programming assignments that specifically focus on data structures and algorithms will be used for this assessment evaluation. The assignments will be evaluated in terms of the students' choice of appropriate data structure and whether the algorithms were appropriately utilized and evaluated in terms of performance. For outcome A3, Informatics students enrolled in the fall 2021 offering of I450 and spring 2022 offering of INFO-I 451 will be evaluated. In I450, the final capstone documents submitted by students will be used to assess the analysis and design aspects of the project. In I451, project development and implementation will be used to evaluate the development effectiveness and client satisfaction.

Benchmark/Target	For outcome A2, the level of performance where students create programs that follow coding standards, run and implement all of the requirements as specified in the problem specifications document, will be considered acceptable. We expect that 75% of students will provide satisfactory programs in terms of adequately utilizing data structures and basic algorithms. For outcome A3, the level of performance where students create complete and satisfactory analysis & design documents based on the project specifications in I450 will be considered acceptable. We expect that 80% of students will provide satisfactory or exceptional work. For the development aspect, we expect that 80% of students will develop a satisfactory or exceptional work.in terms of project development and implementation that will leave their client satisfied.

Academic Year 2022-2023	
Student Learning Outcomes	Outcome B1: Students will communicate effectively in collaborative teams to solve, document, and orally present a solution to a technical problem. Outcome B2: Students will demonstrate the ability and communication skills to function effectively in teams to achieve a common goal
Measure Description	Informatics students enrolled in the fall 2022 offering of INFO I450 will be evaluated for outcome B1. Also, Informatics students enrolled in the fall 2022 offering of INFO I01

	will be assessed for outcome B2. In I450, the capstone team-project (design, implementation, and oral presentation) will be used for this assessment evaluation. In I101, the most significant team-based assignment will be used to assess students' communication skills and teamwork.
Benchmark/Target	For outcome B1, the level of performance where students collaborate effectively to plan, analyze, and present the capstone project based on the client's needs will be considered for this assessment. We expect that 85% of students will provide satisfactory or exceptional teamwork. For outcome B2, the level of performance where students communicate effectively to solve a particular technical problem in I101 will be considered for assessing this outcome. We expect that 75% of students will provide satisfactory or exceptional teamwork.

Academic Year 2023-2024	
Student Learning Outcomes	Outcome C1: Students will utilize digital representations of information for presentation and/or processing. Outcome C2: Students will organize and categorize information in a database to improve understanding and information sharing. Outcome C3: Students will apply interaction design techniques, including user/contextual issues, while designing and developing a usable information system.

Measure Description	Informatics students enrolled in the spring 2024 offering of INFO I308 will be evaluated for outcome C1. In I308, the most significant assignment that deals with the digital representation of information and processing will be used to assess this outcome Informatics students enrolled in the spring 2024 offering of INFO I451 will be assessed for outcome C2. In I451, the most significant assignment regarding the design of a database, as well as the capstones' aspect of database design, will be both used to assess this outcome. For outcome C3, Informatics students enrolled in the fall 2023 offering of INFO I300 will be assessed. In I300, the course's final project will be used to assess this outcome.
Benchmark/Target	For outcome C1, the level of performance where students demonstrate satisfactory utilization of digital representation will be considered for this assessment. We expect that 75% of students will demonstrate satisfactory or exceptional utilization of digital representation of data. For outcome C2, the level of performance where students design databases effectively to solve a particular technical problem in I451 will be considered for assessing this outcome. We expect that 80% of students will provide satisfactory or exceptional database designs. For outcome C3, the level of performance where students produce effective product designs that reflect the user's issues and requirements will be considered for assessing this outcome. We expect that 70% of students will provide satisfactory or exceptional product designs.

Academic Year 2024-2025	
Student Learning Outcomes	Outcome D1: Students will analyze the social, ethical, and legal implications/impacts of technology use on individuals and the society. Outcome D2: Students will analyze the social and organizational issues surrounding the implementation and use of information systems in modern organizational contexts.
Measure Description	Informatics students enrolled in the spring 2025 offering of INFO I202 will be evaluated for outcome D1. In I202, the most significant written assignment that deals with analyzing technology use and impacts on society and individuals will be used for assessing this outcome. For outcome D2, Informatics students enrolled in the spring 2025 offering of INFO I303 will be assessed for outcome D2. In I303, the most significant assignment regarding the analysis of organizational issues as it is related to the implementation of technology solutions will be used to assess this outcome.
Benchmark/Target	For outcome D1, we expect that 75% of students will demonstrate satisfactory or exceptional documents that describe and analyze the implications of technology use on individuals and society. For outcome D2, We expect that 85% of students will provide documents that either partially or fully address the application of social/organizational issues regarding the implementation and use of information systems in organizations.

V. Ongoing assessment

Informatics faculty will review the assessment measures described previously and will discuss ways to improve student learning. Faculty will also participate, whenever possible, in global, national, and regional conferences to bring new ideas into the curriculum to promote student learning.

A. Data Collection and analysis

1. The faculty will analyze each student's progress in the program annually.

2. Faculty will analyze graduating student exit interview data collected by the School's Dean.

3. Faculty will submit recommendations for improvements in courses to the School's Dean.

4. The faculty will prepare the annual Assessment Report.

B. Feedback and Analysis

1. After recommendations are, the faculty will receive suggestions, comments, and feedback from the Dean.

2. The annual assessment report will be circulated to the school's members for comments.

3. The annual assessment report will be made available to Informatics adjuncts and resident faculty for review.

4. The annual assessment report will be submitted to the Indiana University Kokomo Assessment Committee for review and feedback.