Outcome Based Education (OBE)
Department of Computer Science
BS Computer Science

Department Vision

To excel in computer and innovative technologies by producing quality and skill-oriented professionals with moral and social responsibilities.

Department Mission

To offer innovative academic programs that foster entrepreneurial qualities and impart knowledge, skills, and ethical values that enable graduates to address real-world challenges, while cultivating a commitment to life-long learning, adaptability, and personal growth.

Program Mission

To equip students with both foundational and advanced knowledge in computer science, emphasize ethical and professional practices, foster entrepreneurial thinking, and develop problem-solving skills to tackle technological challenges, and embrace lifelong learning.

Program Educational Objectives (PEOs)

PEO 1: Demonstrate comprehensive knowledge of computer science principles and practical skills to design, develop, and implement innovative solutions that address real-world technological challenges.

PEO 2: Fulfill ethical and social responsibilities as both an individual and a collaborative team player.

PEO 3: Exhibit lifelong learning and managerial skills to ensure sustainable career development and professional growth.

Graduate Attributes (GAs)

S#	Graduate Attribute (GA)	Outcomes
1.	**Academic Education**	To prepare graduates as computing professionals.
2.	**Knowledge for Solving Computing Problems:**	Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.
3.	**Problem Analysis**	Identify and solve complex computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.
4.	**Design/ Development of**	Design and evaluate solutions for complex computing problems, and design and

	Solutions	evaluate systems, components, or processes that meet specified needs.
5.	**Modern Tool Usage**	Create, select, or adapt and then apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.
6.	**Individual and Teamwork**	Function effectively as an individual and as a member or leader of a team in multidisciplinary settings.
7.	**Communication**	Communicate effectively with the computing community about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.
8.	**Computing Professionalism and Society**	Understand and assess societal, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.
9.	**Ethics**	Understand and commit to professional ethics, responsibilities, and norms of professional computing practice.
10.	**Life-long Learning**	Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional.

Mapping of PEOs and GAs

Computer Science		**Graduate Attributes**									
		GA1	**GA2**	**GA3**	**GA4**	**GA5**	**GA6**	**GA7**	**GA8**	**GA9**	**GA10**
PEO	**PEO Description**	**Academic Education**	**Knowledge for Solving Computing Problems**	**Problem Analysis**	**Design and Development of Solution**	**Modern Tool Usage**	**Individual and Teamwork**	**Communication**	**Computing, Professionalism and Society**	**Ethics**	**Life Long Learning**
PEO1	Demonstrate a strong theoretical computing knowledge and practical skills to design and apply effective solutions to the real-world problems.	✓	✓	✓	✓	✓					
PEO2	Perform ethical and social responsibilities, as an individual and team player.						✓		✓	✓	
PEO3	Manifest life-long learning and managerial skills for sustainable career development and professional growth.							✓	✓	✓	✓

Outcome Based Education (OBE)
Department of Computer Science
BS Software Engineering

Department Vision

To excel in computer and innovative technologies by producing quality and skill-oriented professionals with moral and social responsibilities.

Department Mission

To offer innovative academic programs that foster entrepreneurial qualities and impart knowledge, skills, and ethical values that enable graduates to address real-world challenges, while cultivating a commitment to life-long learning, adaptability, and personal growth.

Program Mission

To equip students with both foundational and advanced knowledge in software engineering, emphasize ethical and professional values, foster entrepreneurial thinking, teamwork, and problem-solving skills to design, develop, and maintain quality software solutions, and cultivate lifelong learning and personal growth.

Program Educational Objectives (PEOs)

PEO 1: Demonstrate comprehensive knowledge of software engineering principles and practical skills to design, develop, and maintain high-quality software solutions that address real-world challenges.

PEO 2: Fulfill ethical and social responsibilities as both an individual and a collaborative team player.

PEO 3: Exhibit lifelong learning and managerial skills to ensure sustainable career development and professional growth.

Graduate Attributes (GAs)

S#	Graduate Attribute (GA)	Outcomes
1.	**Academic Education**	To prepare graduates as computing professionals.
2.	**Knowledge for Solving Computing Problems:**	Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.
3.	**Problem Analysis**	Identify and solve complex computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.
4.	**Design/ Development of Solutions**	Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs.

5.	**Modern Tool Usage**	Create, select, or adapt and then apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.
6.	**Individual and Teamwork**	Function effectively as an individual and as a member or leader of a team in multidisciplinary settings.
7.	**Communication**	Communicate effectively with the computing community about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.
8.	**Computing Professionalism and Society**	Understand and assess societal, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.
9.	**Ethics**	Understand and commit to professional ethics, responsibilities, and norms of professional computing practice.
10.	**Life-long Learning**	Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional.

Mapping of PEOs and GAs

Software Engineering		**Graduate Attributes**									
		GA1	**GA2**	**GA3**	**GA4**	**GA5**	**GA6**	**GA7**	**GA8**	**GA9**	**GA10**
PEO	**PEO Description**	**Academic Education**	**Knowledge for Solving Computing Problems**	**Problem Analysis**	**Design and Development of Solution**	**Modern Tool Usage**	**Individual and Teamwork**	**Communication**	**Computing, Professionalism and Society**	**Ethics**	**Life Long Learning**
PEO1	Demonstrate comprehensive knowledge of software engineering principles and practical skills to design, develop, and maintain high-quality software solutions that address real-world challenges.	✓	✓	✓	✓	✓					
PEO2	Perform ethical and social responsibilities, as an individual and team player.						✓		✓	✓	
PEO3	Manifest life-long learning and managerial skills for sustainable career development and professional growth.							✓	✓	✓	✓

Outcome Based Education (OBE)
Department of Computer Science
BS Computer Engineering

Department Vision

To excel in computer and innovative technologies by producing quality and skill-oriented professionals with moral and social responsibilities.

Department Mission

To offer innovative academic programs that foster entrepreneurial qualities and impart knowledge, skills, and ethical values that enable graduates to address real-world challenges, while cultivating a commitment to life-long learning, adaptability, and personal growth.

Program Mission

To equip students with comprehensive knowledge in computer engineering, emphasize ethical and professional values, foster entrepreneurial thinking, teamwork, and problem-solving skills to tackle technological challenges, and cultivate lifelong learning and personal growth.

Program Educational Objectives (PEOs)

PEO 1: Demonstrate comprehensive knowledge of computer engineering principles and practical skills to design, develop, and implement innovative solutions that address real-world technological challenges.

PEO 2: Fulfill ethical and social responsibilities as both an individual and a collaborative team player.

PEO 3: Exhibit lifelong learning and managerial skills to ensure sustainable career development and professional growth.

Graduate Attributes (GAs)

S#	Graduate Attribute (GA)	Outcomes
1.	**Academic Education**	To prepare graduates as computing professionals.
2.	**Knowledge for Solving Computing Problems:**	Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.
3.	**Problem Analysis**	Identify and solve complex computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.
4.	**Design/ Development of**	Design and evaluate solutions for complex computing problems, and design and

	Solutions	evaluate systems, components, or processes that meet specified needs.
5.	**Modern Tool Usage**	Create, select, or adapt and then apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.
6.	**Individual and Teamwork**	Function effectively as an individual and as a member or leader of a team in multidisciplinary settings.
7.	**Communication**	Communicate effectively with the computing community about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.
8.	**Computing Professionalism and Society**	Understand and assess societal, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.
9.	**Ethics**	Understand and commit to professional ethics, responsibilities, and norms of professional computing practice.
10.	**Life-long Learning**	Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional.

Mapping of PEOs and GAs

Computer Engineering		**Graduate Attributes**									
		GA1	**GA2**	**GA3**	**GA4**	**GA5**	**GA6**	**GA7**	**GA8**	**GA9**	**GA10**
PEO	**PEO Description**	**Academic Education**	**Knowledge for Solving Computing Problems**	**Problem Analysis**	**Design and Development of Solution**	**Modern Tool Usage**	**Individual and Teamwork**	**Communication**	**Computing, Professionalism and Society**	**Ethics**	**Life Long Learning**
PEO1	Demonstrate comprehensive knowledge of computer engineering principles and practical skills to design, develop, and implement innovative solutions that address real-world technological challenges.	✓	✓	✓	✓	✓					
PEO2	Perform ethical and social responsibilities, as an individual and team player.						✓		✓	✓	
PEO3	Manifest life-long learning and managerial skills for sustainable career development and professional growth.							✓	✓	✓	✓

Outcome Based Education (OBE)
Department of Computer Science
BS Artificial Intelligence

Department Vision

To excel in computer and innovative technologies by producing quality and skill-oriented professionals with moral and social responsibilities.

Department Mission

To offer innovative academic programs that foster entrepreneurial qualities and impart knowledge, skills, and ethical values that enable graduates to address real-world challenges, while cultivating a commitment to life-long learning, adaptability, and personal growth.

Program Mission

To equip students with comprehensive knowledge in artificial intelligence (AI), emphasize ethical and professional values, foster entrepreneurial thinking, teamwork, and problem-solving skills to design and develop ethical AI-based solutions for real-world problems, and cultivate lifelong learning and personal growth.

Program Educational Objectives (PEOs)

PEO 1: Demonstrate comprehensive knowledge of artificial intelligence (AI) concepts and practical skills to design, develop, and maintain AI-based solutions that address real-world challenges.

PEO 2: Fulfill ethical and social responsibilities as both an individual and a collaborative team player.

PEO 3: Exhibit lifelong learning and managerial skills to ensure sustainable career development and professional growth.

Graduate Attributes (GAs)

S#	Graduate Attribute (GA)	Outcomes
1.	**Academic Education**	To prepare graduates as computing professionals.
2.	**Knowledge for Solving Computing Problems:**	Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.
3.	**Problem Analysis**	Identify and solve complex computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.
4.	**Design/ Development of Solutions**	Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs.

5.	**Modern Tool Usage**	Create, select, or adapt and then apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.
6.	**Individual and Teamwork**	Function effectively as an individual and as a member or leader of a team in multidisciplinary settings.
7.	**Communication**	Communicate effectively with the computing community about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.
8.	**Computing Professionalism and Society**	Understand and assess societal, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.
9.	**Ethics**	Understand and commit to professional ethics, responsibilities, and norms of professional computing practice.
10.	**Life-long Learning**	Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional.

Mapping of PEOs and GAs

Artificial Intelligence		**Graduate Attributes**									
		GA1	**GA2**	**GA3**	**GA4**	**GA5**	**GA6**	**GA7**	**GA8**	**GA9**	**GA10**
PEO	**PEO Description**	**Academic Education**	**Knowledge for Solving Computing Problems**	**Problem Analysis**	**Design and Development of Solution**	**Modern Tool Usage**	**Individual and Teamwork**	**Communication**	**Computing, Professionalism and Society**	**Ethics**	**Life Long Learning**
PEO1	Demonstrate comprehensive knowledge of artificial intelligence (AI) concepts and practical skills to design, develop, and maintain AI-based solutions that address real-world challenges.	✓	✓	✓	✓	✓					
PEO2	Perform ethical and social responsibilities, as an individual and team player.						✓		✓	✓	
PEO3	Manifest life-long learning and managerial skills for sustainable career development and professional growth.							✓	✓	✓	✓