## M.Sc. Information Technology (CBCS-University Department) PROGRAMME OBJECTIVES

**PO1 Technical Expertise:** Implement fundamental domain knowledge of core courses for developing effective computing solutions by incorporating creativity and logical reasoning.

**PO2 Successful Career:** Deliver professional services with updated technologies in information technology based career.

**PO3 Soft Skills:** Develop leadership skills and incorporate ethics, team work with effective communication & time management in the profession.

**PO4 Research:** Graduates of the programme will contribute significantly in the technological developments of Information Technology through research practices

#### **PROGRAM SPECIFIC OUTCOMES**

**PSO1:** Apply knowledge of mathematics, science and algorithm in solving complex Computer engineering problems.

**PSO2:** Generate solutions by conducting experiments and applying techniques to analyze and interpret data

**PSO3:** Design component, or processes to meet the needs within realistic constraints.

PSO4: Identify, formulate, and solve Software Engineering, Networking and Data Mining problems.

**PSO5:** Comprehend professional and ethical responsibility in computing profession.

**PSO6:** Express effective communication skills.

**PSO7:** Participate in global, economic, environmental, and societal context.

**PSO8:** Recognize the need for, and an ability to engage in life-long learning.

PSO9: Knowledge of contemporary issues and emerging developments in computing profession.

**PSO10:** Utilize the techniques, skills and modern computer Engineering tools, Software and techniques necessary for Engineering practice.

**PSO11:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.

**PSO12:** Design research problems and conduct research in computing environment.

# PO vs. PSO Mapping

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9	PSO10	PSO11	PSO12
PO1 Technical Expertise	S	S	М	S	М	L	S	S	L	S	L	L
PO2 Successful Career	М	М	S	М	S	S	L	М	L	М	S	М
PO3 Soft Skills	L	М	S	М	М	S	S	L	S	L	М	L
PO4 Research	М	S	М	М	М	L	L	М	L	L	М	S

S- Strong

M-Middle

L-Low

#### M.Sc. Cyber Security (CBCS-University Department)

#### **PROGRAMME EDUCATIONAL OBJECTIVES (PEO)**

PEO1: Graduates of the programme will be able communicate to effectively both orally and in writing in a variety of audiences.

PEO2: Graduates of the programme will be able to demonstrate critical thinking by analyzing situations and by constructing and selecting solutions to problems.

PEO3: Graduates of the programme will be able to understand and appreciate the legal and ethical environment impacting individuals as well as business organizations and have an understanding of the ethical implications of IT legal decisions.

PEO4: Graduates of the programme will be able to understand fundamentals and advanced issues of various threats faced by today's cyberinfrastructure.

#### **PROGRAM SPECIFIC OUTCOMES**

**PSO1:** Evaluate the computer network and information security needs of an organization. Explain concepts and theories of networking and apply them to various situations, classifying networks, analyzing performance and implementing new technologies.

**PSO2:** Assess cyber-security risk management policies in order to adequately protect an organization's critical information and assets.

**PSO3:** Measure the performance of security systems within an enterprise-level information system. Troubleshoot, maintain and update an enterprise-level information security system.

**PSO4:** Implement continuous network monitoring and provide real-time security solutions.

PSO5: Formulate, update and communicate short- and long-term organizational cyber-

security strategies and policies.

**PSO6:** Explain the concepts of confidentiality, availability and integrity in Information Assurance, including physical, software, devices, policies and people. Analyze these factors in an existing system and design implementations.

**PSO7:** Analyze and evaluate the cyber security needs of an organization.

**PSO8:** Manage multiple operating systems, systems software, network services and security.

Evaluate and compare systems software and emerging technologies.

**PSO9:** Effectively communicate technical information verbally, in writing, and in presentations.

**PSO10:** Implement cyber security solutions. Be able to use cyber-security, information assurance, and cyber/computer forensics software/tools. Design operational and strategic cyber-security strategies and policies.

PEO vs. PSO Mappin	g
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	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9	PSO10
PEO1 Career Accomplishments	S	S	S	S	S	S	S	S	М	S
PEO2 Research	М	L	М	L	М	S	L	М	S	S
PEO3 Sustained Learning	S	L	S	L	S	М	L	S	L	S
PEO4 Activity Skills	S	М	S	М	L	S	М	М	L	S

S- Strong

M – Middle

L-Low

### M.Sc. Data Analytics (CBCS-University Department)

### PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The objectives of the programme are:

**PEO1.** To understand basic Data Analytics concepts and techniques for solutions in the IT industries and to carry out research as time, environment and society dictates.

PEO2. To remember basics concepts and techniques of Data Analytics.

**PEO3.** To acquire knowledge and skills in the statistical and mathematical concepts, programming techniques and computing tools for Data Analytics.

**PEO4.** To apply Data Analytics knowledge and skills in the wide range of Data Analytics based domains using Descriptive, Diagnostic, Predictive and Prescriptive approaches of Data Analytics.

PEO5. To acquire knowledge in the necessary ethics as a Data Analytics professional or Scientist.

**PEO6.** To understand the need for team work to solve complex problems in the wide range of Data Analytics based domains.

### PROGRAMME SPECIFIC OUTCOMES (PSO)

**PSO1.** Knowledge: Able to remember basic Data Analytics concepts and techniques.

**PSO2.** Analytical Knowledge: Able to analyze and evaluate the data associated with different data analytics based problems to make insights.

**PSO3.** Analyze & Solve Complex Problems: Able to identify, plan, design and complete Data Analytics Projects.

**PSO4.** Research: Competent to solve complex problems using the statistical and mathematical concepts and programming techniques for Data Analytics.

**PSO5.** Modern Tool usage: Able to take up Data Analytics as time, environment and society dictates using modern computing tools and techniques.

**PSO6.** Ethics: Able to understand his/her ethical responsibility.

**PSO7.** Specific and Team work solving: Ability to understand each phase in the data analytics projects and work as an individual or a group to deliver best analysis and solutions.

# PEO and PSO Mapping

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
PE01	S	S	S	М	М	L	М
PE02	S	S	S	S	М	L	М
PE03	S	S	S	S	S	L	L
PE04	S	S	S	S	S	L	L
PE05	L	L	М	L	L	S	М
PE06	L	L	L	L	L	М	S

\* S- Strong, M – Middle, L – Low

### <u>M.Phil. Information Technology (CBCS-University Department)</u> PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

**PEO1: Technical Expertise-** Implement fundamental domain knowledge of core courses for developing effective computing solutions by incorporating creativity and logical reasoning.

**PEO2:** Successful Career- Deliver professional services with updated technologies in information technology based career.

**PEO3: Soft Skills-** Develop leadership skills and incorporate ethics, team work with effective communication & time management in the profession.

**PEO4: Research-** Graduates of the programme will contribute significantly in the technological developments of Information Technology through research practices.

#### PROGRAM SPECIFIC OUTCOMES (PSO)

**PSO1:** Apply knowledge of mathematics, science and algorithm in solving complex Computer engineering problems.

**PSO2:** Generate solutions by conducting experiments and applying techniques to analyze and interpret data

PSO3: Design component, or processes to meet the needs within realistic constraints.

**PSO4:** Identify, formulate, and solve Software Engineering, Networking and Data Mining problems.

**PSO5:** Comprehend professional and ethical responsibility in computing profession.

**PSO6:** Recognize the need for, and an ability to engage in life-long learning.

**PSO7:** Knowledge of contemporary issues and emerging developments in computing profession. **PSO8:** Utilize the techniques, skills and modern computer Engineering tools, Software and techniques necessary for Engineering practice.

**PSO9:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.

**PSO10:** Design research problems and conduct research in computing environment.

## PEO vs. PSO Mapping

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9	PSO10
PEO1	S	S	М	S	М	М	S	S	М	S
PEO2	М	М	S	М	S	S	М	М	М	М
PEO3	М	М	S	М	М	S	S	М	S	М
PEO4	S	S	М	М	L	М	М	М	М	М

\* S- Strong, M – Middle, L – Low

## M.Tech. in Computer and Information Technology (CBCS-University Department) PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The objectives of the programme are:

**PEO1.** To prepare students to excel in research or to succeed in Information Technology Profession by adapting to the rapid advances in new emerging technologies through rigorous graduate education.

**PEO2.** To provide students with a solid foundation in mathematical, scientific and engineering fundamentals required to provide IT solutions to real-world problems of Industries, Businesses and Society.

**PEO3.** To train students with good computer science and engineering knowledge so as to comprehend, analyze, design and create novel products and novel IT services.

**PEO4.** To inculcate students in solving real-time problems through IT knowledge and with attention to team work, effective communication skills and critical thinking.

**PEO5.** To provide student with an academic environment aware of excellence, leadership, ethical codes and guidelines, learning and teamwork for a successful professional career.

### PROGRAMME SPECIFIC OUTCOMES (PSO)

**PSO1.** An ability to independently carry out research /investigation and development work to solve practical problems.

**PSO2:** An ability to write and present a substantial technical report/document.

**PSO3:** A degree of mastery over the field of Information Technology.

**PSO4.** An ability to comprehend, select and adopt appropriate and emerging computing and communication technologies to solve the challenging problems of this information era.

**PSO5.** An ability to recognize the need for applying efficient software and hardware based solutions to improve the quality of life.

**PSO6.** An ability to function effectively as an individual and a team member, in project and product development and to follow professional ethics in the career.

# PEO and PSO Mapping

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
PE01	S	S	S	М	М	L
PE02	S	S	S	S	М	L
PE03	S	S	S	S	S	М
PE04	L	S	L	L	L	S
PE05	М	L	L	S	М	S

\* S- Strong, M – Middle, L – Low