B.Sc. Computer Science (3 years)

(Revised CBCS pattern)

PEO, PO and CO Mappings

1. Program Name : B.Sc.(Computer Science)

2. Program Educational Objectives: After completion of this program, the graduates / students would

PEO I :Technical Expertise	Implement fundamental domain knowledge of core courses for developing effective computing solutions by incorporating creativity and logical reasoning.
PEO II : Successful Career	Deliver professional services with updated technologies in **Computer Science** based career.
PEO III :Hands on Technology and Professional experience	Develop leadership skills and incorporate ethics, team work with effective communication & time management in the profession.
PEO IV :Interdisciplinary and Life Long Learning	Undergo higher studies, certifications and research programs as per market needs.

3. Program Outcome(s): Students / graduates will be able to

PO1: Apply knowledge of mathematics, science and algorithm in solving Computer problems and applied use of banks.

PO2: Learn various custom software

PO3: Design component, or processes to meet the needs within realistic constraints.

PO4: Identify, formulate, and solve problems using computational temperaments.

PO5: Comprehend professional and ethical responsibility in computing profession.

PO6: Express effective communication skills.

PO7: Recognize the need for interdisciplinary, and an ability to engage in life-long learning.

PO8: Actual hands on technology to understand it's working.

PO9: Knowledge of contemporary issues and emerging developments in computing profession.

PO10: Utilize the techniques, skills and modern tools, for actual development process

PO11: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings in actual development work

PO12: Research insights and conduct research in computing environment

4. Course Outcome(s): Every individual course under this program has course objectives and course outcomes (CO). The course objectives rationally match with program educational objectives. The mapping of PEO, PO and CO is as illustrated below

5. Mapping of PEO& PO and CO

Program Educational Objectives	Thrust Area	Program Outcome	Course Outcome
PEO I	Technical Expertise	PO1,PO2,PO3,PO6	All core courses
PEO II	Successful Career	PO4,PO5,PO11,	All discipline specific electives courses
PEO III	Hands on Technology and Professional experience	PO8,PO10	All Lab courses
PEO IV	Interdisciplinary and Life Long Learning	PO7,PO9,PO12	All open electives and discipline specific electives

Bachelor of Computer Application (3 years)

(Revised CBCS pattern)

PEO, PO and CO Mappings

1. Program Name : Bachelor of Computer Application

2. Program Educational Objectives: After completion of this program, the graduates / students would

PEO I :Technical Expertise	Implement fundamental domain knowledge of core courses for developing effective computing solutions by incorporating creativity and logical reasoning.
PEO II : Successful Career	Deliver professional services with updated technologies in **Computer application** based career.
PEO III :Hands on Technology and Professional experience	Develop leadership skills and incorporate ethics, team work with effective communication & time management in the profession.
PEO IV :Interdisciplinary and Life Long Learning	Undergo higher studies, certifications and research programs as per market needs.

3. Program Outcome(s): Students / graduates will be able to

PO1: Apply knowledge of mathematics, science and algorithm in solving Computer problems and applied use of banks.

PO2: Learn various custom software

PO3: Design component, or processes to meet the needs within realistic constraints.

PO4: Identify, formulate, and solve problems using computational temperaments.

PO5: Comprehend professional and ethical responsibility in computing profession.

PO6: Express effective communication skills.

PO7: Recognize the need for interdisciplinary, and an ability to engage in life-long learning.

PO8: Actual hands on technology to understand it's working.

PO9: Knowledge of contemporary issues and emerging developments in computing profession.

PO10: Utilize the techniques, skills and modern tools, for actual development process

PO11: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings in actual development work

PO12: Research insights and conduct research in computing environment

4. Course Outcome(s): Every individual course under this program has course objectives and course outcomes (CO). The course objectives rationally match with program educational objectives. The mapping of PEO, PO and CO is as illustrated below

5. Mapping of PEO& PO and CO

Program Educational Objectives	Thrust Area	**Program Outcome**	Course Outcome
PEO I	Technical Expertise	PO1,PO2,PO3,PO6	All core courses
PEO II	Successful Career	PO4,PO5,PO11,	All discipline specific electives courses
PEO III	Hands on Technology and Professional experience	PO8,PO10	All Lab courses
PEO IV	Interdisciplinary and Life Long Learning	PO7,PO9,PO12	All open electives and discipline specific electives

Bachelor of Library and Information Science

Choice Based Credit System (CBCS) Semester Pattern

With Effect from: July, 2019

Course Objective:

¬ The courses will enhance the understanding of Library and Information Science Education and Library fields.

¬ To educate the students to respond to the changing information needs of society

¬ By studying the Subject Library and Information Science the student will be able to understand and appreciate the purpose of Libraries in changing circumstances.

¬ To impart training is basic principle of Library and information science. It is useful to understand the basic functions and principals of theory as well as practical work in Library and Information Science.

¬ To acquaint the candidates generally with the social, cultural education and communicational aspects of Library and Information Science

. ¬ To create awareness among the students for acquiring the knowledge of specialized subjects.

¬ To provide understanding of IT application in information environment including Network and communication system.

PROGRAMME OUTCOMES :-

LIS Students

Will learn the skills of organizing information and recorded knowledge.

¬ Will be able to provide traditional and modern Information and Reference Services for users.

¬ Will become competent for job opportunities in LIS and related field

¬ Can apply the skills and attitudes of visioning, entrepreneurship, advocacy, planning and management of Libraries and Information Centers (LICs) and effective leadership in the LIS field.

¬ Possess the skills to respect, engage and collaborate with a diverse community in order to advocate for and construct inclusive, meaningful, and participatory library services, programmes and resources.

¬ Can perform and access research based practices through the application of information literacy, inquiry, and research methods including data discovery, analytics and qualitative measures

SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY, NANDED (3 years)

B.Sc. BIOTECHNOLOGY

CHOICE BASED CREDIT SYSTEM (June 2019)

PEO, PO and CO Mappings

Learning Objective:

1. To enable students to utilize their knowledge of grammar effectively for communicative purposes.

2. To develop communicative skills of the learners in listening, speaking, writing and reading.

3. To focus on how English is used in real-life situations

4. To develop fluency in conversation and efficiency in interactional skills

5. To learn to use grammar communicatively so that they become effective and efficient communicators in English.

Learning outcome:

By the end of this course students should be able to:

1. Understand and demonstrate Basic English usages for their different purposes.

2. Clear entrance examination and aptitude tests.

3. Write various letters, reports required for professional life.

Outcome:

Students become able to understand the applications of Biotechnology in different fields.

To understand the basic concept of Life forms, Evolution and Biodiversity Learning Outcomes: Students will understand biodiversity of living organism and plant body organization

Swami Ramanand Teerth Marathwada University, Nanded

M.Sc. BIOTECHNOLOGY

CHOICE BASED CREDIT SYSTEM (June 2019)

Objective:

To understand the basics of Cell Biology and developmental Biology. To know the communication as well as transportation in cells. To become aware about the stem cell technology

To know the basic principles, working and applications of biological techniques like Microscopy, electrophoresis, chromatography and spectroscopy.

To learn the fundamental process in plant system. To understand the basic aspects of plant physiology.

To learn the Principles of Mendelian inheritance. To understand the Genome organization and gene regulation of Prokaryotes and eukaryotes.

1) Structure, classification and the properties of Biomolecules

2) Functions of biomolecules in Human health

3) Laboratory skills for the study of biomolecules

Outcome:

Students will understand the basics of Cell Biology and developmental Biology and fundamentals of Cancer genetics. They will Identify the characteristics and basic needs of living organisms and ecosystems

Students will learn the working principles of biological techniques like microscopy, electrophoresis, chromatography and spectroscopy. They will use these biological techniques in research and development.

Students will learn the plant water relationship, mechanism of photosynthesis and respiration. They will explain the mechanism of plant reproduction.

Students will acquire the laboratory skills for the isolation if genetic material. They will learn the biochemistry of DNA and RNA. Students will analyze the gene interactions

SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY, NANDED.

Master of Journalism & Media Science

(Choice Based Credit System syllabus to be implemented from Academic Year 2020-2021)

Learning Objectives of the Program :

1. To study different modes, structure and forms of communication

2. To acquaint the students with theoretical trends in mass communication

3. To sensitize the students with the need and issues of development

4. To situate communication within larger context of national-international issues

5. To help understand the media dynamics with the help of contemporary theory

6. To develop multi-tasking skills

Learning Outcomes –

After Completion of the course Students can work in the following fields

Reporter

Correspondent

Sub-Editor

Video-Editor

Feature Writer

Photojournalist

Video journalist

One can Publish own News Papers

Public Relations Specialist

Create news suppliers agency

Public Relations Officer

T.V.Anchor

MASTER OF ARTS (Education)

Objectives of the Course:

To enable the students to:

1. Understand the nature of Philosophy and Philosophy of Education

2. Critically analyze Eastern and Western Schools of Philosophy

3. Understand the implications of Eastern and Western Schools of Philosophy to Education

4. Critically analyze and appreciate the Thoughts of Great Thinkers with reference Concept of Man and his

5. Development , Aims of Education, Curriculum, Teaching and Learning and Role of the Teacher

Course Outcomes:

CO1 : Student will be able to demonstrate understanding of concept, scope and significance of Philosophy , nature & functions of Philosophy in educational context.

CO2 : Student will be able to demonstrate understanding of branches of Philosophy ii) explain relation amongst branches of Philosophy and education

CO3 : Student will be able understand the contributions of eastern schools of Philosophy to education

CO4 : Student will be able to understand the contributions of western schools of Philosophy to education

CO5 : Student will be able to demonstrate understanding of concept of Man and his development of educational thinkers and their implications to education.

M.Sc. (Computer Science) (2 years)

(Revised CBCS pattern)

PEO, PO and CO Mappings

1. Program Name : M.Sc.(CS) Affiliated Colleges

2. Program Educational Objectives: After completion of this program, the graduates / students would

PEO I :Technical Expertise	Implement fundamental domain knowledge of core courses for developing effective computing solutions by incorporating creativity and logical reasoning.
PEO II : Successful Career	Deliver professional services with updated technologies in **computational science** based career.
PEO III :Hands on Technology and Professional experience	Develop leadership skills and incorporate ethics, team work with effective communication & time management in the profession.
PEO IV :Interdisciplinary and Life Long Learning	Undergo higher studies, certifications and research programs as per market needs.

3. Program Outcome(s): Students / graduates will be able to

PO1: Apply knowledge of mathematics, science and algorithm in solving Computer problems and applied use of banks.

PO2: Learn various custom software

PO3: Design component, or processes to meet the needs within realistic constraints.

PO4: Identify, formulate, and solve problems using computational temperaments.

PO5: Comprehend professional and ethical responsibility in computing profession.

PO6: Express effective communication skills.

PO7: Recognize the need for interdisciplinary, and an ability to engage in life-long learning.

PO8: Actual hands on technology to understand it's working.

PO9: Knowledge of contemporary issues and emerging developments in computing profession.

PO10: Utilize the techniques, skills and modern tools, for actual development process

PO11: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings in actual development work

PO12: Research insights and conduct research in computing environment

4. Course Outcome(s): Every individual course under this program has course objectives and course outcomes (CO). The course objectives rationally match with program educational objectives. The mapping of PEO, PO and CO is as illustrated below

5. Mapping of PEO& PO and CO

Program Educational Objectives	Thrust Area	Program Outcome	Course Outcome
PEO I	Technical Expertise	PO1,PO2,PO3,PO6	All core courses
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PEO IV	Interdisciplinary and Life Long Learning	PO7,PO9,PO12	All open electives and discipline specific electives

Swami Ramanand Teerth Marathwada University, Nanded

Syllabus M.Sc Clinical Research (Revised)

Choice Base Credit System (CBCS) June-2014

Objectives of the course:

This course is with the following objectives –

• To provide the students with the requisite knowledge that will enable them to pursue a career in the Clinical Research industry.

• Synthesize the highest academic standards with relevance to the need to present business & commercial policies.

• Encourage clinical research methodologies & start PhD programs in clinical research.

• Collaborate with organizations at national & international level in areas of research, training, seminars & conferences.

•Represent the interest of clinical research professionals in the country & ensure that India does not lag behind in maintaining the internationally prescribed standards of clinical Ethics.

• To give students in-depth training in both the theoretical and practical aspects of clinical research, regulatory affairs and clinical data management in the clinical research industry.

M.Sc. (Computer Management) (2 years)

(Revised CBCS pattern)

PEO, PO and CO Mappings

1. Program Name : M.Sc.(CM)

2. Program Educational Objectives: After completion of this program, the graduates / students would

PEO I :Technical Expertise	Implement fundamental domain knowledge of core courses for developing effective computing solutions by incorporating creativity and logical reasoning.
PEO II : Successful Career	Deliver professional services with updated technologies in **Software engineer** based career.
PEO III :Hands on Technology and Professional experience	Develop leadership skills and incorporate ethics, team work with effective communication & time management in the profession.
PEO IV :Interdisciplinary and Life Long Learning	Undergo higher studies, certifications and research programs as per market needs.

3. Program Outcome(s): Students / graduates will be able to

PO1: Apply knowledge of mathematics, science and algorithm in solving Computer problems and applied use of banks.

PO2: Learn various custom software

PO3: Design component, or processes to meet the needs within realistic constraints.

PO4: Identify, formulate, and solve problems using computational temperaments.

PO5: Comprehend professional and ethical responsibility in computing profession.

PO6: Express effective communication skills.

PO7: Recognize the need for interdisciplinary, and an ability to engage in life-long learning.

PO8: Actual hands on technology to understand it's working.

PO9: Knowledge of contemporary issues and emerging developments in computing profession.

PO10: Utilize the techniques, skills and modern tools, for actual development process

PO11: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings in actual development work

PO12: Research insights and conduct research in computing environment

4. Course Outcome(s): Every individual course under this program has course objectives and course outcomes (CO). The course objectives rationally match with program educational objectives. The mapping of PEO, PO and CO is as illustrated below

5. Mapping of PEO& PO and CO

Program Educational Objectives	Thrust Area	**Program Outcome**	Course Outcome
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PEO III	Hands on Technology and Professional experience	PO8,PO10	All Lab courses
PEO IV	Interdisciplinary and Life Long Learning	PO7,PO9,PO12	All open electives and discipline specific electives

Master of Library and Information Science

Choice Based Credit System (CBCS) Semester Pattern

Revised Syllabus With Effect from: July, 2020

Course Objective:

1. To provide an understanding of the vital and pervasive role of Information as an essential resource in all developmental activities.

2. To provide a thorough insight in to all techniques of information handling with special emphasis on the application of information technology.

3. By studying the Subject Library and Information Science the student will be able to understand and appreciate the purpose of Libraries in changing circumstances.

4. To impart training is basic principle of Library and information science. It is useful to understand the basic functions and principals of theory as well as practical work in Library and Information Science.

5. To create awareness among the students for acquiring the knowledge of specialized subjects.

6. To provide necessary skills and ICT background for designing, implementing, operating and managing Libraries and Information Centers.

7. To develop research skill in students and enable information science.

PROGRMME OUTCOMES:

LIS Students:

1. Will be trained in Technological knowledge and professional skills.

2. Will be able to effectively administer and manage Libraries and Information Centers.

3. Will learn the skills of organizing information and recorded knowledge.

4. Will become competent for job opportunities in LIS and related field.

PROGRAMME SPECIFIC OUTCOMES:

LIS Students:

1. Can manage information resources and the information life-cycle through the processes of collection development, organization, preservation, conservation, access, and dissemination in accordance with physical, virtual, and technical infrastructure and needs.

2. Can design and implement policies essential for creating and providing information services and resources guided by the values of patron privacy, equitable access, intellectual freedom, and ethical use of information.

3. Can perform and access research based practices through the application of information literacy, inquiry, and research methods including data discovery, analytics and qualitative measures.