



“बेटी बचाओ, बेटी पढ़ाओ”

# JAYOTI VIDYAPEETH WOMEN'S UNIVERSITY, JAIPUR

DEPARTMENT OF SCIENCE & TECHNOLOGY

FACULTY OF EDUCATION & METHODOLOGY

## PROGRAM OUTCOMES

Program Code	Program Name	Program Outcomes
1.10	B.TECH(CSE)	<ol style="list-style-type: none"><li>1. Apply the knowledge of engineering fundamentals, sciences to solve complex problems.</li><li>2. Identify the problem, formulate, review previous work if done, analyze the complex problem and find solutions.</li><li>3. Design solutions for complex engineering problems and design system components</li><li>4. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.</li><li>5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling.</li></ol>
26.1	B.DES-FD	<ol style="list-style-type: none"><li>1. Critical thinking: Assess product quality, service Ability, and regulatory compliance standards.</li><li>2. Research: Apply concepts and skills through research based assignments and experimental learning about the interrelationships among historic, socio-cultural, and psychological factors of clothing.</li><li>3. Digital Literacy: Appraise the aesthetics of design process through developing digital presentations and portfolios by using software according to the need of fashion industry.</li><li>4. Effective Communicator: Formulate skills for written, oral, and visual forms to communicate research based ideas.</li></ol>

<p style="text-align: center;"><b>5</b></p>	<p style="text-align: center;"><b>MCA</b></p>	<ol style="list-style-type: none"> <li>1. Engineering Acquaintance: Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.</li> <li>2. Problem Analysis: Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering. Sciences.</li> <li>3. Design/ Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental consideration.</li> <li>4. Conduct investigations of composite problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.</li> <li>5. Modern Tool Usage: Create, select and apply appropriate techniques, resources. and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.</li> </ol>
<p style="text-align: center;"><b>12.10</b></p>	<p style="text-align: center;"><b>M.SC ZOOLOGY</b></p>	<ol style="list-style-type: none"> <li>1. The Program offers both classical as well as modern concepts of Zoology in higher education.</li> <li>2. It enables the students to study animal diversity in both local and global environments.</li> <li>3. To make the study of animals more interesting and relevant to human studies more emphasis is given to branches like behavioural biology, evolutionary biology and economic.</li> <li>4. More of upcoming areas in cell biology, genetics,</li> </ol>

		<p>molecular biology, biochemistry, genetic engineering and bioinformatics have also been included.</p> <ol style="list-style-type: none"> <li>5. Equal importance is given to practical learning and presentation skills of students.</li> <li>6. The lab courses provide the students necessary skills required for their employability.</li> <li>7. Skill enhancement courses in classical and applied branches of Zoology enhance enterprising skills of students.</li> <li>8. The global practices in terms of academic standards and evaluation strategies.</li> <li>9. Provides opportunity for the mobility of the student both within and across the world.</li> <li>10. The uniform grading system will benefit the students to move across institutions within India to begin with and across countries.</li> <li>11. It will also enable potential employers in assessing the performance of the candidates across the world.</li> </ol>
<p><b>12.11</b></p>	<p><b>M.SC BOTANY</b></p>	<ol style="list-style-type: none"> <li>1. Think Critically - Get ability to apply the process of science by formulating hypotheses and design experiments based on the scientific method.</li> <li>2. Analyze and interpret results generated through studies in botany, taxonomical treatments, field studies, excursion tours and laboratory techniques used in the subject.</li> <li>3. Use quantitative reasoning by using mathematical calculations and graphing skills to solve problems in plant science (Botany).</li> <li>4. Effective Communication and collaborate with other disciplines.</li> <li>5. Effectively communicating the fundamental concepts of Botany in written and oral format.</li> <li>6. Identify credible scientific sources to interpret and</li> </ol>

		<p>evaluate the evidences</p> <p>7. Understand the relationship between science and society by recognizing and discussing logical, scientific and ethical issues in Botany.</p> <p>8. .Environment and Sustainability: Understand the issues of environmental contexts and sustainable development with respect to assessment, conservation and utilization of floral diversity.</p>
<b>12.3</b>	<b>M.SC MATHS</b>	<p>1. M.Sc. Mathematics program will help to understand the analysis, structure and algebra of problems in engineering and technology world.</p> <p>2. Mathematician use a wide range of approaches: from addition subtraction to modelling the problems in different branches of science. The intention is to understand the subject in the mathematics role in modern times.</p> <p>3. The key areas of study within the disciplinary/subject area of Mathematics comprise of functional analysis, abstract algebra, differential geometry etc</p> <p>4. The M.Sc. degree programme in Mathematics also enhances with skill enhancement courses.</p>
<b>16.4</b>	<b>B.SC(BT)</b>	<p>1. Graduates will gain and apply knowledge of Biotechnology, Science and Engineering concepts to solve problems related to field of Biotechnology.</p> <p>2. Students will have expertise of biotechnology. Graduates will be able to decide and apply appropriate tools and techniques in biotechnological manipulation.</p>
<b>16.3</b>	<b>B.SC.(FST/ FND)</b>	<p>1. Graduates will gain and apply knowledge of Food nutrition and Dietetics concepts to solve problems related to field of Food nutrition and Dietetics.</p> <p>2. Graduates will be able to decide and apply appropriate tools of Food nutrition and Dietetics for making new food products specific to diets.</p>

		<ol style="list-style-type: none"> <li>3. Graduates will gain and apply knowledge of Food technology, Science and Engineering concepts to solve problems related to field of Food technology.</li> <li>4. Graduates will be able to decide and apply appropriate tools of Food technology for making new food products &amp; technologies</li> </ol>
<b>46</b>	<b>BFA</b>	<ol style="list-style-type: none"> <li>1. Knowledge of different Fine Arts: Knowledge of painting, photography, sculpture, artistic craft-based media, ceramics and metal as well digital technology such as three-dimensional modelling and printing, to find an area that favours the expressive style.</li> <li>2. Problem analysis: Identify, formulate, research literature, and analyse art problems historically as well as in modern perspectives to arrive at substantiated conclusions using techniques of research, ideas, field survey.</li> <li>3. Development of solutions: Solutions are developed for aesthetic issues or problems so that art curriculum can be designed in a way that artists, professionals, art historians, critics, researchers and students can be benefited.</li> <li>4. Modern tool usage: Create, select, and apply appropriate research techniques and resources to discover new research and give solutions to the artistic problems with an understanding of the limitations.</li> <li>5. Different art techniques: Understanding of applicable techniques and procedures in a multiplicity of pictorial media.</li> <li>6. Historical and contemporary perspectives: Knowledge of varied art forms, painters and art pieces from diverse historical and contemporary contexts.</li> </ol>
		<ol style="list-style-type: none"> <li>1. Subject Knowledge: Graduates of the program gain in-depth knowledge of physics, chemistry, and mathematics. They</li> </ol>

<p><b>16.1</b></p>	<p><b>B.SC (PCM/ZBC</b></p>	<p>acquire a strong foundation in these subjects, including theoretical principles, practical applications, and experimental techniques.</p> <ol style="list-style-type: none"> <li>2. <b>Pedagogical Skills:</b> The program equips students with teaching methodologies, classroom management techniques, and instructional strategies specific to science and mathematics education. They learn how to design lesson plans, create engaging activities, and effectively communicate complex concepts to students.</li> <li>3. <b>Teaching Proficiency:</b> Graduates develop the ability to teach the subjects of physics, chemistry, and mathematics at the secondary school level. They understand the curriculum requirements, assessment methods, and educational policies related to these subjects.</li> <li>4. <b>Practical Experience:</b> Many B.Sc. B.Ed. PCM programs include practical training components, such as teaching practice in schools or internships. This hands-on experience allows students to apply their knowledge and skills in real classroom settings, gaining practical insights into teaching and learning processes.</li> <li>5. <b>Career Opportunities:</b> Graduates of the program are eligible to work as teachers in secondary schools, particularly in the science and mathematics departments. They can pursue careers in both public and private educational institutions. They may also choose to pursue advanced degrees or specialized certifications to enhance their career prospects or explore other related fields.</li> <li>6. <b>Research and Development:</b> The program may also foster research and analytical skills in students. They may be encouraged to undertake research projects, conduct experiments, and analyze scientific data. This can open doors to opportunities in scientific research, development, or innovation in industries or academic institutions</li> </ol>
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<p><b>2.6</b></p>	<p><b>B.TECH (FBT)</b></p>	<ol style="list-style-type: none"> <li>1. Graduates of the course will have strong background in the interface of modern biology and advanced food technology and be able to use these tools in industry and/or institutes wherever necessary.</li> <li>2. Graduates of the course will function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings in food and Biotech industries.</li> <li>3. Graduates will identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of natural sciences and engineering sciences.</li> <li>4. Graduates of the course will design solutions with appropriate consideration for public health and safety and environmental considerations.</li> <li>5. Graduate will able to generate, select, and relate suitable techniques, assets, and current engineering and IT tools counting prophecy and modelling to compound engineering activities related to Food and Biotechnology.</li> </ol>
<p><b>12.2</b></p>	<p><b>M.SC CHEMISTRY</b></p>	<ol style="list-style-type: none"> <li>1. Creative Thinking: Students will be able to think creatively (divergently and convergent) to propose novel ideas in explaining facts and figures or providing new solution to the problems in chemistry. The skills of observations and drawing logical inferences from the scientific experiments will also be developed.</li> <li>2. Students will develop various communication skills such as reading, listening, speaking, etc., which we will help in expressing ideas and views clearly and effectively.</li> <li>3. Personality Development: Students will imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality. They will also realize that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude and other necessary qualities leads towards a successful life.</li> </ol>

		<p>4. Skills in research and industrial field: Students will build a scientific temper and will be able to learn the necessary skills to succeed in research or industrial field. In addition they will acquire the skills in handling scientific instruments, planning and performing in laboratory experiments.</p>
<b>12.9</b>	<b>M.SC-PHYSICS</b>	<ol style="list-style-type: none"> <li>1. Apply the knowledge and skill in the design and development of Electronics circuits to fulfil the needs of Electronic Industry.</li> <li>2. Become professionally trained in the area of electronics, optical communication, nonlinear circuits, materials characterization and lasers.</li> <li>3. Pursue research related to Physics and Materials characterization.</li> <li>4. Demonstrate highest standards of Actuarial ethical conduct and Professional Actuarial behaviour, critical, interpersonal and communication skills as well as a commitment to life-long learning</li> </ol>
<b>1.13</b>	<b>M.TECH-CS</b>	<ol style="list-style-type: none"> <li>1. An ability to independently carry out research /investigation and development work to solve practical problems.</li> <li>2. An ability to write and present a substantial technical report/document. Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.</li> </ol>