



M.Tech Environmental Science and Engineering

PROGRAMME OUTCOMES

PO -1 Engineering knowledge Graduates will have a thorough understanding of core Chemical engineering principles and their application in design, analysis, and manufacturing of various equipment related to chemical process

PO -2 Design and development Graduates will have the ability to design, conduct experiments, analyse and interpret data, and make decisions based on relevant engineering and scientific knowledge

PO -3 Modern tool usage Graduates will be proficient in using modern tools and techniques, including software packages, in the design and analysis of any real chemical process.

PO -4 Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO -5 Problem analysis Graduates will have the ability to identify, formulate, and solve complex engineering problems related to Chemical Engineering process using analytical, numerical, and experimental methods.

PO -6 Individual and team work Graduates will have the ability to work in multidisciplinary teams and communicate effectively with other professionals from different fields.

PO-7 Ethics Graduates will have the ability to apply ethical and professional principles in their engineering practice and demonstrate awareness of social, environmental, and economic impacts of engineering solutions.

PO -8 Environment and sustainability At the end of the Program, a student shall be able to understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO-9 Lifelong learning Graduates will have the ability to engage in lifelong learning and keep themselves up-to-date with the latest developments in Chemical engineering.

PO-10 Conduct investigations of complex problems: At the end of the Program, a student shall be able to 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

PO-11 The Engineer and society Graduates will have the ability to pursue careers in various industries, including manufacturing, automotive, aerospace, and energy, as well as in research and academia.

PO -12 Communication At the end of the Program, a student shall be able to communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.





MEWAR UNIVERSITY

Programme Specific Outcomes of M.Tech Environmental Science and Engineering

PSO-1 Graduates will be able to apply their knowledge of environmental science and engineering to identify, analyze and solve complex environmental problems.

PSO-2 Graduates will be able to design and implement effective environmental management strategies to mitigate environmental pollution and degradation

PSO-3 Graduates will be able to apply their knowledge and skills to evaluate the environmental impacts of engineering projects and provide solutions to minimize the negative impacts.





Programme Outcomes of M.Tech Cement and Ceramic Engineering

PO-1 Engineering knowledge Student will be able to apply the knowledge of related to ceramics, cement and materials to solve engineering problems

PO-2 Conduct investigations of problems Student will be able to Identify and formulate complex synthesis routes for various area related to ceramics, cement and materials engineering.

PO-3 Research and investigations A student will be able to conduct investigations of ceramics and cement materials .using various advanced characterization techniques, analyse e and interpret data to draw valid conclusions

PO-4 Design and development Student will Possess skills in the design of experiments, modelling and simulation related to Cement and Ceramic materials.

PO-5 Multidisciplinary tasks As student will be able to carry out laboratory work and multidisciplinary tasks involving Cement and Ceramic engineering and, materials science.

PO-6 Advanced techniques A student will able to synthesize Cement and ceramic materials and develop advanced techniques for various applications

PO-7 Problem solving A student will propagate their knowledge and address problems of social relevance such as energy environment and medicine through their specific electives

PO-8 The Engineer and society A student will be able to analyse the impact of Cement and Ceramic material

PO-9 Innovative ideas Student can execute their own innovative ideas in the form of projects, product design and development.

PO-10 lifelong learning- Student will develop confidence for self-education and ability for lifelong learning.

PO-11 Ethic Commit to professional and ethical responsibilities as an engineer

PO-12 Individual and team work A student can make use of their expertise in environmental engineering and technology principles to manage multi disciplinary projects as an in dividable or as a member or leader in a team is on society including environment, health and ecosystem





MEWAR UNIVERSITY

Programme Specific Outcomes of M.Tech Cement and Ceramic Engineering

PSO-1 Apply knowledge of materials science and engineering to analyze and design cement and ceramic materials for various applications.

PSO-2 Analyze and design processes for the production, processing, and characterization of cement and ceramic materials.

PSO- 3 Apply principles of sustainability and environmental management in the production and use of cement and ceramic materials.



PROGRAMME OUTCOMES

PO-1 Engineering knowledge Graduate will Apply the knowledge of mathematics, science and engineering fundamentals and Petroleum engineering specialization to provide solution for complex Petroleum engineering problems in society, institutions, academia and research.

PO-2 Design and development Graduate will be able to use theoretical and practical knowledge in petroleum fields to analyse and designing various complex petroleum engineering problems in evaluating static and dynamic models of sub surface reservoirs to draw substantiated inferences using

PO-3 Conduct investigations of problems Graduate will have a ability to efficiently estimate the resource and produce the crude oil and natural gas from subsurface to meet specified needs with appropriate constraints such as public health, safety, cultural, and environmental considerations.

PO 4 Problem analysis Graduates will have a ability to Identify problems in upstream, midstream and downstream (entire value chain) and use research-based knowledge and methods, including design, analysis and interpretation of data pertaining to petroleum field and synthesize of the information to provide valid conclusions

PO-5 The Engineer and society Graduate will be able to establish a close linkages with petroleum industries to conduct research at the university that will fulfil the needs of the society at national and global levels.

PO-6 Environment and sustainability At the end of the Program, a student will become familiar with environmentally sound exploration, evaluation and recovery of hydrocarbons from the earth by bearing in mind the responsibilities relevant to professional engineering practices

PO-7 Multidisciplinary Approach Graduate will have a ability to work in multidisciplinary domain of petroleum industry and successfully communicate the various features of petroleum with the technical and non-technical personals.

PO-8 Ethics Graduates will have the ability to apply ethical and professional principles in their engineering practice and demonstrate awareness of social, environmental, and economic impacts of engineering solutions ethically and apply its principals in professional engineering practices in unbiased and fair manner.

PO-9 Individual and team work Graduate will be able to develop individual thinking with effective contribution and function as a cohesive team member or leader in diverse and multidisciplinary professional environment.

PO-10 Communication Graduate will communicate effectively on complex engineering activities with the engineering community and with society.

PO-11 Project management Graduate will be able to demonstrate knowledge and understanding of engineering management principles and apply to manage petroleum industry projects.

PO-12 Lifelong learning Graduate can recognize the need for the futuristic technical knowhow for lifelong learning in the context of changing scientific concept and technology development in petroleum industry.





PROGRAMME OUTCOMES

PO-1 Research activities : A student will be able to carry out research/investigation in dependently and development work to solve practical problems.

PO-2 Report work A student will be able to write and present a substantial technical report/document

PO-3 Engineering knowledge 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.

PO-4 Problem solving A student can apply the knowledge of environmental sciences to solve engineering problems.

PO-5 Design and development Student will possess skills in the design of experiments, modelling and simulation related to environmental engineering.

PO-6 Multidisciplinary Approach Student will be able to Carry out laboratory work and multidisciplinary tasks involving microbiology, analytical techniques, water and waste water analysis, air and soil testing.

PO-7 Environment and sustainability Student can update the knowledge on n novel environmental remediation methodologies and design suitable retro fits to improve the efficiency of the conventional methods practiced

PO-8 The Engineer and society Student can propagate their knowledge and address problems of social relevance towards environment mitigation strategies.

PO-9 Innovative ideas Student can execute their own innovative ideas in the form of projects ,product design and development.

PO-10 lifelong learning- Student will Develop confidence for self-education and ability y for lifelong learning.

PO-11 Ethic Commit to professional and ethical responsibilities as an engineer

PO-12 Individual and team work A student can make use of their expertise in environmental engineering and technology principles to manage multi disciplinary projects as an in dividable or as a member or leader in a team





Programme Specific Outcomes of B.Tech Chemical Engineering

PSO-1 Graduate will have ability to apply knowledge of mathematics, science, and engineering in the field of chemical engineering to solve complex engineering problems.

PSO-2 Graduate will have ability to develop and implement chemical engineering solutions that are sustainable, economically feasible, and environmentally friendly.

PSO-3 Ability to design and evaluate chemical processes and equipment using contemporary engineering tools and techniques.

Programme Specific Outcomes of B.Tech Petro Chemical Engineering

PSO-1 Graduate will have knowledge of Petrochemical Engineering: Graduates will have a strong foundation in petrochemical engineering concepts, including the design, operation, and optimization of petrochemical processes.

PSO-2 Graduate will have skills in Petrochemical Process Design: Graduates will be able to design and analyze petrochemical processes and equipment, and will be able to select appropriate materials, equipment, and technologies for specific applications.

PSO-3 Graduate will have ability to Manage Petrochemical Projects: Graduates will have the skills to plan, organize, and manage petrochemical projects, including the ability to prepare project reports, cost estimates, and feasibility studies.



[Handwritten signature]