CIVIL ENGINEERING

Programme Outcomes (POs)

PO 1:   **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO 2:   **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO 3:   **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO 4:   **Conduct investigations of complex problems**: 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 5:   **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO 6:   **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO 7:   **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 8:   **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9:   **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10: **Communication**: 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.

PO 11: **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 12: **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

PEO 1: Assessing societal needs and plan suitable infrastructure

PEO 2: Analyze and design components of civil engineering projects

PEO 3: Develop team spirit and inter personal dynamics for effective execution and management of projects.

PEO 4: Adhering to lifelong learning and adapt to changing professional and societal needs.

PROGRAM SPECIFIC OUT COMES (PSO)

PSO1: Capability to investigate, plan, analyze and design buildings for different purposes such as residential, commercial, public office, recreational etc. using STADD Pro and relevant software.

PSO2: Competency in preliminary engineering surveys, planning and design of infrastructure viz. roads, bridges and designing traffic control systems etc. using MX Roads and other relevant software programs.

PSO3: Conduct field and laboratory tests for analysis and quality control of civil engineering projects.

Note: Program Outcomes (POs) and Program Specific Outcomes (PSOs) are mapped with Course Outcomes (COs) and they are correlated in following levels

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

Program Outcomes (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

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12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Educational Objectives (PEOs)

PEO-1: To Pursue a successful career in the field of Computer Science & Engineering and

Contribute to the profession.

PEO-2: To keep abreast of the developments and trends in the field of Computer Science &

Engineering and engage in research leading to innovations and products.

PEO-3: To be able to work effectively in multidisciplinary and multicultural environments.

PEO-4: To be responsible members and leaders of their communities, understand the human,social and environmental context of their profession and contribute positively to the

needs of individuals and society at large.

Program Specific outcomes (PSOs)

PSO – I: Students will have the ability to understand the principles and working of computer systems to assess the hardware and software aspects of computer systems.

PSO-II: Students will have the ability to understand the structure and development methodologies of software system, that possess professional skills and knowledge of software design process.

PSO-III: Students will have the ability to use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.

RGM COLLEGE OF ENGINEERING(AUTONOMOUS), NANDYAL-518501

ELECTRONICS AND COMMUNICATION ENGINEERING

Program Outcomes (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. **Conduct investigations of complex problems**: 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.

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.

6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to   assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in   societal   and   environmental   contexts,   and   demonstrate   the knowledge of, and need for sustainable development.

8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication**: 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.

11. **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.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Educational Objectives (PEOs)

PEO-1: To train competent Electronics & Communication Engineers in analysis, design and testing of electronics systems by providing modern tools.

PEO-2: To prepare graduates to take up gainful employment in core sector and prepare them for a successful career in Multinational companies.

PEO-3: To impart skills to develop affordable products for rural people by adopting multidisciplinary approach.

PEO-4: To undertake sponsored projects, consultancy and internships by strengthening industry institute collaboration.

Program Specific outcomes (PSOs)

PSO-I: Students are able to analyze and design the electronic circuits with the knowledge of courses related circuits, networks, linear digital circuits and Analog electronics.

PSO-II: Student can explore the scientific theories, ideas, methodologies in operation and maintenance of communication systems to bridge the gap between academics and industries.

PSO-III: Students are able to work professionally with new cutting edge Technologies in the fields of electronic design, communication and automation

Note: Program Outcomes (POs) and Program Specific Outcomes (PSOs) are mapped with Course Outcomes (COs) and they are correlated in following levels

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

RGM COLLEGE OF ENGINEERING(AUTONOMOUS), NANDYAL-518501

ELECTRICAL AND ELECTRONICS ENGINEERING

Program Outcomes (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. **Conduct investigations of complex problems**: 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.

5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

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9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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11. **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.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific outcomes

PSO– 1: Students are able to analyze and design the electrical and electronic circuits with the knowledge of courses related circuits, networks, linear digital circuits and power electronics.

PSO-2: Student can explore the scientific theories, ideas, methodologies in operation and maintenance of electrical machines to bridge the gap between academics and industries.

PSO-3: Students are able to work professionally with new cutting edge Technologies in the fields of power system, generation, operation, and maintenance.

Program Educational Objectives

PEO-1: Graduates will have intra-disciplinary comprehension and skills to design and develop products and systems in the field of Electrical and Electronics Engineering.

PEO-2: Graduates will acquire knowledge to meet the needs of operation and continuance of electrical tools used in various industries

PEO-3: Graduates will be proficient to meet the tasks in public and private sectors of Electrical Engineering

PEO-4: Graduates will possess the knowledge and motivation to pursue successful professional career for the betterment of humankind

Note: Program Outcomes (POs) and Program Specific Outcomes (PSOs) are mapped with Course Outcomes (COs) and they are correlated in following levels

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

RGM COLLEGE OF ENGINEERING(AUTONOMOUS), NANDYAL-518501

MECHANICAL   ENGINEERING

Programme Outcomes (POs)

PO 1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO 2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO 3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO 4: Conduct investigations of complex problems: 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 5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO 6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO 7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10: Communication: 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.

PO 11: 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 12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Educational Objectives (PEOs)

PEO.1: To apply modern computational, analytical, simulation tools and techniques to address the challenges faced in mechanical and allied engineering streams.

PEO.2: To Plan, design, construct, maintain and improve mechanical engineering systems that are technically sound, economically feasible and socially acceptable to enhance quality of life.

PEO.3: To Exhibit professionalism, ethical attitude, team spirit and pursue

life long learning to achieve career and organizational goals.

PEO.4: To communicate effectively using innovative tools and demonstrates leadership & entrepreneurial skills.

Programme specific outcomes (PSOs)

PSO 1: The graduate will be able to design systems, components or process for broadly defined engineering technology problems appropriate to programme educational objectives.

PSO 2: The graduates will be able to apply modern engineering tools viz., CAD/CAM packages for modeling, analysis and predicting simple to complex engineering activities with an understanding of the limitations.

PSO 3: The graduate will be able to apply oral and graphical communication in both technical and non-technical environment.

PSO 4: The graduate will be able to engage in self directed continuing professional development and have a strong commitment to address ethical and professional responsibilities.

Note: Program Outcomes (POs) and Program Specific Outcomes (PSOs) are mapped with Course Outcomes (COs) and they are correlated in following levels

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

RGM COLLEGE OF ENGINEERING(AUTONOMOUS), NANDYAL-518501

INFORMATION TECHNOLOGY

PROGRAM OUTCOMES

Engineering Graduates will be able to:

1) **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2) **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3) **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal , and environmental considerations.

4) **Conduct investigations of complex problems**: 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.

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.

6) **The engineer and society**: Apply reasoningnformed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7) **Environmentandsustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8) **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9) **Individualandteamwork**: Function effectively as an individual, and as a member or lead erindivers eteams, and inmulti disciplinary settings.

10) **Communication**: 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 designd ocumentation, make effective presentations, and give and receive clear instructions.

11) **Projectmanagementandfinance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these toone's own work, as a member and leaderinateam, to manage projects and inmulti disciplinary environments.

12) **Life-longlearning**: Recognize the need for, and have the preparation and ability to engage in independent and life – long learning in the broadest context of technological change.

Program Educational Objectives (PEOs)

Graduates of the B.Tech (IT) program are to prepare them to:

PEO 1: To be a competent IT professional capable of software development, technological innovation in a multidisciplinary environment

PEO 2: Function effectively as individuals and team members in the workplace, growing into highly technical or project management and leadership roles.

PEO 3: To develop various application programs as an IT professional with ethical values and sensitivity to the impact of technology on society.

PROGRAM SPECIFIC OUTCOMES (PSOs)

1. Design, implement and evaluate computer technologies, systems, processes, components and/or programs appropriate to a defined task, while analyzing the impact on existing systems and potential future applications and also develop technological solutions to simple and complex problems.

2. Apply formal frameworks, methods and management systems to the organization, storage and retrieval of data in ways that demonstrate an understanding of both the business enterprise and the relevant technology.

3. Implement effective business solutions across an organization that demonstrates appropriate consideration of alternative computer technologies, including networks, servers, programming languages and database systems.

4. Plan, analyze, design and construct information systems to identified specifications, using clear and efficient code in the relevant programming language(s).

Develop, analyze and defend solutions to networking and security problems that demonstrate an appropriate balance among security needs, business concerns, confidentiality, availability and system integrity