



# TEEGALA KRISHNA REDDY ENGINEERING COLLEGE

(Sponsored by TKR Educational Society, Approved by AICTE, Affiliated by JNTUH)

Medbowli, Meerpet, Saroornagar, Hyderabad-500097

Phone: 040-24092838 Fax: +91-040-24092555

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## Institute Vision

Imparting Knowledge and instilling skills to the aspiring students in the field of Engineering, Technology, Science and Management to face the emerging challenges of the society.

## Institute Mission

- Encouraging scholarly activities that transfer knowledge in the areas of Engineering, Technology, Science and Management.
- Ensuring the students of all ability levels are well trained to meet the needs of education and their future endeavors
- Inculcating human values and ethics into the education system for the all round development of the students.

## Quality Policy

Teegala Krishna Reddy Engineering College is committed to provide quality Technical education to the students through dedicated and talented faculty, good infrastructure, laboratories and research.

## DEPARTMENT OF ECE

### Vision

Striving to provide quality education and train students in the interdisciplinary technologies to meet the needs and demands of society shaping them into skilful engineers imbued with professional ethics in the field of Electronics and Communication Engineering.

### Mission

- Imparting quality education in Electronics and Communication Engineering through effective teaching –learning process and make the students useful to the society.
- Involving the students in creative and group activities.
- Empowering the students to prepare them for technicality, employability and entrepreneurship capabilities with social etiquettes.

### Program Educational Objectives (PEOs)

**PEO-1:** The students will be supported with a solid foundation in Basic Sciences and Mathematics. These basics will be used extensively in Electronics and Communication Engineering for solving practical problems.

**PEO-2:** The students will be trained to acquire practical skills and hands on experience which motivates them to participate in National and International fests, seminars, workshops and also industrial visits. Added to the above, they are exposed to gain employability, entrepreneurship and face competitive exams.



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**PEO-3:** The students will be acquired with life skills so that they can envisage the problems and portray solutions enabling them to work effectively with group and develop confidence to face group discussions.

**PEO-4:** The students shall also exhibit professionalism, ethical attitude and communication skills in their chosen profession and update their skills to latest technologies through lifelong learning process.

## Program Outcomes (Pos):

PO. No.	Description
PO 1	<b>Engineering Knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	<b>Problem Analysis:</b> 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	<b>Design / Development of Solutions:</b> 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	<b>Conduct Investigations of Complex Problems:</b> 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	<b>Modern Tool Usage:</b> 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	<b>The Engineer and Society:</b> 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	<b>Environment and Sustainability:</b> 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	<b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	<b>Individual and Team Work:</b> Function effectively as an individual, and as a



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	member or leader in diverse teams, and in multidisciplinary settings.
<b>PO 10</b>	<b>Communication:</b> 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.
<b>PO 11</b>	<b>Project Management and Finance:</b> 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.
<b>PO 12</b>	<b>Life-long Learning:</b> 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.
<b>Program Specific Outcomes</b>	
<b>PSO 1</b>	Students able to acquire creativity in support of the design, simulation, implementation towards the basic technologies in the field of Electronics and Communication Engineering.
<b>PSO 2</b>	An able to recognize the importance of professional developments in the field of Electronics and Communication Engineering and achieve success in the competitive examinations, further develop interest towards higher studies and career building.



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## DEPARTMENT OF EEE

### **Vision of the Department**

Imparting knowledge and Engineering skills to the aspiring students in the field of Electrical and Electronics Engineering, and to face the emerging challenges of the society.

### **Mission of the Department**

- Encouraging scholarly activities that transfer knowledge in the areas of Electrical and Electronics Engineering.
- Encourage the students and train them to meet the needs of education and their future endeavors.
- Inculcating human values and ethics into the education system for the all-round development of the students.

### **Program Educational Objectives (PEOs)**

**PEO 1** Students will have strong foundation in the basic principles of sciences, Mathematics, Electrical and Electronics Engineering to analyze and design and create eco-friendly products and solutions for real life problems.

**PEO 2** Students will be better employable and achieve success in their chosen areas of Electrical and Electronics Engineering and related field.

**PEO 3** Students will be successful engineers with necessary professional skills, effective oral, written communication and team building activities in multi-disciplinary areas with right attitude and Ethics.

**PEO 4** The Students shall also exhibit professionalism, ethical attitude and communication skills in their chosen profession and update their skills to latest technologies through lifelong learning process.

### **Program Outcomes (Pos):**

PO. No.	Description
PO 1	<b>Engineering Knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems
PO 2	<b>Problem Analysis:</b> 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	<b>Design / development of Solutions:</b> 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,



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	societal, and environmental considerations.
<b>PO 4</b>	<b>Design / development of Solutions:</b> 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.
<b>PO 5</b>	<b>Modern tool usage:</b> 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.
<b>PO 6</b>	<b>The engineer and Society:</b> 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.
<b>PO 7</b>	<b>Environment and sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
<b>PO 8</b>	<b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
<b>PO 9</b>	<b>Individual and team work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
<b>PO 10</b>	<b>Communication:</b> 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.
<b>PO 11</b>	<b>Project management and finance:</b> 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.
<b>PO 12</b>	<b>Life-long learning:</b> 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.
<b>Program Specific Outcomes (PSOs)</b>	
<b>PSO 1</b>	Students will be able to demonstrate an ability to analyze, design and provide engineering solutions in the areas related to Electrical Drives, Electrical Machines, Power Electronics, Control Systems and Power Systems.
<b>PSO 2</b>	Students of EEE are able to develop and design the electrical and electronic circuits using simulation software's such as P-SPICE, MATLAB and will be able to utilize the techniques and participate to succeed in competitive examinations like GATE, TOFEL, GRE and GMAT etc.



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## DEPARTMENT OF IT

### Vision

The department of Information Technology focuses to produce technically strong graduates in the field of Information Technology, who will be useful for the society.

### Mission

- To impart sound knowledge in English, basic sciences and Information Technology which will improve students employability.
- To train the graduates and inculcate the importance of communication skills, research and to pursue for higher studies by conducting workshops, seminars.
- During graduation, students are encouraged to learn ethics.

### Program Educational Objectives (PEOs)

**PEO 1:** Graduates engage in professional development and make use of the available resources.

**PEO 2:** Graduates of Information Technology try to improve in professional career with problem solving ability for providing Information Technology solutions by proper plan, analysis, design, implementation and validation.

**PEO 3:** Graduates of the Information Technology program are prepared for their successful career in the Information Technology industry / seek higher studies and continue to develop.

### Program Outcomes (Pos):

PO. No.	Description
PO 1	<b>Engineering Knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	<b>Problem Analysis:</b> 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	<b>Design / development of Solutions:</b> 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	<b>Conduct investigations of complex problems:</b> Use research-based knowledge and research methods including design of experiments, analysis and interpretation



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	of data, and synthesis of the information to provide valid conclusions.
<b>PO 5</b>	<b>Modern tool usage:</b> 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.
<b>PO 6</b>	<b>The engineer and Society:</b> 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.
<b>PO 7</b>	<b>Environment and sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
<b>PO 8</b>	<b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
<b>PO 9</b>	<b>Individual and team work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
<b>PO 10</b>	<b>Communication:</b> 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.
<b>PO 11</b>	<b>Project management and finance:</b> 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.
<b>PO 12</b>	<b>Life-long learning:</b> 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.
<b>Program Specific Outcomes</b>	
<b>PSO 1</b>	Students should be able to apply creativity in support of the design, simulation, implementation & oversight of more advanced technologies.
<b>PSO 2</b>	An ability to recognize the importance of professional developments by pursuing postgraduate studies (or) to participate & succeed in competitive examinations that offer challenging & rewarding careers.



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## DEPARTMENT OF CIVIL

### VISION OF THE DEPARTMENT

To impart technical knowledge in the field of civil engineering and expose the graduate students to the technology.

### MISSION OF THE DEPARTMENT

- To provide good theoretical and practical knowledge to the students during their course of study, and create awareness in technology.
- To encourage students for higher studies and to have research oriented direction.
- After completion of course, the students are empowered with good technical knowledge, employability and ethical values to serve the nation.

### Program Educational Objectives (PEOs)

**PEO-1:** To prepare students to have good knowledge in the field of English, basic sciences and all basic Civil Engineering subjects.

**PEO-2:** The students will be trained in practical skills, communication skills and ethical values by providing industrial internship and workshops.

**PEO-3:** The students will be motivated to innovate and for continuous learning process by encouraging them to attend seminars, becoming members of professional bodies and preparing them for pursuing higher studies.

### PROGRAM OUTCOMES (POs) :

PO. No.	Description
PO 1	<b>Engineering Knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	<b>Problem Analysis:</b> 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	<b>Design / Development of Solutions:</b> 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	<b>Conduct Investigations of Complex Problems:</b> Use research-based knowledge and research methods including design of experiments, analysis and interpretation





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	of data, and synthesis of the information to provide valid conclusions.
<b>PO 5</b>	<b>Modern Tool Usage:</b> 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.
<b>PO 6</b>	<b>The Engineer and Society:</b> 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.
<b>PO 7</b>	<b>Environment and Sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
<b>PO 8</b>	<b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
<b>PO 9</b>	<b>Individual and Team Work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
<b>PO 10</b>	<b>Communication:</b> 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.
<b>PO 11</b>	<b>Project Management and Finance:</b> 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.
<b>PO 12</b>	<b>Life-long Learning:</b> 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 (PSOs):

<b>PSO 1</b>	Ability to plan, analyze, design, and executes projects in civil engineering.
<b>PSO 2</b>	Provide sustainable solutions to the civil engineering problems.



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## DEPARTMENT OF CSE

### **Vision**

Enhance learning that promotes techno graduates aiming employability and entrepreneurship with human values to face the challenges in the global technological society.

### **Mission**

- Empowering students for professional career and higher studies by providing hands on experience and value education to become successful technocrats in the society.
- Nurturing students with interpersonal and entrepreneurial skills, so that they gain ability to work as a team.
- Imparting quality education, employability skills and techno ethical values among the students for the benefit of the society.

### **Program Educational Objectives (PEOs)**

**PEO 1:** The students of the program will have strong foundation in the fundamental principles and gain advanced knowledge in the Basic Sciences, Mathematics and other application of Advanced Computer Engineering.

**PEO 2:** The students of the program will be prepared for their successful careers in the software industry / seek higher studies and continue to develop.

**PEO 3:** The students of the program will prepare to engage in professional development through self-study, graduate and professional studies in engineering & business.

**PEO 4:** The students of the program will practice the profession with leadership qualities, ethics and social responsibilities.

### **Program Outcomes (Pos):**

PO. No.	Description
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, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.



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<b>PO 3</b>	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 considerations.
<b>PO 4</b>	Conduct investigations of complex problems: using research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.
<b>PO 5</b>	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.
<b>PO 6</b>	The Engineer and Society: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
<b>PO 7</b>	Environment and Sustainability: Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
<b>PO 8</b>	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
<b>PO 9</b>	Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.
<b>PO 10</b>	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.
<b>PO 11</b>	Project Management and Finance: Demonstrate knowledge and understanding of 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.
<b>PO 12</b>	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. Any signatory needs to provide an overview of its learning outcomes and confirm that compliance of programs



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<b>PSO 1</b>	Acquire knowledge will be used to design and modify principles in the development of software and hardware systems to get a better quality product.
<b>PSO 2</b>	An ability to identify the state of professional development in preparing for competitive examinations that offer successful career and career building