



SARANATHAN COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirappalli - 620 012, Tamil Nadu, India

1.1. State the Vision and Mission of the Department and Institute

Department website

The screenshot shows the website for the Department of Instrumentation and Control Engineering (ICE) at Saranathan College of Engineering. The page features a navigation menu with options like Home, About Us, Administration, Admission, Center, Departments, Common Facilities, Placement, NAAC, IQAC, and Contact Us. A sidebar on the left lists various departmental resources. The main content area displays the following:

Department of ICE

Vision of the Department:

- To create competent Engineers in the field of Instrumentation and Control Engineering capable of facing real time challenges of future technologies.

Mission of the Department:

- To achieve technical excellence in Engineering and Technology through knowledge based education.
- To make the students understand about the values of life to face real world problems.

The screenshot shows the website for the Department of Instrumentation and Control Engineering (ICE) at Saranathan College of Engineering, specifically the Programme Educational Objectives and Program Specific Outcomes page. The page features a navigation menu with options like Home, About Us, Administration, Admission, Center, Departments, Common Facilities, Placement, NAAC, IQAC, and Contact Us. A sidebar on the left lists various departmental resources. The main content area displays the following:

Programme Educational Objectives

The Graduates of Instrumentation and Control Engineering will

- PEO1: Acquire a comprehensive exposure to basic concepts of Instrumentation and Control Engineering and its related disciplines.
- PEO2: Equip themselves with beyond syllabus skills related to Instrumentation and Control Engineering.
- PEO3: Exhibit their talents that would enable them for prospective placements, higher studies and entrepreneurship activities.
- PEO4: Inculcate professional ethical attitudes and life-long learning skills needed to have a successful professional career.

Program Specific Outcomes

Engineering Graduates will be able to:

- PSO1: Sharpen their technical competency through value added training like CIAD, CLD certification from M/s National Instruments, spoken tutorial from IITB, in-house workshop based training through faculty resources.
- PSO2: Get into industrial internship, culminating in placement opportunities, so as to have a real world professional experience.
- PSO3: Get hands on experience by doing technical projects, and thereby converting them to publications in referred conferences and journals.



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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateswara Nagar, Panjappur, Tiruchirappalli - 620 012, Tamil Nadu, India

The below poster is provided in class rooms and Laboratories:

SARANATHAN COLLEGE OF ENGINEERING
Venkateswara Nagar, Panjappur
Tiruchirappalli - 620012.

Program Outcomes

The Graduates will have the ability to

- Engineering knowledge:**
Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Ethics:**
Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- Individual and team work:**
Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 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.
- 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.
- 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.

SARANATHAN COLLEGE OF ENGINEERING
Venkateswara Nagar, Panjappur
Tiruchirappalli - 620012.

Vision of the Institution

Impart an inclusive engineering education that beyond being a facilitator for a career and rudimentary skills, equips the students to offer ethically & environmentally conscious solutions to societal issues.

Mission of the Institution

Develop the Institution into a Model Self Financing College of Engineering and Technology. Deliver Professional Training to our students with state-of-the-art Laboratories and convert them into Technocrats of international repute.

- Create a nurturing, holistic environment of engineering education to facilitate every student realize their full potential.
- Strive to make the students strong in basic concepts armed with appropriate skills to enhance one's ability to apply the knowledge and provide solutions to real time issues.
- Maintain an ambience that facilitates the students to strengthen their ethical value systems.
- Actively promote R&D and institute-industry interaction.

Department of ICE

Vision of the Department

To create competent Engineers in the field of Instrumentation and Control Engineering capable of facing real time challenges of future technologies.

Mission of the Department

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- To make the students understand about the values of life to face real world problems.

Program Educational Objectives

The Graduates of Instrumentation and Control Engineering will

PEO1: Acquire a comprehensive exposure to basic concepts of Instrumentation and Control Engineering and its related disciplines.

PEO2: Equip themselves with beyond syllabus skills related to Instrumentation and Control Engineering.

PEO3: Exhibit their talents that would enable them for prospective placements, higher studies and entrepreneurship activities.

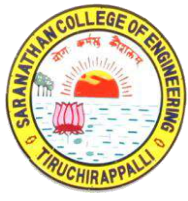
PEO4: Inculcate professional ethical attitudes and life-long learning skills needed to have a successful professional career.

Program Specific Outcomes

PSO1: Sharpen their technical competency through value added training like CLAD, CLD certification from M/s National Instruments, spoken tutorial from IITE, in-house workshop based training through faculty resources.

PSO2: Get into industrial internship, culminating in placement opportunities, so as to have a real world professional experience.

PSO3: Get hands on experience by doing technical projects, and thereby converting them to publications in referred conferences and journals.



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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirapalli - 620 012, Tamil Nadu, India

Second Year Class Room





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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirapalli - 620 012, Tamil Nadu, India

Third Year Class Room





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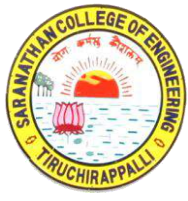
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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirapalli - 620 012, Tamil Nadu, India

Final Year Class Room





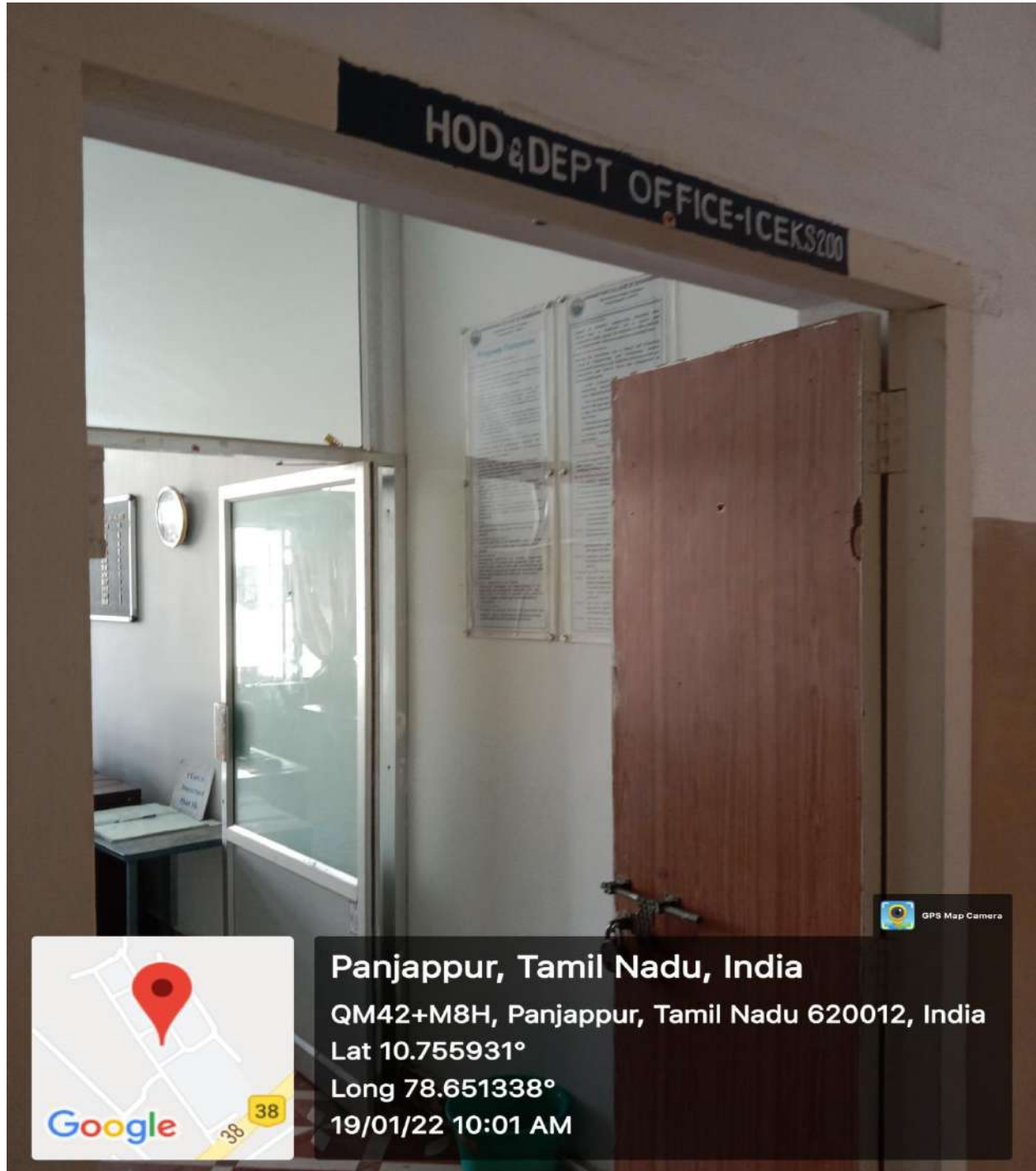
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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

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HoD Cabin





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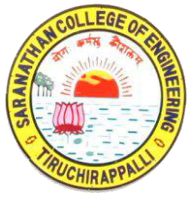
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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirapalli - 620 012, Tamil Nadu, India

NI Research Lab





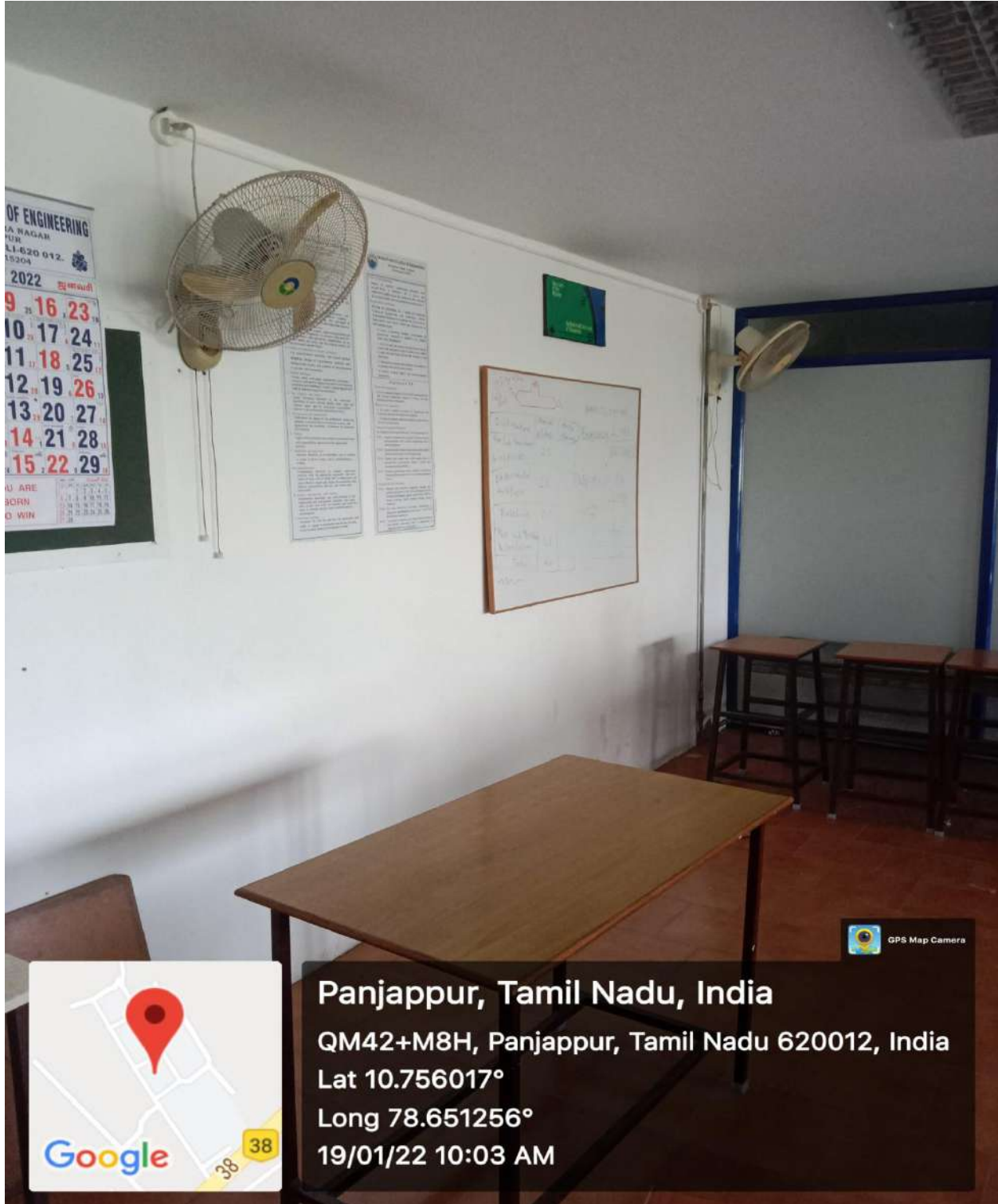
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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

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Transducer, Measurements & II Lab





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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirappalli - 620 012, Tamil Nadu, India

Circuits and Instrumentation Design Lab

SARANATHAN COLLEGE OF ENGINEERING
Venkateshwara Nagar, Panjappur
Tiruchirappalli - 620012.

Program Outcomes

The Graduates will have the ability 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.
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. **Lifelong 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.

SARANATHAN COLLEGE OF ENGINEERING
Venkateshwara Nagar, Panjappur
Tiruchirappalli - 620012.

Vision of the Institution
Impart an inclusive engineering education that beyond being a facilitator for a career and rudimentary skills, equips the students to offer ethically & environmentally conscious solutions to societal issues.

Mission of the Institution
Develop the Institution into a Model Self Financing College of Engineering and Technology. Deliver Professional Training to our students with state-of-the-art Laboratories and convert them into Technocrats of international repute.

1. Create a nurturing, holistic environment of engineering education to facilitate every student realize their full potential.
2. Strive to make the students strong in basic concepts armed with appropriate skills to enhance one's ability to apply the knowledge and provide solutions to real time issues.
3. Maintain an ambience that facilitates the students to strengthen their ethical value systems.
4. Actively promote R&D and institute-industry interaction.

Department of ICE

Vision of the Department
To create competent Engineers in the field of Instrumentation and Control Engineering capable of facing real time challenges of future technologies.

Mission of the Department

1. To achieve technical excellence in Engineering and Technology through knowledge based education.
2. To make the students understand about the values of life to face real world problems.

Program Educational Objectives
The Graduates of Instrumentation and Control Engineering will

PEO1: Acquire a comprehensive exposure to basic concepts of Instrumentation and Control Engineering and its related disciplines.

PEO2: Equip themselves with beyond syllabus skills related to Instrumentation and Control Engineering.

PEO3: Exhibit their talents that would enable them for prospective placements, higher studies and entrepreneurship activities.

PEO4: Incultate professional ethical attitudes and life-long learning skills needed to have a successful professional career.

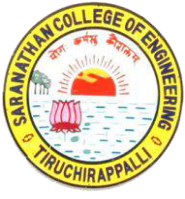
Program Specific Outcomes

PSO1: Sharpen their technical competency through value added training like CLAD, CLD certification from M's National Instruments, spoken tutorial from IITB, in-house workshop based training through faculty resources.

PSO2: Get into industrial internship, culminating in placement opportunities, so as to have a real world professional experience.

PSO3: Get hands on experience by doing technical projects, and thereby converting them to publications in referred conferences and journals.

Panjappur, Tamil Nadu, India
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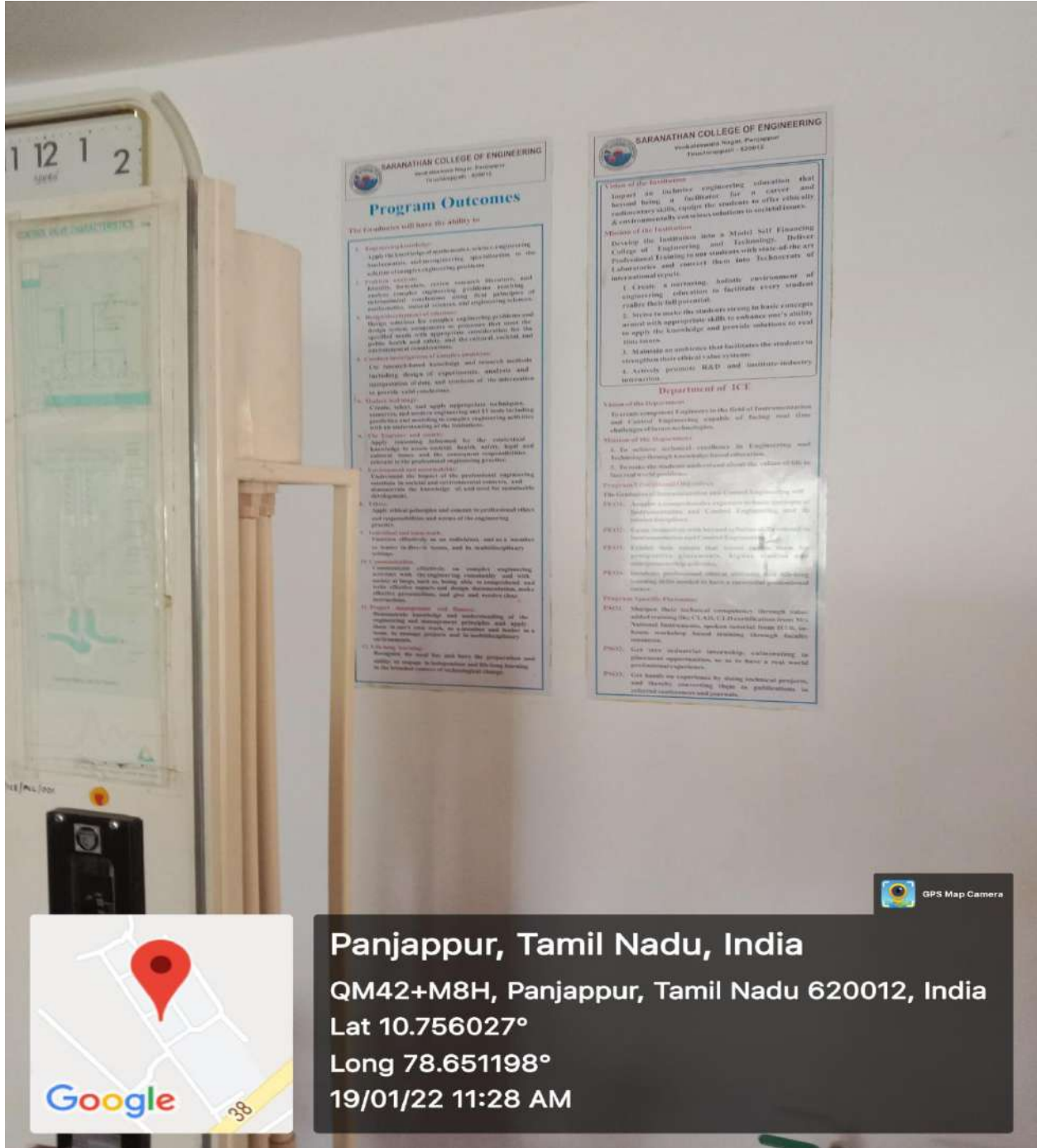
SARANATHAN COLLEGE OF ENGINEERING

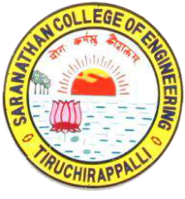
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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirappalli - 620 012, Tamil Nadu, India

Process Control System Lab





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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirappalli - 620 012, Tamil Nadu, India

Virtual Instrumentation Lab

SARANATHAN COLLEGE OF ENGINEERING
Venkateshwara Nagar, Panjappur
Tiruchirappalli - 620012

Program Outcomes

The Graduates will have the ability to

- Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 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.
- 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.
- 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.
- 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.
- The Engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities inherent to the professional engineering practice.
- Environment and sustainability:** Understand the impact of the professional engineering in solutions to societal and environmental contexts, and demonstrate the knowledge of, and need for, sustainable development.
- Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- Autonomous and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- Communication:** Communicate effectively on complex engineering topics through oral, written, graphical, visual, and computing media at large, such as being able to comprehend and write effective reports and design documents, make effective presentations, and give and receive clear instructions.
- Project management and finance:** Apply management knowledge and understanding of the business and management principles and apply engineering and management principles and apply them to manage projects and activities in a team, to manage projects and in multidisciplinary environments.
- Life-long learning:** Monitor the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

SARANATHAN COLLEGE OF ENGINEERING
Venkateshwara Nagar, Panjappur
Tiruchirappalli - 620012

Vision of the Institution

Impart an inclusive engineering education that beyond being a facilitator for a career and employability skills, equips the students to offer ethically & environmentally sensitive solutions to societal issues.

Mission of the Institution

Develop the Institution into a Model Self Financing College of Engineering and Technology. Deliver Professional Training to our students with state-of-the-art Laboratories and convert them into Technocrats of International repute.

- Create a nurturing, holistic environment of engineering education to facilitate every student realize their full potential.
- Strive to make the students strong in basic concepts around with appropriate skills to enhance one's ability to apply the knowledge and provide solutions to real time issues.
- Maintain an ambience that facilitates the students to strengthen their ethical value systems.
- Actively promote R&D and Institute-Industry interaction.

Department of ICE

Vision of the Department

To create competent Engineers in the field of Instrumentation and Control Engineering capable of facing and thus challenges of future technologies.

Mission of the Department

- To achieve technical excellence in Engineering and Technology through knowledge based education.
- To make the students understand about the values of life to face real world problems.

Program Educational Objectives

The Graduates of Instrumentation and Control Engineering will

- PEO1: Acquire a comprehensive exposure to basic concepts of Instrumentation and Control Engineering and its related disciplines.
- PEO2: Equip themselves with broad skillset related to Instrumentation and Control Engineering.
- PEO3: Exhibit their talents that would enable them the prospective placements, higher studies and entrepreneurship activities.
- PEO4: Evolve professional ethical attitudes and life-long learning skills needed to have a successful professional career.

Program Specific Outcomes

- PSO1: Sharpen their technical competency through value added training like C.E.A.E.C.I.T. credit course from Anna University, speaker tutorial from IIR, in-house workshop based training through faculty resources.
- PSO2: Use their industrial networking, collaborating in placement opportunities, so as to have a real world professional experience.
- PSO3: Use skills on reputation by doing technical projects, and sharing converting them to publications, in cultural institutions and journals.



Panjappur, Tamil Nadu, India

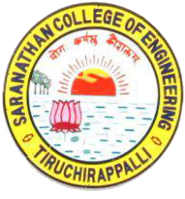
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SARANATHAN COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Venkateshwara Nagar, Panjappur, Tiruchirappalli - 620 012, Tamil Nadu, India

Advanced Control Systems Lab

SARANATHAN COLLEGE OF ENGINEERING
Venkateshwara Nagar, Panjappur
Tiruchirappalli - 620 012

Program Outcomes

The Graduates will have the ability to:

- Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, science of selection, and engineering sciences.
- Design/Development of Solutions:** Design and/or develop a complete engineering solution and design solutions for complex engineering problems and design systems components to generate that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations.
- Investigation:** Conduct investigation 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.
- Modern Tool Usage:** Utilize, 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.
- 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.
- 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.
- Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 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.
- Project Management and Finance:** Apply management and organizational principles and apply them to one's own work, as well as to lead a team in managing projects and in multidisciplinary environments.
- Life-long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

SARANATHAN COLLEGE OF ENGINEERING
Venkateshwara Nagar, Panjappur
Tiruchirappalli - 620 012

Vision of the Institution

Impart an holistic engineering education that focused on a Engineer for a career and customer skills, equip the students to offer education & environmentally sensitive solutions to societal needs.

Mission of the Institution

Develop the Institution into a Model Self Financing College of Engineering and Technology. Effective Professional Training to our students with state-of-the-art Laboratories and convert them into Technocrats of International Repute.

- Create a institution, holistic environment of engineering education to facilitate every student realize their full potential.
- Strive to make the students strong in basic concepts as well with appropriate skills to enhance one's ability to apply the knowledge and provide solutions to real time issues.
- Maintain an excellence that facilitates the students to strengthen their ethical value systems.
- Actively promote R&D and institute-industry interaction.

Department of ICE

Vision of the Department

To create competent Engineers in the field of Instrumentation and Control Engineering capable of facing and meet challenges of future technologies.

Mission of the Department

- To achieve technical excellence in Engineering and Technology through knowledge based education.
- To make the students understand about the value of life to their real world practices.

Program Educational Objectives

The Graduates of Instrumentation and Control Engineering will:

- PEE01: Acquire a comprehensive exposure to basic concepts of Instrumentation and Control Engineering and its related disciplines.
- PEE02: Equip themselves with beyond to higher skills related to Instrumentation and Control Engineering.
- PEE03: Exhibit those values that would enable them to progressively placements, higher studies and entrepreneurship activities.
- PEE04: Instill professional ethical attitudes and lifelong learning skills needed to have a successful professional career.

Program Specific Outcomes

- PSO01: Acquire their technical competencies through value education using the C.S.A.P.A.E.I. curriculum from Anna University, upon successful completion of the B.Tech. degree, involving hands training through flexible education.
- PSO02: Gain more industrial internship, volunteering to placement opportunities, so as to have a real world professional experience.
- PSO03: Get hands on experience by doing technical projects, and thereby, conveying them to publications in national conferences and seminars.

Google

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