



ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.

7.2 Best Practices

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual

Best Practice I

1. Title of the Practice:

Projects to Publications - Learn and Explore the Practical Knowledge of the Students

Every year, at St. Anne's College of Engineering and Technology, our final year students do projects in the eighth semester as per Anna University Curriculum. The final semester project signifies a milestone in an engineering student's life. The eighth semester projects are converted into research papers. These research papers are presented in the Conferences namely National/International Conference on Research and Development in Science, Engineering and Technology (NCRDSET/ICRDSET) organized by the SANCET, annually. The papers presented in the conferences are published in the NCRDSET/ICRDSET proceedings holding the ISBN number.

2. Objective of the Practice

- The objective of the practice is to make the students to try out new ideas for providing practical exposure, to share their knowledge to the research community which helps students engaged in purposeful, relevant learning and fruitful outcome.
- The best way to share the project knowledge is to present their work in Conferences and publishing it. They have an opportunity to get feedback on their project by asking questions and discussions with the audience. This can help the students to think of fresh ways to broaden their perspective.
- It provides a better level of professionalization to a resume.

3. The Context

The final year project plays a very crucial part in a student's life. The final year students undertake a research-oriented project entirely on their own. The project focuses on performing a literature review, identifying the gaps and contribution, clarifying the research questions and objectives, developing a methodology, ascertaining the budget and resources, defining the expected outcomes and familiarizing with the software, tools and techniques to be used.

The student utilize the computers, equipment, machines and resources in SANCET or purchases the material, builds the system, performs the experiments or conducts the simulations, analyzes the results, discusses it and comes to reasonable conclusions. The students who have presented at conferences learn a great deal from others research, make valuable contacts through



ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.

networking, and appreciate the opportunity to improve their presentation skills and showcase their project to others. Hence the NCRDSET/ICRDSET is organized to provide the students with a complete research experience.

4. The Practice

An innovative and worthwhile final semester project strengthens the core skills of the student and prepares them to face future challenges. It helps to bridge the gap between theory-based learning and skills-based learning. To monitor the progress of project, a Review Committee is formed which includes the Supervisor, Project Co-ordinator and Evaluator. There shall be four reviews during the semester. The project batch should make a power point presentation and present it in reviews. An Assessment Record should be maintained by each batch and the status of the project work should be recorded in it. Every project batch should get sign from the respective Supervisor every week in order to ensure the progress of the project work. Our students Project Work and presenting paper in Conference comprises the following steps:

1. The students area of interest is collected and the students are grouped (2-5 members) into various batches. The project guide is allocated based on the area of interest of the students.
2. The students do literature survey from the journals and e-sources available in the Central Library. Our students carry out a thorough study of the published papers in order to provide the most recent papers in their area of interest. The ideas presented based on the literature survey are further explored for fresh insight. In this way, students bring out their innovative idea for project work.
3. The students present their idea in the zeroth review to confirm the title of the project to the Review Committee. The committee analyse the feasibility and approve the project.
4. Then students start the implementation of the project. They should present the methodology and implementation progress in every review. Project review content is shown to the project guide before every review. The suggestions made by the Supervisor are incorporated in the presentation. Project review committee monitor the progress of the project work and suggest ideas to enhance the project work. The project demo is shown and report is submitted in the third review.
5. After completion of implementation of the project, the paper is prepared with the guidance of Guide. Completed and innovated projects are presented in the National/International Conferences conducted in our College. The papers presented in the conference are published in the Conference proceedings.



ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.

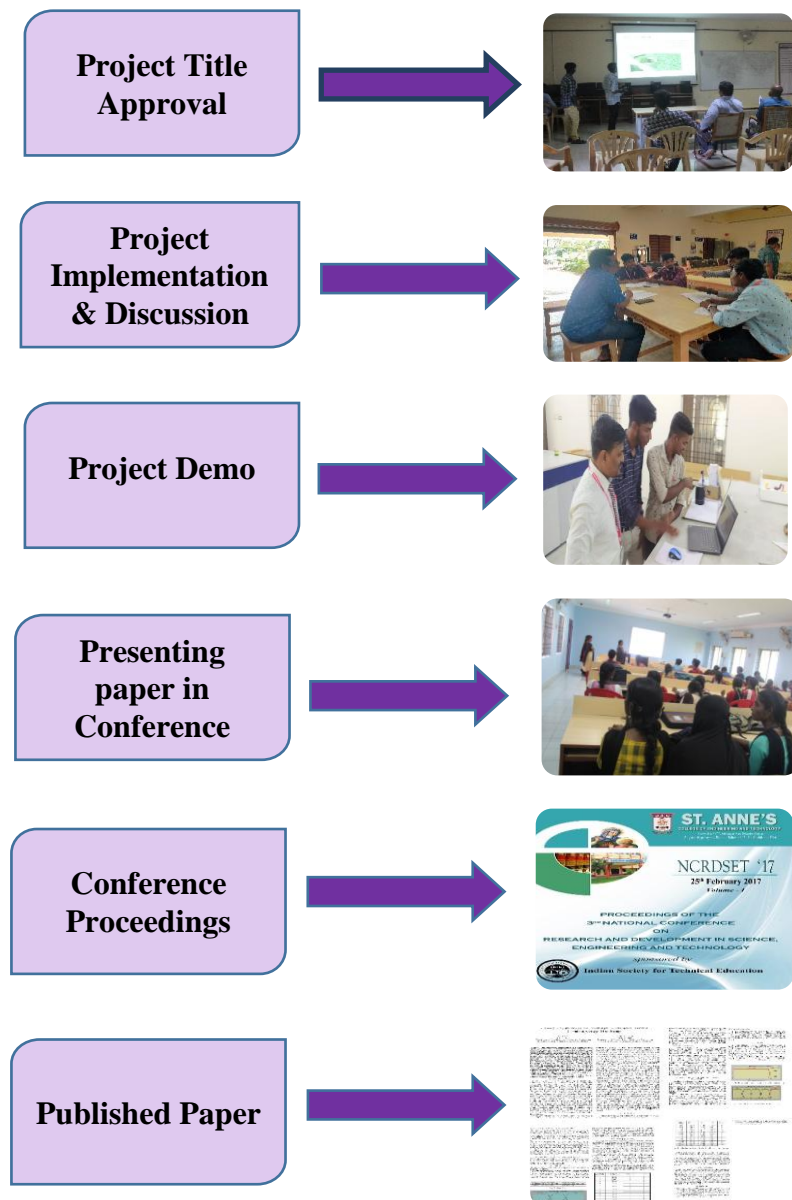


Figure 1 - Strategy of Project to Publications

5. Evidence of Success

This practice has been intentionally designed to achieve the desired learning outcomes and to provide the students with the best possible learning and practical experience.

The final year students project work is converted into a paper after a successful completion of the project work. This paper is published in the Proceedings of National/International Conference conducted by our Institution every year. We have conducted six National Conferences and one International Conference in our Institution, from 2015 to till now. The Conference proceedings have been kept in our College Library and all the Department Libraries.



ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.

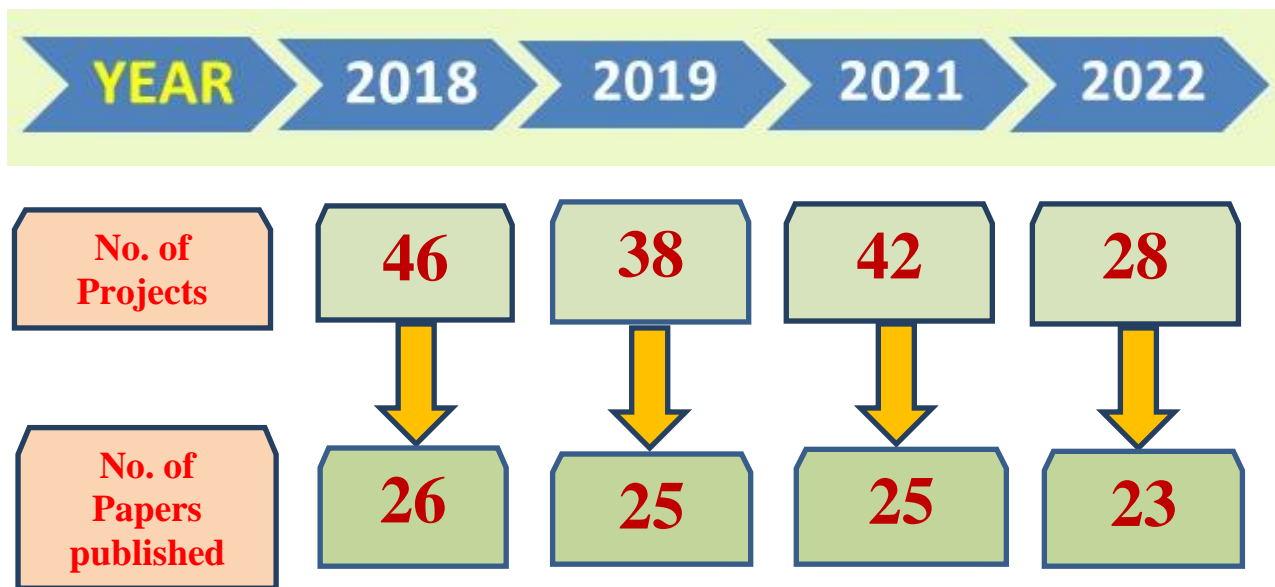


Figure 2 - Projects and Papers published in NCRDSET/ICRDSET

A sample of ECE students project batch details during 2018-2019 and index pages of the proceedings of the 5th National Conference on Research and Development in Science, Engineering and Technology (NCRDSET'19) is enclosed.

Ece March 2019

ST. ANNE'S
COLLEGE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
(An ISO 9001:2015 Certified Institution)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

PROJECT BATCH LIST

PERIOD: DEC – MAY 2019 BATCH: 2018-2019 YEAR/ SEMESTER: IV / VIII

S. No.	REGISTER NO.	NAME	NAME OF THE GUIDE	TITLE OF THE PROJECT
1	422115106003	Avila Vinmarasi R	Mrs. B. Mary Amath Jenni, AP	Reinforcement Impedance Bandwidth for UWB Angular circular ring Antenna
	422115106004	Elavaras T		
2	422115106007	Kanchana K	Ms. S. K. Suriya, AP	Design and Implementation of Drawing Robot using Embedded system
	422115106011	Stella S		
	422115106012	Suganya E		
	422115106013	Varsha B		
3	422115106006	Ilayaran M	Mrs. D. Umamaheswari, ASP Mr. S. Durai Raj, AP	Implementation of Image Processing Technique for Detection of Brain Tumors using MRI
	422115106008	Meera M		
	422115106501	Karanya G		
4	422115106005	Guru S	Mr. V. Venkatesan, AP Ms. B. ArunKumar, AP	Design of 32-Bit Vedic and Array Multiplier
	422115106014	Vignesh M		
	422115106303	Manibalan S		
5	422115106002	Arokiya Michel John D	Ms. S. Devika, AP	IoT based Automated Blood Bank system
	422115106010	Selvakumaiya T		
	422115106302	Hariprasath C		

PREPARED BY: S. Madhavan VERIFIED BY: S. H. APPROVED BY: R. Srinivasan

FILE NO.: SAC/ETEC/FIL/011-07 REV. NO.: 00 EFFECTIVE DATE: 06.10.2017

Figure 3 - A sample shows Project Batch List of Department of ECE during 2018-2019



ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

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

ANGUCHETTYPALAYAM, PANRUTI – 607 106.

Proceedings of the

5th NATIONAL CONFERENCE

on Research and Development in Science, Engineering and Technology

Organized by



St. Anne's College of Engineering and Technology

NCRDSET '19



Volume 1

TABLE OF CONTENT

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Sl. No.	PAPER ID	Title of the Paper	Author Name	Page No.
1.	NCRDSET-1002	Design of Low Cost CNC Plotter Machine using Arduino Uno	Mr.S. BalaBasker	1
2.	NCRDSET-1012	Marine Monitoring & Early Warning Detection Using Wireless Sensor Networks	Mr. R. Radhakrishnan Mr. S. Balabasker	6
3.	NCRDSET-1029	IoT Based Smart Garbage Collecting System	Dr. N. Dhanasekar Mr. S. Pasupathi Raja Ms. S. Soundarya	11
4.	NCRDSET-1037	An Automatic Object Based Efficient and Flexible Spraying Agro-Robot for Agricultural Application	Ms. R. Arutselvi Ms. K. Kamali Ms. S. Niranjanadevi	16
5.	NCRDSET-1057	Smart security device for the protection of women	Ms. A. Preemi Ms. T. Kiruthuka	21
6.	NCRDSET-1060	IoT Based Controlling of Advanced Hybrid Energy System for Industrial Applications	Ms. A. Priya Ms. S. Sathya Ms. V. Sumathi	28
7.	NCRDSET-1062	Design of 32 Bit Vedic & Array Multiplier	Mr. S. Gurus, Mr. M. Vignesh, Mr. S. Manibalan Mr. V. Vengatesan,	33
8.	NCRDSET-1070	IoT Based Automatic Digital Toll Plaza using RF Technology	Ms. R. Karikuzhali, Ms. R. Ramya, Ms. T. Suruthi, Mr. A. Arul	38
9.	NCRDSET-1077	Innovative Wireless Power Transfer System for Biomedical Capsule Endoscopy with Optimum Coil Configuration	Mr. S. Sathyanosothy Ms. E. Gayathri, Ms. B. Keerthana, Ms. S. Sowmya	46
10.	NCRDSET-1081	High Speed Dynamic Share Link between Mobile Terminals Using Visible Light Communication	Mr. D. Venkatesh Mr. R. Rajkumar Mr. T. Vignesh	53
11.	NCRDSET-1082	Segregation of Waste using IoT	Mr. V. V. Vishail Jeganath Mr. M. Sri Hari, Ms. G. Geethapriya	60

12.	NCRDSET-1105	A Assorted Novel-Discriminative Based Hashing Method	Ms. B. Mary Amala Jenni Mrs. D. Umamaheswari	64
13.	NCRDSET-1107	A Novel Dual Broadband Modified Circular Patch Antenna for Wireless Application	Ms. R. Avila Vinnarasi Ms. T. Elavarasi Ms. K. Kanchana Mrs. B. Mary Amala Jenni,	68
14.	NCRDSET-1108	Design of a 60 GHz Power Amplifier utilizing 90nm CMOS Technology	Mr. V. Venkatesan Mr. S. Durai Raj	74
15.	NCRDSET-1115	Plant Based Completely Biodegradable Printed Circuit Boards	Ms. E. Durga, Ms. K. Prabavathi, Ms. R. Haripriya, Ms. V. Manishaand Mrs. A. Uma Maheswari	79
16.	NCRDSET-1116	Implementation of Image Processing Technique for Detection of Brain Tumors using MRI	Mrs. D. Umamaheswari, Ms. M. Itiya Rani, Ms. M. Meera, Ms. G. Karanya	87
17.	NCRDSET-1117	Design and Implementation of Drawing Robot by Using Embedded System	Ms. S. Stella, Ms. E. Suganya, Ms. B. Varaha Ms. S.K. Suriya	92
18.	NCRDSET-1126	Design and Comparison of Performance Characteristics of Rectangular Slot and Square Slot Patch Antenna	Mr. S. Durairaj, Mr. V. Venkatesan	98
19.	NCRDSET-1133	A Smart Contrivance for Women's Security	Ms. S. Devika Ms. S.K. Suriya	103
20.	NCRDSET-1135	Design of Security System for Vehicles	Mr. B. Arunkumar	107
21.	NCRDSET-1137	A Language Teaching Ability for Deaf And Dumb using Wireless Technology	Mr. A. Shalik Moomin, Mr. M. Arun Ms. S. Gandhimathi	113
22.	NCRDSET-1139	Chebyshev Polynomial approximation for Distributed Signal Processing	Ms. S. Devika Ms. S. K. Suriya	118
23.	NCRDSET-1140	FPGA implementation of OFDM transceiver using NTT and INTT algorithm	Ms. S. Arul Jenifer	122

24.	NCRDSET-1147	Hypervisor and Redemtion - Awareness Analysis of 5G Networks	Mrs. D. Umamaheswari Mrs. B. Mary Amala Jenni	127
25.	NCRDSET-1153	IoT Based Automated Blood Bank System	Mr. D. Arokia Micheal John, Mr. T. Selvakannaiya, Mr. C. Hariprasath Ms. S. Devika	132
26.	NCRDSET-1154	Smart Agriculture Fields Based on IoT	Dr. P. Arjun, Mrs. M. Pheemina Selvi, Mr. M. Ganesan, Mr. N. Mohamed Wasim akram	138
27.	NCRDSET-1155	An Advanced Vehicle to Vehicle Collision Detection Technique using Wireless Technology	Mr. S. Alexander, Mr. M. Aruloli, Mr. S. Kathiravan Mrs. Karthika	143
28.	NCRDSET-1157	An Energy Efficient Shift Register Based on Decoder Enabled Gated Pulsed Latch	Mr. A. Muruganmuthu	151
29.	NCRDSET-1164	Early Diagnosis of Parkinson's Disease using Machine Learning Techniques	Sr. S. Anita	155
30.	NCRDSET-1165	FPGA Implementation of High Performance FIR Filter Design using Distributed Arithmetic Based Approximate Sum of Products	Ms. A. Anusuya	161
31.	NCRDSET-1166	Smart security device for the protection of women	Ms. A. Preemi Ms. T. Kiruthuka	167
32.	NCRDSET-1168	FPGA Implementation of Approximate Error Detection and Correction in Fault Tolerance Code of Hamming and BCH with using Stochastic Checkers	Ms. R. Suganya	174
33.	NCRDSET-1169	Low Power and Accurate Complex Square Root Computation using Low-Complexity Methodology	Ms. P. Jeya Stella,	179

Figure 4 - Publication of Papers in NCRDSET'19 Proceedings - Department of ECE during 2019



ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.

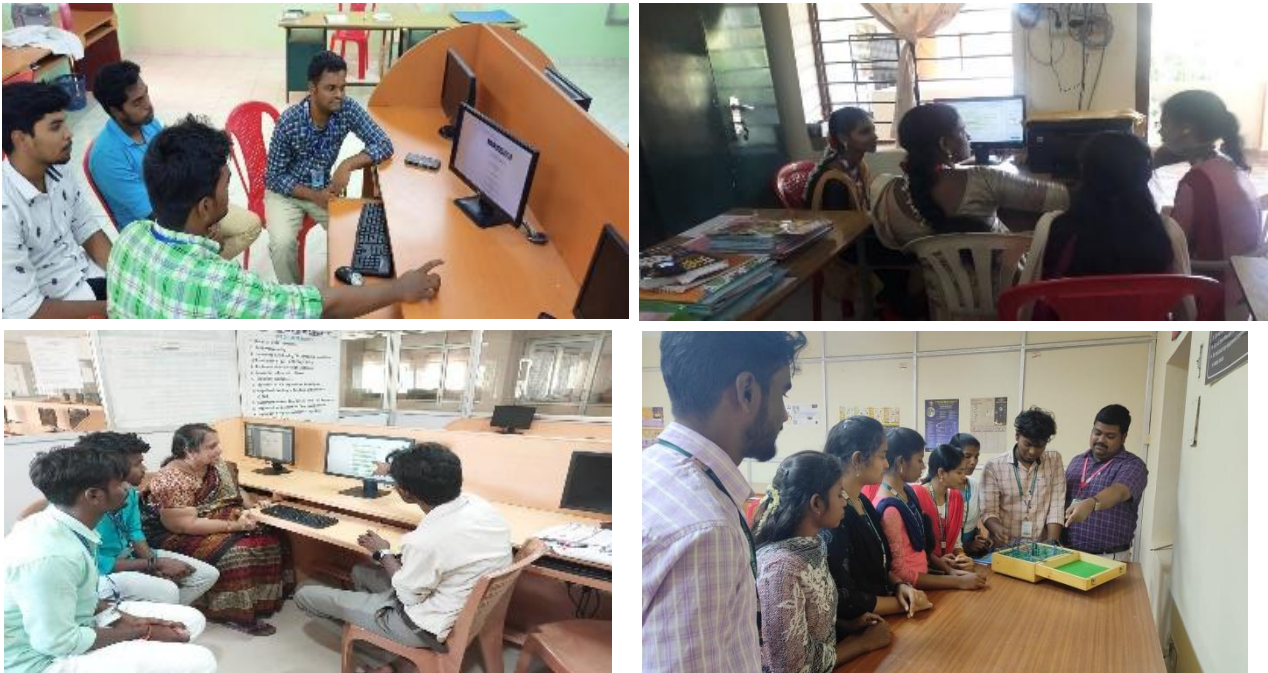


Figure 5 - Project Discussion with Project Guide



Figure 6 - Presenting the Papers in NCRDSET



ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.


6. Problems Encountered

The following challenges are addressed for successful implementation of this practice:

- Every research paper should have performance evaluation metrics of the research work. In UG level project, students implemented their idea and demonstrated the output. The absence of performance evaluation in a project may become an impediment in converting the project into a paper for conference.
- At times, it happened that as the project has not been completed within tenure, they are unable to present the paper in Conference during that academic year.
- Students find difficult to write a paper for presenting in a conference and publishing in a journal.

The following resources are required during the implementation of this practice:

- Continuous motivation and support is required as the students are capable of losing their confidence when project work is not completed within the tenure.
- Special seminar is needed for final year students on how to write a research paper.


Dr. R. AROKIADASS, M.E., Ph.D.,
Principal,
St. Anne's College of Engineering & Technology,
ANGUCHETTYPALAYAM,
Siruvathur-(Post), Panruti-(T.k),
Cuddalore-(Dist), Pin: 607 110.