NATIONAL BOARD OF ACCREDITATION

Data Capturing Points of the Program Applied for NBA Accreditation– Tier I/II UG (Engineering) Institute Programs

| | |
|---|---|
| **Program Name** : Robotics and Automation | **Discipline**: Engineering & Technology |
| **Level** : Under Graduate | **Tier**: 1 |
| **Application No**: 11376 | **Date of Submission**: 29-10-2026 |

# PART A- Profile of the Institute

| | |
|---|---|
| **A1.Name of the Institute**: ERODE SENGUNTHAR ENGINEERING COLLEGE | |
| Year of Establishment : 1995 | Location of the Institute: THUDUPATHI |
| **A2. Institute Address**:THUDUPATHI POST, PERUNDURAI TALUK | |
| City:Erode | State:Tamil Nadu |
| Pin Code:638057 | Website:www.erodesengunthar.ac.in |
| Email:contact@esec.ac.in | Phone No(with STD Code):04294-232701 |
| **A3. Name and Address of the Affiliating University (if any)**: | |
| Name of the University : ANNA UNIVERSITY OF TECHNOLOGY, CHENNAI | City: Chennai |
| State : Tamil Nadu | Pin Code: 600025 |
| **A4. Type of the Institution**: Self-Supported Institute | |
| **A5. Ownership Status**: Self financing | |

**A6. Details of all Programs being Offered by the Institution:**

- No. of UG programs: **17**
- No. of PG programs: **10**

Table No. A6.1: List of all programs offered by the Institute.

| Sr.No. | Discipline | Level of program | Name of the program | Year of Start | Year of Closed | Name of The Department |
|---|---|---|---|---|---|---|
| 1 | Computer Application | PG | Master in Computer Applications | 2004 | -- | Computer Application |
| 2 | Engineering & Technology | UG | Agricultural Engineering | 2020 | -- | Agricultural Engineering |
| 3 | Engineering & Technology | PG | Applied Electronics | 2013 | -- | Electronics and Communication Engineering |
| 4 | Engineering & Technology | UG | Artificial Intelligence and Data Science | 2020 | -- | Computer Science and Engineering |
| 5 | Engineering & Technology | UG | Biomedical Engineering | 2018 | -- | Biomedical Engineering |
| 6 | Engineering & Technology | UG | Biotechnology | 2023 | -- | Biotechnology |
| 7 | Engineering & Technology | PG | Chemical Engineering | 2018 | -- | Chemical Engineering |
| 8 | Engineering & Technology | UG | Chemical Engineering | 1996 | -- | Chemical Engineering |
| 9 | Engineering & Technology | UG | Civil Engineering | 2002 | -- | Civil Engineering |
| 10 | Engineering & Technology | UG | Computer Science and Design | 2021 | -- | Computer Science and Engineering |

| | | | | | | |
|---|---|---|---|---|---|---|
| 11 | Engineering & Technology | UG | Computer Science and Engineering | 1999 | -- | Computer Science and Engineering |
| 12 | Engineering & Technology | PG | Computer Science and Engineering | 2011 | -- | Computer Science and Engineering |
| 13 | Engineering & Technology | UG | Computer Science and Engineering (Artificial Intelligence & Machine Learning) | 2024 | -- | Computer Science and Engineering |
| 14 | Engineering & Technology | UG | Computer Science and Engineering (Cyber Security) | 2024 | -- | Computer Science and Engineering |
| 15 | Engineering & Technology | UG | Computer Science and Engineering (Internet of Things) | 2025 | -- | Computer Science and Engineering |
| 16 | Engineering & Technology | UG | Electrical and Electronics Engineering | 1996 | -- | Electrical and Electronics Engineering |
| 17 | Engineering & Technology | UG | Electronics & Communication Engineering | 2000 | -- | Electronics and Communication Engineering |
| 18 | Engineering & Technology | UG | Electronics & Instrumentation Engineering | 2001 | -- | Electronics and Instrumentation Engineering |
| 19 | Engineering & Technology | PG | Environmental Engineering | 2012 | -- | Civil Engineering |
| 20 | Engineering & Technology | PG | Industrial Safety Engineering | 2018 | -- | Mechanical Engineering |
| 21 | Engineering & Technology | UG | Information Technology | 2019 | -- | Information Technology |
| 22 | Engineering & Technology | PG | Manufacturing Engineering | 2004 | -- | Mechanical Engineering |
| 23 | Engineering & Technology | UG | Mechanical Engineering | 1996 | -- | Mechanical Engineering |
| 24 | Engineering & Technology | PG | Power Electronics and Drives | 2012 | -- | Electrical and Electronics Engineering |
| 25 | Engineering & Technology | UG | Robotics and Automation | 2020 | -- | Robotics and Automation |
| 26 | Engineering & Technology | PG | Structural Engineering | 2023 | -- | Civil Engineering |
| 27 | Management | PG | Master of Business Administration | 2008 | -- | Management |

**A7. Programs to be considered for Accreditation vide this Application:**

Table No. A7.1: List of programs to be considered for accreditation.

| Name of the Department | Having Allied Departments | Name of the Program | Program Level |
|---|---|---|---|
| Robotics and Automation | Yes | Robotics and Automation | UG |

Table No. A7.2: Allied Department(s) to the Department of the program considered for accreditation as above.
Cluster ID. Name of the Department (in table no. A7.1) Name of allied Departments/Cluster (for table no. A7.1)

| Allied Department/Cluster Name | Program Name | Program Level |
|---|---|---|
| Mechanical Engineering | Mechanical Engineering | UG |
| Mechanical Engineering | Industrial Safety Engineering | PG |
| Mechanical Engineering | Manufacturing Engineering | PG |
| Electronics and Communication Engineering | Electronics & Communication Engineering | UG |

| | | |
|---|---|---|
| Electronics and Communication Engineering | Applied Electronics | PG |

# PART-B: Program information

**B1. Provide the Required Information for the Program Applied For:**

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

| SR.NO. | PROGRAM NAME | PROGRAM APPLIED LEVEL | YEAR OF START / YEAR OF CLOSED | SANCTIONED INTAKE | INCREASE/DECREASE INTAKE (if any) | YEAR OF INCREASE/DECREASE | CURRENT INTAKE | YEAR OF AICTE APPROVAL | AICTE/COMPETENT AUTHORITY ARROVAL DETAILS | ACCREDITATION STATUS | FROM | TO | NO. OF TIMES PROGRAM ACCREDITED | PROGRAM DURATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Robotics and Automation | UG | 2020 / -- | 60 | Yes | 2025 | 60 | 2025 | F.No. Southern/1-44643714103/2025/EOA | Applying first time | -- | -- | 0 | 4 |

| Sanctioned Intake for Last Five Years for the Robotics and Automation | |
|---|---|
| **Academic Year** | **Sanctioned Intake** |
| 2025-26 | 60 |
| 2024-25 | 30 |
| 2023-24 | 30 |
| 2022-23 | 30 |
| 2021-22 | 30 |
| 2020-21 | 60 |

List of the Allied Departments/Cluster and Programs:

| SR.NO. | ALLIED DEPARTMENT NAME | PROGRAM NAME | PROGRAM APPLIED LEVEL | YEAR OF START / YEAR OF CLOSED | SANCTIONED INTAKE | INCREASE/DECREASE INTAKE (if any) | YEAR OF INCREASE/DECREASE | CURRENT INTAKE | YEAR OF AICTE APPROVAL | AICTE/COMPETENT AUTHORITY ARROVAL DETAILS | ACCREDITATION STATUS | FROM | TO | NO. OF TIMES PROGR ACCRI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Electronics and Communication Engineering | Electronics & Communication Engineering | UG | 2000 / -- | 60 | Yes | 2025 | 180 | 2025 | F.No. Southern/1-44643714103/2025/EOA | Granted accreditation for 3 years for the period (specify period) | 2022 | 2025 | 4 |

| Sanctioned Intake for Last Five Years for the Electronics & Communication Engineering | |
|---|---|
| **Academic Year** | **Sanctioned Intake** |
| 2025-26 | 180 |
| 2024-25 | 120 |
| 2023-24 | 120 |
| 2022-23 | 120 |
| 2021-22 | 90 |
| 2020-21 | 90 |

| SR.NO. | ALLIED DEPARTMENT NAME | PROGRAM NAME | PROGRAM APPLIED LEVEL | YEAR OF START / YEAR OF CLOSED | SANCTIONED INTAKE | INCREASE/DECREASE INTAKE (if any) | YEAR OF INCREASE/DECREASE | CURRENT INTAKE | YEAR OF AICTE APPROVAL | AICTE/COMPETENT AUTHORITY ARROVAL DETAILS | ACCREDITATION STATUS | FROM | TO | NO. OF TIMES PROGI ACCRI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Mechanical Engineering | Manufacturing Engineering | PG | 2004 / -- | 18 | Yes | 2025 | 12 | 2025 | F.No. Southern/1-44643714103/2025/EOA | Eligible but not applied | -- | -- | 0 |

| Sanctioned Intake for Last Five Years for the Manufacturing Engineering | |
|---|---|
| **Academic Year** | **Sanctioned Intake** |
| 2025-26 | 12 |
| 2024-25 | 18 |
| 2023-24 | 18 |
| 2022-23 | 18 |
| 2021-22 | 18 |
| 2020-21 | 18 |

| SR.NO. | ALLIED DEPARTMENT NAME | PROGRAM NAME | PROGRAM APPLIED LEVEL | YEAR OF START / YEAR OF CLOSED | SANCTIONED INTAKE | INCREASE/DECREASE INTAKE (if any) | YEAR OF INCREASE/DECREASE | CURRENT INTAKE | YEAR OF AICTE APPROVAL | AICTE/COMPETENT AUTHORITY ARROVAL DETAILS | ACCREDITATION STATUS | FROM | TO | NO. OF TIMES PROGI ACCRI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Mechanical Engineering | Industrial Safety Engineering | PG | 2018 / -- | 24 | Yes | 2022 | 30 | 2022 | F.No. Southern/1-10970487106/2022/EOA | Eligible but not applied | -- | -- | 0 |

| Sanctioned Intake for Last Five Years for the Industrial Safety Engineering | |
|---|---|
| **Academic Year** | **Sanctioned Intake** |
| 2025-26 | 30 |
| 2024-25 | 30 |
| 2023-24 | 30 |
| 2022-23 | 30 |
| 2021-22 | 24 |
| 2020-21 | 24 |

| SR.NO. | ALLIED DEPARTMENT NAME | PROGRAM NAME | PROGRAM APPLIED LEVEL | YEAR OF START / YEAR OF CLOSED | SANCTIONED INTAKE | INCREASE/DECREASE INTAKE (if any) | YEAR OF INCREASE/DECREASE | CURRENT INTAKE | YEAR OF AICTE APPROVAL | AICTE/COMPETENT AUTHORITY ARROVAL DETAILS | ACCREDITATION STATUS | FROM | TO | NO. OF TIMES PROGI ACCRI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Electronics and Communication Engineering | Applied Electronics | PG | 2013 / -- | 18 | Yes | 2025 | 12 | 2025 | F.No. Southern/1-44643714103/2025/EOA | Eligible but not applied | -- | -- | 0 |

| Sanctioned Intake for Last Five Years for the Applied Electronics | |
|---|---|
| **Academic Year** | **Sanctioned Intake** |
| 2025-26 | 12 |
| 2024-25 | 18 |
| 2023-24 | 18 |
| 2022-23 | 18 |
| 2021-22 | 18 |
| 2020-21 | 18 |

| SR.NO. | ALLIED DEPARTMENT NAME | PROGRAM NAME | PROGRAM APPLIED LEVEL | YEAR OF START / YEAR OF CLOSED | SANCTIONED INTAKE | INCREASE/DECREASE INTAKE (if any) | YEAR OF INCREASE/DECREASE | CURRENT INTAKE | YEAR OF AICTE APPROVAL | AICTE/COMPETENT AUTHORITY ARROVAL DETAILS | ACCREDITATION STATUS | FROM | TO | NO. OF TIMES PROGI ACCRI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Mechanical Engineering | Mechanical Engineering | UG | 1996 / -- | 60 | Yes | 2020 | 60 | 2020 | F.No. Southern/1-7004000280/2020/EOA | Granted accreditation for 3 years for the period (specify period) | 2023 | 2026 | 5 |

| SR.NO. | ALLIED DEPARTMENT NAME | PROGRAM NAME | PROGRAM APPLIED LEVEL | YEAR OF START / YEAR OF CLOSED | SANCTIONED INTAKE | INCREASE/DECREASE INTAKE (if any) | YEAR OF INCREASE/DECREASE | CURRENT INTAKE | YEAR OF AICTE APPROVAL | AICTE/COMPETENT AUTHORITY ARROVAL DETAILS | ACCREDITATION STATUS | FROM | TO | NO. OF TIMES PROGI ACCRI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Sanctioned Intake for Last Five Years for the Mechanical Engineering | |
|---|---|
| **Academic Year** | **Sanctioned Intake** |
| 2025-26 | 60 |
| 2024-25 | 60 |
| 2023-24 | 60 |
| 2022-23 | 60 |
| 2021-22 | 60 |
| 2020-21 | 60 |

**B2. Detail of Head of the Department for the program under consideration:**

| | |
|---|---|
| A. Name of the HoD : | Dr.S.Deepankumar |
| B. Nature of appointment: | Regular |
| C. Qualification: | Ph.D |

**B3. Program Details**

Table No.B3.1: Admission details for the program excluding those admitted through multiple entry and exit points.

| Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable) | 2025-26 (CAY) | 2024-25 (CAYm1) | 2023-24 (CAYm2) | 2022-23 (CAYm3) | 2021-22 (CAYm4) | 2020-21 (CAYm5) | 2019-20 (CAYm6) |
|---|---|---|---|---|---|---|---|
| N=Sanctioned intake of the program (as per AICTE /Competent authority) | 60 | 30 | 30 | 30 | 30 | 60 | 0 |
| N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program | 60 | 31 | 29 | 31 | 29 | 18 | 0 |
| N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats | 0 | 2 | 1 | 0 | 1 | 7 | 0 |
| N3=Separate division if any | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| N4=Total no. of students admitted in the 1st year via all supernumerary quotas | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points. | 60 | 33 | 30 | 31 | 31 | 25 | 0 |

CAY= Current Academic Year. CAYm1= Current Academic Year Minus 1 CAYm2= Current Academic Year Minus 2. LYG= Last Year Graduate. LYGm1= Last Year Graduate Minus 1. LYGm2= Last Year Graduate Minus 2.

**B4. Enrolment Ratio in the First Year**

Table No. B4.1: Student enrolment ratio in the 1st year.

| Year of entry | N (From Table 4.1) | N1 (From Table 4.1) | N4 (From Table 4.1) | Enrollment Ratio [(N1/N)*100] |
|---|---|---|---|---|
| 2025-26 (CAY) | 60 | 60 | 0 | 100.00 |

| | | | | |
|---|---|---|---|---|
| 2024-25 (CAYm1) | 30 | 31 | 0 | 103.33 |
| 2023-24 (CAYm2) | 30 | 29 | 0 | 96.67 |

Average [ (ER1 + ER2 + ER3) / 3 ] = 100.00≡ 20.00

**B5. Success Rate of the Students in the Stipulated Period of the Program**

Table No.B5.1: The success rate in the stipulated period of a program.

| Item | (2021-22) LYG | (2020-21) LYGm1 | (2019-20) LYGm2 |
|---|---|---|---|
| A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any). | 31.00 | 66.00 | 0.00 |
| B=No. of students who graduated from the program in the stipulated course duration | 23.00 | 19.00 | 0.00 |
| Success Rate (SR)= (B/A) * 100 | 74.19 | 28.79 | 0.00 |

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 51.49

**B6. Academic Performance of the First-Year Students of the Program**

Table No.B6.1: Academic Performance of the First-Year Students of the Program.

| Academic Performance | CAYm1( 2024-25 ) | CAYm2( 2023-24 ) | CAYm3 ( 2022-23 ) |
|---|---|---|---|
| Mean of CGPA or mean percentage of all successful students(X) | 8.20 | 8.00 | 7.90 |
| Y=Total no. of successful students | 28.00 | 28.00 | 29.00 |
| Z=Total no. of students appeared in the examination | 31.00 | 29.00 | 31.00 |
| API [X*(Y/Z)] | 7.41 | 7.72 | 7.39 |

Average API[ (AP1+AP2+AP3)/3 ] : 7.51

**B7: Academic Performance of the Second Year Students of the Program**

Table No.B7.1: Academic Performance of the Second Year Students of the Program.

| Academic Performance | CAYm1 ( 2024-25 ) | CAYm2 ( 2023-24 ) | CAYm3 ( 2022-23 ) |
|---|---|---|---|
| X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10) | 8.70 | 8.40 | 7.80 |
| Y=Total no. of successful students | 29.00 | 29.00 | 25.00 |
| Z=Total no. of students appeared in the examination | 29.00 | 29.00 | 25.00 |
| API [ X * (Y/Z) ] | 8.70 | 8.40 | 7.80 |

Average API [ (AP1 + AP2 + AP3)/3 ] : 8.30

**B8. Academic Performance of the Third Year Students of the Program**

Table No.B8.1: Academic Performance of the Third Year Students of the Program

| Academic Performance | CAYm1 (2024-25) | CAYm2 (2023-24) | CAYm3 (2022-23) |
|---|---|---|---|
| X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10) | 8.60 | 8.30 | 8.25 |
| Y=Total no. of successful students | 28.00 | 24.00 | 20.00 |
| Z=Total no. of students appeared in the examination | 29.00 | 25.00 | 21.00 |

| | | | |
|---|---|---|---|
| API [ X*(Y/Z) ]: | 8.30 | 7.97 | 7.86 |

Average API [ (AP1 + AP2 + AP3)/3 ] : 8.04

**B9. Placement, Higher Studies, and Entrepreneurship**

Table No.B9.1: Placement, higher studies, and entrepreneurship details.

| Item | LYG (2021-22) | LYGm1(2020-21) | LYGm2(2019-20) |
|---|---|---|---|
| FS*=Total no. of final year students | 31.00 | 66.00 | 0.00 |
| X=No. of students placed | 26.00 | 21.00 | 0.00 |
| Y=No. of students admitted to higher studies | 1.00 | 1.00 | 0.00 |
| Z= No. of students taking up entrepreneurship | 0.00 | 1.00 | 0.00 |
| Placement Index(P) = (((X + Y + Z)/FS) * 100): | 87.10 | 34.85 | 0.00 |

Average Placement Index = (P_1 + P_2 + P_3)/3: 60.98 Placement Index Points:

# PART C: Faculty Details in Department and Allied Departments

## (Data to be filled in for the Department and Allied Departments)

**C1. Faculty details of Department and Allied Departments**

Table No.C1: Faculty details in the Department for the past 3 years including CAY

| Sr.No | Name of the Faculty | PAN No. | Highest degree | University | Area of Specialization | Date of Joining in this Institution | Experience in years in current institute | Designation at Time Joining in this Institution | Present Designation | The date on which Designated as Professor/ Associate Professor if any | Nature of Association (Regular/ Contract/ Ad hoc) | Currently Associated (Y/N) | In case of NO, Date of Leaving | IS HOD? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Dr.S.Deepankumar | XXXXXXX45N | Ph.D | Anna University | Mechanical Engineering | 02/05/2025 | 1.5 | Associate Professor | Associate Professor | 02/05/2025 | Regular | Yes | | Yes |
| 2 | Dr.J.Balaji | XXXXXXX31K | Ph.D | Anna University | Mechanical Engineering | 01/06/2024 | 2.4 | Professor | Professor | 01/06/2024 | Regular | Yes | | No |
| 3 | Mr.M.Karthick | XXXXXXX02R | M.E. | Anna University | Industrial Safety Engineering | 11/07/2020 | 5.9 | Assistant Professor | Assistant Professor | | Regular | No | 30/04/2026 | No |
| 4 | Mr.R.Karthick | XXXXXXX30C | M.E. | Anna University | Manufacturing Engineering | 01/06/2023 | 2.6 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 5 | Ms.R.Nithya | XXXXXXX92R | M.E. | Anna University | VLSI Design | 07/07/2023 | 2.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 6 | Ms.V.Vimala | XXXXXXX35L | M.E. | Anna University | Engineering Design | 12/07/2024 | 1.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 7 | Mr.S.Manikandan | XXXXXXX57N | M.E. | Anna University | Manufacturing Engineering | 01/06/2024 | 2.4 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 8 | Dr.J.Manivannan | XXXXXXX19E | Ph.D | Anna University | Mechanical Engineering | 01/06/2024 | 0.11 | Associate Professor | Associate Professor | 01/06/2024 | Regular | No | 31/05/2025 | No |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Dr.D.Giridhar | XXXXXXX52C | Ph.D | IIT Madras | Mechanical Engineering | 01/06/2023 | 1.2 | Professor | Professor | 01/06/2023 | Regular | No | 31/07/2024 | No |
| 10 | Dr.R.Sasikumar | XXXXXXX69D | Ph.D | Anna University | Mechanical Engineering | 01/06/2023 | 1.2 | Associate Professor | Associate Professor | 01/06/2023 | Regular | No | 31/07/2024 | No |
| 11 | Mr.A.Karthick | XXXXXXX31H | M.E. | Karpagam University | Manufacturing Engineering | 01/07/2022 | 2.4 | Assistant Professor | Assistant Professor | | Regular | No | 15/11/2024 | No |
| 12 | Mr.M.Mathiyalagan | XXXXXXX30R | M.E. | Anna University | Engineering Design | 01/07/2022 | 2.1 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 13 | Mr.C.Pradeepkumar | XXXXXXX10R | M.E. | Anna University | Computer Aided Design | 25/06/2025 | 1.4 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |

Table No.C2: Faculty details of Allied Departments for the past 3 years including CAY.

| Sr.No | Name of the Faculty | PAN No. | APAAR faculty ID*(if any) | Highest degree | University | Area of Specialization | Date of Joining in this Institution | Experience in years in current institute | Designation at Time Joining in this Institution | Present Designation | The date on which Designated as Professor/ Associate Professor if any | Nature of Association (Regular/ Contract/ Ad hoc) | Currently Associated (Y/N) | In case of NO, Date of Leaving | IS HOD? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Mr.M.Karthikkumar | XXXXXXX73L | XXXXXXXXX879 | M.E. | Anna University | VLSI Design | 12/07/2013 | 12.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 2 | Dr.V.Thamizharasan | XXXXXXX57N | XXXXXXXXX124 | Ph.D | Anna University | VLSI Design | 07/07/2010 | 15.5 | Assistant Professor | Associate Professor | 01/07/2023 | Regular | Yes | | No |
| 3 | Ms.S.Divya | XXXXXXX34L | XXXXXXXXX796 | M.E. | Anna University | Applied Electronics | 02/07/2018 | 7.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 4 | Ms.M.A.Asuvanti | XXXXXXX54R | XXXXXXXXX216 | M.E. | Anna University | VLSI Design | 01/07/2021 | 4.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 5 | Ms..C.Mekala | XXXXXXX92G | XXXXXXXXX579 | M.E. | Anna University | Communication Systems | 01/07/2021 | 4.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 6 | Ms.K.R.Priyadharshini | XXXXXXX21C | XXXXXXXXX323 | M.E. | Anna University | VLSI Design | 07/04/2022 | 3.8 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 7 | Ms.E.L.Dhivya Priya | XXXXXXX69B | XXXXXXXXX292 | M.E. | Anna University | VLSI Design | 01/07/2022 | 3.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 8 | Mr.S.Gladson | XXXXXXX53J | XXXXXXXXX976 | M.Tech | Sathyabama University | VLSI Design | 11/07/2022 | 3.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 9 | Ms.R.Savitha | XXXXXXX73K | XXXXXXXXX051 | M.E. | Anna University | VLSI Design | 27/07/2022 | 3.4 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 10 | Ms.N.R.Raghapriya | XXXXXXX66E | XXXXXXXXX319 | M.E. | Anna University | Embedded Systems Technologies | 27/07/2022 | 3.4 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 11 | Ms.N.Gomathi | XXXXXXX95G | XXXXXXXXX230 | M.E. | Anna University | VLSI Design | 24/08/2022 | 3.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | Ms.J.S.Saranyanivasini | XXXXXXX57Q | XXXXXXXXX199 | M.E. | Anna University | Communication Systems | 07/06/2023 | 2.6 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 13 | Ms.D.Viji | XXXXXXX23K | XXXXXXXXX523 | M.Tech | Prist University | Electrical Engineering | 09/06/2023 | 2.6 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 14 | Mr.N.Sakthivel | XXXXXXX96D | XXXXXXXXX979 | M.E. | Sathyabama University | Applied Electronics | 13/05/2024 | 1.7 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 15 | Ms.G.Amsaveni | XXXXXXX28G | XXXXXXXXX215 | M.E. | Anna University | Applied Electronics | 10/02/2025 | 0.10 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 16 | Ms.S.Vidhya | XXXXXXX83G | XXXXXXXXX388 | M.E. | Anna University | Communication Systems | 16/06/2025 | 0.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 17 | Ms.G.Mokana | XXXXXXX70R | XXXXXXXXX059 | M.E. | Anna University | Applied Electronics | 25/06/2025 | 0.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 18 | Mr.L.M.Jayaprabhakar | XXXXXXX94B | XXXXXXXXX211 | M.E. | Anna University | Communication Systems | 01/07/2025 | 0.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 19 | Mr.M.Balamurugan | XXXXXXX01D | NA | M.E. | Anna University | Applied Electronics | 01/07/2021 | 3.2 | Assistant Professor | Assistant Professor | | Regular | No | 24/09/2024 | No |
| 20 | Mr.C.Raju | XXXXXXX60E | XXXXXXXXX371 | M.E. | Anna University | Communication Engineering | 02/07/2025 | 0.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 21 | Ms.J.Jasmin shifa | XXXXXXX97G | NA | M.E. | Anna University | VLSI Design | 13/09/2022 | 3.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 22 | Dr.S.Karthick | XXXXXXX34H | XXXXXXXXX592 | Ph.D | Anna University | Applied Electronics | 01/02/2019 | 6.10 | Associate Professor | Professor | 01/02/2023 | Regular | Yes | | No |
| 23 | Dr.M.Sundaram | XXXXXXX42J | XXXXXXXXX043 | Ph.D | Anna University | Communication Systems Engineering | 01/02/2021 | 4.10 | Professor | Professor | 01/02/2021 | Regular | Yes | | No |
| 24 | Dr.R.Kalaivani | XXXXXXX58L | XXXXXXXXX604 | Ph.D | Anna University | Microwave and Optical Engineering | 07/08/2002 | 23.4 | Assistant Professor | Professor | 01/01/2018 | Regular | Yes | | No |
| 25 | Dr.S.Bharathidasan | XXXXXXX35B | XXXXXXXXX376 | Ph.D | Anna University | Applied Electronics | 16/02/2022 | 3.9 | Associate Professor | Associate Professor | 16/02/2022 | Regular | Yes | | No |
| 26 | Dr.R.Vadivelu | XXXXXXX43D | NA | Ph.D | Anna University | Microwave and Radar Systems | 11/12/2023 | 1.5 | Professor | Professor | 11/12/2023 | Regular | No | 31/05/2025 | No |
| 27 | Dr.Y.Robinson | XXXXXXX38H | XXXXXXXXX363 | Ph.D | Bharathiyar University | Mechanical Engineering | 01/07/2021 | 4.1 | Professor | Professor | 01/07/2021 | Regular | No | 28/08/2025 | No |
| 28 | Dr.P.Thangavel | XXXXXXX17L | XXXXXXXXX919 | Ph.D | Anna University | Mechanical Engineering | 29/01/2024 | 1.10 | Professor | Professor | 29/01/2024 | Regular | Yes | | No |
| 29 | Dr.M.Vijay Anand | XXXXXXX02C | XXXXXXXXX004 | Ph.D | Anna University | Mechanical Engineering | 31/07/2024 | 1.4 | Professor | Professor | 31/07/2024 | Regular | Yes | | No |
| 30 | Dr.S.Suresh | XXXXXXX60L | XXXXXXXXX127 | Ph.D | Anna University | Mechanical Engineering | 09/06/2023 | 2.6 | Associate Professor | Professor | 30/09/2025 | Regular | Yes | | No |
| 31 | Dr.S.Navaneetha Krishnan | XXXXXXX71P | XXXXXXXXX671 | Ph.D | Anna University | Mechanical Engineering | 13/06/2018 | 7.6 | Associate Professor | Associate Professor | 13/06/2018 | Regular | Yes | | No |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | Dr.M.Elango | XXXXXXX19E | XXXXXXXXX342 | Ph.D | Anna University | Mechanical Engineering | 30/08/2024 | 1.3 | Associate Professor | Associate Professor | 30/08/2024 | Regular | Yes | | No |
| 33 | Mr.P.Chokkalingam | XXXXXXX69Q | XXXXXXXXX518 | M.E. | Anna University | Manufacturing Engineering | 12/05/2011 | 14.7 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 34 | Mr.N.S.Mohan | XXXXXXX87G | XXXXXXXXX611 | M.E. | Anna University | Manufacturing Engineering | 01/07/2016 | 9.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 35 | Mr.G.Dhayanithi | XXXXXXX05M | XXXXXXXXX111 | M.E. | Anna University | Manufacturing Engineering | 29/05/2017 | 8.6 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 36 | Mr.V.P.Krishnamurthy | XXXXXXX35F | XXXXXXXXX058 | M.E. | Anna University | Computer Aided Design | 04/01/2023 | 2.11 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 37 | Mr.R.Manikandan | XXXXXXX66B | XXXXXXXXX459 | M.E. | Anna University | Engineering Design | 19/08/2024 | 1.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 38 | Mr.A.Prabhakaran | XXXXXXX29N | XXXXXXXXX011 | M.E. | Anna University | Manufacturing Engineering | 02/06/2014 | 11.6 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 39 | Mr.K.S.Mohanraj | XXXXXXX84K | XXXXXXXXX064 | M.Tech | Anna University | Rubber Technology | 10/05/2024 | 1.7 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 40 | Mr.K.Elavarasan | XXXXXXX04H | XXXXXXXXX366 | M.E. | Anna University | Manufacturing Engineering | 14/10/2024 | 1.2 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 41 | Mr.M.Karthick | XXXXXXX47H | XXXXXXXXX976 | M.E. | Anna University | Engineering Design | 23/11/2023 | 2 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 42 | Mr.K.C.Rameshkumar | XXXXXXX90E | XXXXXXXXX022 | M.E. | Anna University | Manufacturing Engineering | 02/01/2024 | 1.11 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 43 | Mr.P.Kirubakaran | XXXXXXX81N | XXXXXXXXX677 | M.E. | Anna University | Engineering Design | 03/07/2023 | 2.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 44 | Mr.C.Chelladurai | XXXXXXX45M | XXXXXXXXX093 | M.E. | Anna University | Manufacturing Engineering | 19/08/2024 | 1.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 45 | Mr.S.Karthikeyan | XXXXXXX95C | XXXXXXXXX631 | M.E. | Anna University | Industrial Safety Engineering | 03/06/2019 | 6.6 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 46 | Mr.L.Boopalan | XXXXXXX20H | XXXXXXXXX896 | M.E. | Anna University | Industrial Safety Engineering | 01/08/2024 | 1.4 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 47 | Mr.R.Arunprakash | XXXXXXX44C | XXXXXXXXX358 | M.E. | Anna University | Manufacturing Engineering | 01/09/2025 | 0.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 48 | Mr.J.Parthiban | XXXXXXX65Q | XXXXXXXXX301 | M.E. | Anna University | Manufacturing Engineering | 08/09/2025 | 0.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 49 | Dr.M.Pandian | XXXXXXX26E | XXXXXXXXX186 | Ph.D | National Institute of Technology, Tiruchirappalli | Thermal Engineering | 05/12/2016 | 7.7 | Professor | Associate Professor | | Regular | No | 12/07/2024 | No |
| 50 | Mr.M.Makeshkumar | XXXXXXX93F | NA | M.E. | Anna University | Thermal Engineering | 31/07/2024 | 0.9 | Assistant Professor | Assistant Professor | | Regular | No | 31/05/2025 | No |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | Mr.R.Srinivasa Moorthy | XXXXXXX76A | NA | M.E. | Bharathiyar University | Mechanical Engineering (Engineering Design) | 15/06/2018 | 6.1 | Associate Professor | Associate Professor | 15/06/2018 | Regular | No | 31/07/2024 | No |
| 52 | Mr.R. Prabhakaran | XXXXXXX77P | NA | M.E. | Anna University | Engineering Design | 03/01/2022 | 2.6 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 53 | Dr.M.P.Prabhakaran | XXXXXXX49R | NA | Ph.D | Anna University | Mechanical Engineering | 07/01/2020 | 3.8 | Associate Professor | Associate Professor | 07/01/2020 | Regular | No | 30/09/2023 | No |
| 54 | Mr.R.Arunkumar | XXXXXXX51D | NA | M.E. | Anna University | Thermal Engineering | 01/07/2021 | 3.1 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 55 | Mr.M.Sivam | XXXXXXX55J | NA | M.E. | Anna University | Engineering Design | 01/07/2021 | 3.1 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 56 | Mr.P.Tamizharasu | XXXXXXX35D | NA | M.E. | Anna University | Industrial Safety Engineering | 01/07/2020 | 4.1 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 57 | Mr.R.Kalidasan | XXXXXXX56K | NA | M.E. | Anna University | Engineering Design | 01/07/2016 | 8.1 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 58 | Mr.G.Kavin | XXXXXXX01H | NA | M.E. | Anna University | Industrial Safety Engineering | 16/04/2018 | 6.3 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 59 | Mr.L.Moulidharan | XXXXXXX48I | NA | M.E. | Anna University | Industrial Safety Engineering | 02/01/2019 | 5.6 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 60 | Mr.A.Balakumaran | XXXXXXX06N | NA | M.E. | Anna University | CAD/CAM | 03/06/2019 | 4.3 | Assistant Professor | Assistant Professor | | Regular | No | 30/09/2023 | No |
| 61 | Mr.R.Manikandan | XXXXXXX98J | NA | M.E. | Karpagam University | Engineering Design | 02/03/2020 | 3.6 | Assistant Professor | Assistant Professor | | Regular | No | 30/09/2023 | No |
| 62 | Mr.N.NavaneethaKrishnan | XXXXXXX50G | NA | M.E. | Anna University | Engineering Design | 19/06/2017 | 6.3 | Assistant Professor | Assistant Professor | | Regular | No | 30/09/2023 | No |
| 63 | Mr.J.Mahendravarman | XXXXXXX40C | NA | M.E. | Karpagam University | Engineering Design | 03/07/2023 | 1 | Assistant Professor | Assistant Professor | | Regular | No | 31/07/2024 | No |
| 64 | Dr.C.Natesamurthy | XXXXXXX13D | NA | Ph.D | Anna University | Mechanical Engineering | 01/07/2022 | 1.5 | Associate Professor | Associate Professor | 01/07/2022 | Regular | No | 18/12/2023 | No |
| 65 | Dr.N.Saravanan | XXXXXXX11A | XXXXXXXXX319 | Ph.D | Anna University | Mechanical Engineering | 07/07/2021 | 4.5 | Professor | Professor | 07/07/2021 | Regular | Yes | | Yes |
| 66 | Mr.S.Kalyan Kumar | XXXXXXX68L | XXXXXXXXX681 | M.E. | Anna University | Engineering Design | 01/07/2017 | 8.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 67 | Mr C.Muthumohan | XXXXXXX16F | XXXXXXXXX856 | M.E. | Anna University | Mechatronics Engineering | 01/07/2021 | 4.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 68 | Mr.J.Jayaraj | XXXXXXX24F | XXXXXXXXX332 | M.E. | Anna University | Industrial safety Engineering | 03/07/2023 | 2.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | Mr.D.Ashokkumar | XXXXXXX44D | XXXXXXXXX391 | M.E. | Anna University | Engineering Design | 28/08/2024 | 1.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 70 | Mr.D.Gunasekaran | XXXXXXX79E | XXXXXXXXX795 | M.E. | Karpagam University | Manufacturing Engineering | 30/08/2024 | 1.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 71 | Mr.K.Rajesh | XXXXXXX03N | XXXXXXXXX078 | M.E. | Anna University | Manufacturing Engineering | 23/08/2024 | 1.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 72 | Ms.S.Poorani | XXXXXXX73N | NA | Ph.D | Anna University | Control Systems | 01/06/2018 | 7.6 | Professor | Professor | 01/06/2018 | Regular | Yes | | No |
| 73 | Ms.V.Gayathri | XXXXXXX29M | XXXXXXXXX691 | M.E. | Anna University | Communication Systems | 15/07/2024 | 1.5 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 74 | Ms.S.V.Saveeithaa | XXXXXXX40K | XXXXXXXXX882 | M.E. | Anna University | VLSI Design | 25/03/2024 | 1.9 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 75 | Mr.K.Arun Kumar | XXXXXXX32C | NA | M.E. | Anna University | Communication Systems | 14/06/2024 | 1.6 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 76 | Ms.D.Linett Sophia | XXXXXXX49G | XXXXXXXXX855 | M.E. | ST PETERS UNIVERSITY | Applied Electronics | 01/09/2023 | 2.3 | Assistant Professor | Assistant Professor | | Regular | Yes | | No |
| 77 | Mr.V.Venkateshwaran | XXXXXXX21P | NA | M.E. | Anna University | VLSI Design | 03/02/2020 | 4.4 | Assistant Professor | Assistant Professor | | Regular | No | 28/06/2024 | No |
| 78 | Mr.N.Parthiban | XXXXXXX26M | NA | M.E. | Anna University | Applied Electronics | 11/03/2020 | 4.2 | Assistant Professor | Assistant Professor | | Regular | No | 30/05/2024 | No |
| 79 | Dr.J.Balaji | XXXXXXX31K | XXXXXXXXX176 | Ph.D | Anna University | Mechanical Engineering | 01/10/2021 | 2.7 | Associate Professor | Professor | 02/01/2023 | Regular | No | 31/05/2024 | No |
| 80 | Dr.J.Manivannan | XXXXXXX19E | XXXXXXXXX489 | Ph.D | Anna University | Mechanical Engineering | 03/06/2019 | 4.11 | Associate Professor | Associate Professor | 03/06/2019 | Regular | No | 31/05/2024 | No |
| 81 | Dr.J.Manivannan | XXXXXXX19E | XXXXXXXXX489 | Ph.D | Anna University | Mechanical Engineering | 02/06/2025 | 1.4 | Associate Professor | Associate Professor | 02/06/2025 | Regular | Yes | | No |
| 82 | Mr.S.Manikandan | XXXXXXX57N | XXXXXXXXX794 | M.E. | Anna University | Manufacturing Engineering | 04/06/2013 | 10.11 | Assistant Professor | Assistant Professor | | Regular | No | 31/05/2024 | No |

**C2. Student-Faculty Ratio (SFR)**

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
**B**= No. of Students in UG 2nd year (ST)
**C**= No. of Students in UG 3rd year (ST)
**D**= No. of Students in UG 4th year (ST)
No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):
PG1=1st PG program.
PGm=mth PG program
**A**= No. of Students in PG 1st year
**B**= No. of Students in PG 2nd year
Student Faculty Ratio **(SFR)** = S/F
S= No. of students of all programs in the Department including all students of allied departments/clusters.

**No. of students (ST)**=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)
Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.
**F**=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

No. of UG Programs in the Department1 No. of PG Programs in the Department3

Table No.C2.1: Student-faculty ratio.

| **Description** | **CAY(2025-26)** | **CAYm1 (2024-25)** | **CAYm2 (2023-24)** |
|---|---|---|---|
| UG1.B | 32 | 31 | 30 |
| UG1.C | 31 | 30 | 31 |
| UG1.D | 30 | 31 | 66 |
| **UG1: Robotics and Automation** | **93** | **92** | **127** |
| UG2.B | 66 | 62 | 66 |
| UG2.C | 62 | 66 | 66 |
| UG2.D | 66 | 66 | 66 |
| **UG2: Mechanical Engineering** | **194** | **194** | **198** |
| UG3.B | 122 | 124 | 128 |
| UG3.C | 124 | 128 | 99 |
| UG3.D | 128 | 99 | 99 |
| **UG3: Electronics & Communication Engineering** | **374** | **351** | **326** |
| PG1.A | 12 | 18 | 18 |
| PG1.B | 18 | 18 | 18 |
| **PG1: Applied Electronics** | **30** | **36** | **36** |
| PG2.A | 30 | 30 | 30 |
| PG2.B | 30 | 30 | 30 |
| **PG2: Industrial Safety Engineering** | **60** | **60** | **60** |
| PG3.A | 12 | 18 | 18 |
| PG3.B | 18 | 18 | 18 |
| **PG3: Manufacturing Engineering** | **30** | **36** | **36** |
| DS=Total no. of students in all UG and PG programs in the Department | 93 | 92 | 127 |
| AS=Total no. of students of all UG and PG programs in allied departments | 688 | 677 | 656 |
| S=Total no. of students in the Department (DS) and allied departments (AS) | **S1=** 781 | **S2=** 769 | **S3=** 783 |
| DF=Total no. of faculty members in the Department | 8 | 7 | 7 |
| AF= Total no. of faculty members in the allied Departments | 56 | 52 | 49 |
| F=Total no. of faculty members in the Department (DF) and allied Departments (AF) | **F1=** 64 | **F2=** 59 | **F3=** 56 |
| FF=The faculty members in F who have a 100% teaching load in the first-year courses | 11 | 10 | 7 |
| Student Faculty Ratio (SFR)=S/(F-FF) | **SFR1= 14.74** | **SFR2= 15.69** | **SFR3= 15.98** |
| Average SFR for 3 years | **SFR= 15.47** | | |

**C3. Faculty Qualification**

- Faculty qualification index (FQI) = 2.5 * [(10X +4Y)/RF] where
- X=No. of faculty members with Ph.D. degree or equivalent as per AICTE/UGC norms.
- Y=No. of faculty members with M. Tech. or ME degree or equivalent as per AICTE/ UGC norms.
- RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section C2 of this documents: (RF=S/20).

Table No.C3.1: Faculty qualification.

| Year | X | Y | RF | FQ = 2.5 x [(10X + 4Y) / RF )] |
|---|---|---|---|---|
| 2025-26(CAY) | 15 | 49 | 39.00 | 22.18 |
| 2024-25(CAYm1) | 16 | 43 | 38.00 | 21.84 |
| 2023-24(CAYm2) | 14 | 42 | 39.00 | 19.74 |

**C4. Faculty Cadre Proportion**

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = 1/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents:.
- RF2= No. of Associate Professors required = 2/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- RF3= No. of Assistant Professors required = 6/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- Faculty cadre and qualification and experience should be as per AICTE/UGC norms.

Table No.C4.1: Faculty cadre proportion details.

| Year | Professors | | Associate Professors | | Assistant Professors | |
|---|---|---|---|---|---|---|
| | Required RF1 | Available AF1 | Required RF2 | Available AF1 | Required RF3 | Available AF3 |
| 2025-26 | 7.00 | 8.00 | 15.00 | 7.00 | 44.00 | 49.00 |
| 2024-25 | 7.00 | 10.00 | 14.00 | 6.00 | 41.00 | 43.00 |
| 2023-24 | 7.00 | 8.00 | 13.00 | 6.00 | 40.00 | 42.00 |
| Average | RF1=7.00 | AF1=8.67 | RF2=14.00 | AF2=6.33 | RF2=41.67 | AF2=44.67 |

**C5. Visiting/Adjunct Faculty/Professor of Practice**

Table No. C5.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.

**(CAYm1)**

| S.No | Name of the Person | Designation | Organization | Name of the Course | No. of hours handled |
|---|---|---|---|---|---|
| 1 | Mr.B.S.Mubarak Ali | Industry Expert | JS Auto cast Foundry India Pvt Ltd, Perundurai,Erode | CNC Machining & Industrial Automation | 56.00 |

**(CAYm2)**

| S.No | Name of the Person | Designation | Organization | Name of the Course | No. of hours handled |
|---|---|---|---|---|---|
| 1 | Mr.G.Sudhakar | Industry Expert | Axis Global Institute of Industrial Training, Coimbatore. | CNC Machining & Industrial Automation | 56.00 |

**(CAYm3)**

| S.No | Name of the Person | Designation | Organization | Name of the Course | No. of hours handled |
|---|---|---|---|---|---|
| 1 | Mr.V.Karthick selvan | Industry Expert | JS Auto cast Foundry India Pvt Ltd, Perundurai,Erode | CNC Machining & Industrial Automation | 56.00 |

**C6. Academic Research**

Table No. C6.1: Faculty publication details.

| S.No. | Item | 2024-25 (CAYm1) | 2023-24 (CAYm2) | 2022-23 (CAYm3) |
|---|---|---|---|---|
| 1 | No. of peer reviewed journal papers published | 3 | 3 | 2 |
| 2 | No. of peer reviewed conference papers published | 8 | 9 | 2 |
| 3 | No. of books/book chapters published | 2 | 0 | 0 |

**C7. Sponsored Research Project**

Table No. C7.1: List of sponsored research projects received from external agencies.

**(CAYm1)**

| PI Name | Co-PI names if any | Name of the Dept., where project is sanctioned | Project Title* | Name of the Funding agency | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 |
|---|---|---|---|---|---|---|
| Mr M Karthick | Mr S Manikandan | Robotics and Automation | Real-Time Data Exchange System for Multi-Drone Communication and Coordination | Sumukha Greentech Aviation Ltd | 1 Year | 400000.00 |
| | | | | | | Amount received (Rs.):400000.00 |

**(CAYm2)**

| PI Name | Co-PI names if any | Name of the Dept., where project is sanctioned | Project Title* | Name of the Funding agency | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 |
|---|---|---|---|---|---|---|
| Mr M Karthick | Mr A Karthick | Robotics and Automation | Autonomous Drone-to-Drone Interaction System | Sumukha Greentech Aviation Ltd | 1 Year | 250000.00 |
| | | | | | | Amount received (Rs.):250000.00 |

**(CAYm3)**

| PI Name | Co-PI names if any | Name of the Dept., where project is sanctioned | Project Title* | Name of the Funding agency | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 |
|---|---|---|---|---|---|---|
| Mr M Karthick | Mr A Karthick | Robotics and Automation | UAV & Drone Communication Systems | Sumukha Greentech Aviation Ltd | 1 Year | 300000.00 |
| | | | | | | Amount received (Rs.):300000.00 |

**Total Amount (Lacs) Received for the Past 3 Years: 950000.00**

**Note*:**

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

**C8. Consultancy Work**

Table No. C8.1: List of consultancy projects received from external agencies.

**(CAYm1)**

| PI Name | Co-PI names if any | Name of the Dept., where project is sanctioned | Project Title* | Name of the Funding agency | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 |
|---|---|---|---|---|---|---|
| Mr.R.Karthick | - | Robotics and Automation | Technical Consultancy Using CNC Facilities for Precision Component Manufacturing | Glory Engineering works,Coimbatore | 01-06-2024 to 30-05-2025 | 4.31 |
| Mr.M.Karthick | - | Robotics and Automation | Technical Consultancy Using CNC Facilities for Precision Component Manufacturing | SKM and Company, Salem | 01-06-2024 to 30-5-2025 | 3.61 |
| | | | | | | Amount received (Rs.):7.92 |

**(CAYm2)**

| PI Name | Co-PI names if any | Name of the Dept., where project is sanctioned | Project Title* | Name of the Funding agency | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 |
|---|---|---|---|---|---|---|
| Mr.R.Karthick | - | Robotics and Automation | Technical Consultancy Using CNC Facilities for Precision Component Manufacturing | Glory Engineering works,Coimbatore | 01-06-2023 to 30-05-2024 | 3.62 |
| Mr.M.Mathiyalagan | - | Robotics and Automation | Technical Consultancy Using CNC Facilities for Precision Component Manufacturing | SKM and Company, Salem | 01-06-2023 to 30-05-2024 | 3.91 |
| | | | | | | Amount received (Rs.):7.53 |

**(CAYm3)**

| PI Name | Co-PI names if any | Name of the Dept., where project is sanctioned | Project Title* | Name of the Funding agency | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 |
|---|---|---|---|---|---|---|
| Mr.A.Karthick | - | Robotics and Automation | Technical Consultancy Using CNC Facilities for Precision Component Manufacturing | Glory Engineering works,Coimbatore | 01-06-2022 to 30-05-2023 | 3.80 |
| Mr.S.S.Manoj | - | Robotics and Automation | Technical Consultancy Using CNC Facilities for Precision Component Manufacturing | SKM and Company, Salem | 01-06-2022 to 30-05-2023 | 3.45 |
| | | | | | | Amount received (Rs.):7.25 |

**Total amount (Lacs) received for the past 3 years: 22.70**

**Note*:**

- Only consultancy projects will be considered. Infrastructure-based projects will not be considered here.

**C9. Institution Seed Money or Internal Research Grant to its Faculty for Research Work**

Table No. C9.1: List of faculty members received seed money or internal research grant from the Institution.

**(CAYm1)**

| Faculty name | Project title/ Support for Activity | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 | Amount Utilized(Lacs) i.e. 15,25,000=15.25 | Outcomes of the project |
|---|---|---|---|---|---|
| Dr.J.Balaji | A Sustainable and Inclusive 3D Printed Humanoid Robot | 12 months | 1.43 | 1.43 | Working model |
| Mr.R.Karthick | Smart Autonomous ornithopter for surveillance & Environmental monitoring | 6 months | 0.53 | 0.53 | Working model |
| Mr.S.Manikandan | Autonomous Flight computer for Surveillance and Tracking UAVs | 12 Months | 1.48 | 1.48 | Working model |
| Mrs.V.Vimala | Smart Autonomous 3D Printed Quadrupted Robot for Sustainable Disaster Response and Public Safety | 6 Months | 0.46 | 0.46 | Working model |
| | | | Amount received (Rs.): 3.90 | | |

**(CAYm2)**

| Faculty name | Project title/ Support for Activity | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 | Amount Utilized(Lacs) i.e. 15,25,000=15.25 | Outcomes of the project |
|---|---|---|---|---|---|
| Dr.D.Giridhar | Robotic Exoskeleton Bionic Arm for Rehabilation of Disabled Individual using EMG | 6 months | 0.90 | 0.90 | Working model |
| Dr.R.Sasikumar | Python Powered SCARA Robot:color and shape Identification with computer vision using Firmata | 6 months | 0.65 | 0.65 | Working model |
| | | | Amount received (Rs.): 1.55 | | |

**(CAYm3)**

| Faculty name | Project title/ Support for Activity | Duration of the project | Amount(Lacs) i.e. 15,25,000=15.25 | Amount Utilized(Lacs) i.e. 15,25,000=15.25 | Outcomes of the project |
|---|---|---|---|---|---|
| Mr.M.Karthick | Development of a Two-Rotor Unmanned Aerial Vehicle | 6 months | 0.28 | 0.28 | Working model |
| Mr.L.Thinesh Ignatius | Quadcopter Drone | 6 months | 0.53 | 0.53 | Working model |
| | | | Amount received (Rs.): 0.81 | | |

**Total amount (Lacs) received for the past 3 years : 6.26**

# PART D: Laboratory Infrastructure in the Department

## (Data to be filled in for the Department)

**D1. Adequate and Well-Equipped Laboratories, and Technical Manpower**

Table No.D1.1: List of laboratories and technical manpower.

| Sr. No | Name of the Laboratory | Number of students per set up(Batch Size) | Name of the Important Equipment | Weekly utilization status(all the courses for which the lab is utilized) | Technical Manpower Support | | |
|---|---|---|---|---|---|---|---|
| | | | | | Name of the Technical staff | Designation | Qualification |
| 1 | Robotics Laboratory | 15 | • M Tab mini Robort DIY Kit • 5 Axis Table Top Industrial • Robo Kit • Computer System • M | 24 | Mr N Hariharan | Lab Technician | B.E - CSE |
| 2 | CNC and Metrology Laboratory | 15 | • ACE CNC Lathe Model • ACE CNC Vertical Machining Center Model Model • TC 500 Model 5 HP | 26 | Mr H David | Production Engineer | B.E - Mech |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3 | Dynamics Laboratory | 15 | • Motorized Gyroscope. • Governor apparatus – Watt, Porter, Proell and Hartnell. • Dynamics Balancing Machine Whirling of shaft apparatus Kinematic | 22 | Mr.E.Balamurugan | Lab Technician | Dip-Mech |
| 4 | Strength of Materials Laboratory | 15 | • Universal Tensile Testing machine • Torsion Testing Machine • Impact Testing Machine • Hardness Testing Machine Spring Testing Machine | 22 | Mrs.P.Dharanai Priya | Lab Technician | B.E - Mech |
| 5 | CAD / CAM Laboratory | 30 | • Computer System Intel Core i5 & i7 1TB HDD,16GB DDR, 4GB RAM • Laser Printer • Solid Works Software MATLAB CIMAS CNC Lathe & | 26 | Mr.S.Navinkumar | Lab Technician | B.E-CSE |
| 6 | Mechatronics Laboratory | 15 | • Steeper Motor • PLC Kit • Pneumatic Kit • Servo Motor • Microprocessor Kit | 22 | Mr.E.Balamurugan | Lab Technician | Dip-Mech |
| 7 | Process Control Laboratory | 15 | • Pneumatically Actuated Control Valve • Process Control Training Plant • Programmable Logic controller DAQ card Computer System | 20 | Mr.M.Ramasamy | Lab Technician | Dip-EEE |
| 8 | Microprocessor Laboratory | 15 | • 8086 Trainer • 8051Trainer • 8255/8279/8259/8251 Interfacing Card • ADC /DAC Interfacing card Stepper motor /DC Motor | 20 | Ms.C.Mahalakshmi | Lab Technician | Dip-ECE |
| 9 | Communication Skills Laboratory | 30 | • INTEL Core 2 Duo @2.66GHZ NVIDA M?B, @GBDDRAM,16 0GBHDD, ATX Cabinet, Key Board, Optical Mouse Head Phones FL Client & CL | 4 | Mr.S.Santhosh kumar | Lab Technician | B.E-CSE |
| 10 | Problem Solving and Python programming Lab | 30 | • Hardware : Wipro brand (Core i3, 4GB RAM, 500 GB HDD), Dot Matrix Printer Software : Ubuntu OS, Windows OS Start UML Argo UML Visual Studio | 12 | Mrs.N.Nivetha | Lab Technician | B.Sc (Computer Science) |
| 11 | Chemistry Laboratory | 30 | • pH Meter, UV Visible Conductivity meter, Potentiometer, Spectrophotometer, Flame Photometer, Electrical Hot Air Oven | 22 | Mrs.S.Kalaivani | Lab Technician | B.Sc. Chemistry, B.Ed |
| 12 | Engineering Physics Laboratory | 30 | • Spectrometer, Fibre Optic kit, Travelling Microscope, Lees Disc,Torsion Pendulum,Uniform & Non Uniform Bending setup Diode Laser kit Ultrasonic | 22 | Mrs.A.Poondhalir | Lab Technician | M.Sc. - Physics |
| 13 | Engineering Practices Laboratory Group – A Mechanical | 30 | • Assorted components for plumbing. Carpentry vice (fitted to work bench) Standard wood working tools Demolition Hammer Circular Saw Planer Hand Drilling | 30 | Mr.T.Thirunavukarasu | Lab Technician | B.E -Mechanical |

**D2. Safety Measures in Laboratories**

Table No. D2.1: List of various safety measures in laboratories.

| Sr. No | Laboratory Name | Safety Measures |
|---|---|---|
| 1 | Robotics Laboratory | 1. Avoid wearing loose clothing watch and rings while working in the lab 2. Avoid stepping on electrical wires or any other computer cables. 3. Do not open the system unit casing or monitor casing particularly when the power is turned on. 4. Do not touch, connect or disconnect any plug or cable without your lecturer/laboratory technician's permission. 5. Maintain safe distance from rotating parts and gears. 6. Use emergency stop (E-Stop) button when required |
| 2 | CNC and Metrology Laboratory | 1. Avoid loose clothing, ties, scarves, or dangling accessories. 2. Do not wear gloves while machine is running 3. Inspect coolant level and lubrication system. 4. Never open machine doors while spindle is running. 5. Do not touch rotating tools or workpiece. 6. Keep hands away from moving parts. 7. Do not operate with wet hands. 8. In case of emergency, press E-stop immediately. 9. Do not drop micrometers, verniercalipers, or gauges. 10. Turn off machine power after use |

| | | |
|---|---|---|
| 3 | Dynamics Laboratory | 1. Do not wear loose jewellery, chains, or watches 2. Do not operate equipment without permission. 3. Maintain discipline and avoid running inside the lab. 4. Never touch rotating parts while the machine is running. 5. Check wiring and insulation before switching ON. 6. Switch off main supply after completing the experiment. 7. In case of accident, inform the lab in-charge immediately. |
| 4 | Strength of Material Laboratory | 1. Students instructed not to wear loose clothing, watch and rings while working in the lab. 2. Equipment's only are operated from the permission from the staff In – charge and sand bucket used for fire safety. 3. Never bring hands close to sharp objects. 4. The availability of first aid kit in case of any emergency. 5. Never make any adjustments to a machine when it is in operation. |
| 5 | CAD/CAM Laboratory | 1. Students are restricted for the access of pen drive and usage of unnecessary websites. 2. Wear only prescribed uniform 3. Know the location of the fire extinguisher and the first aid box and how to use them in case of an emergency. 4. Report fires or accidents to your lecturer/laboratory technician immediately. 5. Report any broken plugs or exposed electrical wires to your lecturer/laboratory technician immediately. 6. Avoid stepping on electrical wires or any other computer cables. 7. Do not open the system unit casing or monitor casing particularly when the power is turned on. 8. Do not insert metal objects such as clips, pins and needles into the computer casings. They may cause fire. 9. Do not remove anything from the computer laboratory without permission. 10. Do not touch, connect or disconnect any plug or cable without your lecturer/laboratory technician's permission. 11. Do not plug in external devices without scanning them for computer viruses |
| 6 | Mechatronics Laboratory | 1. Avoid loose clothing, ties, and dangling accessories. 2. Follow instructor's instructions strictly. 3. Report any accident or damage immediately. 4. Check wires and cables for damage before use 5. Be cautious while handling sharp tools and components. 6. Switch off main power supply in case of fire |
| 7 | Process Control Laboratory | 1. Avoid loose clothing, dangling jewellery, and open hair. 2. Do not touch exposed wires or open terminals. 3. Switch OFF power supply before connecting/disconnecting circuits. 4. After experiment, reset all parameters to default. 5. Check for air leakage before operation. 6. Inform faculty immediately in case of accident. |
| 8 | Microprocessor Laboratory | 1. Maintain discipline and avoid running or unnecessary movement. 2. Switch OFF the power supply before making or changing connections. 3. Do not force ICs into sockets; check correct orientation (pin configuration). 4. Wear anti-static wrist straps when handling ICs. 5. In case of electrical fire, use $CO_2$ fire extinguisher only. |

**D3. Project Laboratory/Research Laboratory**

**7.5.A. Availability of project laboratories / research laboratories**

The Department has established **dedicated Project and Research Laboratories** to promote innovation, interdisciplinary research, consultancy activities, and experiential learning among undergraduate, postgraduate, and research scholars. These laboratories function beyond regular practical classes and provide advanced facilities to support student projects, funded research, and industry collaboration

**Table No. 7.5.1: List of project laboratories/research laboratories**

| S. No. | Name of the Laboratory | Areas Supported |
|---|---|---|
| **1.** | 3D Printing Laboratory | ◦ Additive Manufacturing Technologies<br>◦ Rapid Prototyping<br>◦ Product Design & Development<br>◦ Materials Research |
| **3.** | Robot Welding Laboratory | ◦ Robotic Arc Welding (MIG, TIG, Spot Welding)<br>◦ Path Planning & Trajectory Optimization<br>◦ Material Behavior under Automated Welding<br>◦ Welding Metallurgy Studies |
| **4.** | IoT Centre | ◦ Microcontroller coding for robot control<br>◦ Ultrasonic & IR sensors for obstacle detection<br>◦ Wi-Fi/Bluetooth for remote control and monitoring<br>◦ DC/Servo motor interfacing for navigation<br>◦ Battery optimization and voltage regulation for stable performance. |
| **5.** | Nano-Tech Laboratory | ◦ Spin coater, solar simulator, Keithley source meter, UV-Vis spectrophotometer for photovoltaic research.<br>◦ Ball mill, autoclave, muffle furnace, magnetic stirrer for nanoparticle preparation.<br>◦ Spin coating, vacuum oven, source meter for nano-electrode fabrication and testing.<br>◦ Autoclave, incubator shaker, temperature baths for catalyst development.<br>◦ Microscopes, image analysis software, UV-Vis spectrophotometer for structural and optical analysis. |
| **6.** | E-Vehicle Laboratory | ◦ Cell Testing & Pack Testing<br>◦ Pack Manufacturing Unit<br>◦ Single & Multi-cell Algorithm Development Kits<br>◦ Advanced Powertrain Bench<br>◦ Vehicle Testing Facilities<br>◦ Motor Testing Setup<br>◦ CAN Communication Unit |

**7.5.B. Availability of Centre of Excellence**

The **Centre of Excellence** promote advanced learning, research, innovation, consultancy, and industry collaboration in emerging areas of Robotics and automation. The Centre functions as a specialized facility equipped with advanced infrastructure, modern software tools, and research-grade equipment to support students, faculty, research scholars, and industry professionals.

**DRONE DEVELOPMENT CENTRE**

**Vision**

To establish a fosters innovation, research and real-world applications, empowering students to become pioneers in aerial robotics and autonomous systems.

**Mission**

To empower students, researchers and industry leaders through cutting-edge drone technology, fostering innovation, sustainability and real-world applications.

**Facilities at Drone Development Center**



**Fig 7.5.B.1 Facilities at Drone Development Center**

The Drone Development Center is specialized hub dedicated to advancing innovation, Research & development in agriculture and surveillance. It provides students with hands-on expertise in UAV design, fabrication and autonomous technologies. The center focuses on developing cost effective and sustainable drone solutions for real world applications. Our R&D integrates AI, IoT and drone technology to deliver accurate insights on crop health, irrigation and yield prediction. It nurtures a culture of research, creativity, entrepreneurship and industry collaboration.



**Fig 7.5.B.2 Agro Drone**



**Fig 7.5.B.3 Hexacopter**



Fig 7.5.B.4 Medicopter



Fig 7.5.B.5 FPV Racing Drone



Fig 7.5.B.6 DJI Photography Drone



Fig 7.5.B.7 Quadcopter Drone



Fig 7.5.B.8 RC Glider

**Skill Training Programme Conducted Academic Year: 2025-2026**

| S.No. | Title of Skill Development Course | No. of Students Participated | Dept/Year/Sem | Duration |
|---|---|---|---|---|
| 1. | Workshop on UAV Electronics, Flight Control & Flying | 35 | EEE/III/VI | 17.09.2025 to 18.09.2025 |
| 2. | Mechanical Insights into Drone Design & Operation | 45 | Mech/III/V | 13.08.2025 to 14.08.2025 |

| | | | | |
|---|---|---|---|---|
| 3. | Drone Applications in Farming & Automation | 37 | EIE & Agri/III/V | 28.07.2025 to 29.07.2025 |
| 4. | Drone Technology in Precision Farming | 40 | Agri/III/V | 21.07.2025 to 22.07.2025 |




**Fig 7.5.B.9 Two Days workshop on UAV Electronics, Flight Control & Flying for B.E- III Year-Electrical and Electronics Engineering students held on 17.09.25 & 18.09.25**




**Fig 7.5.B.10 Two Days workshop on Mechanical Insights into Drone Design & Operation for B.E- III Year-Mechanical Engineering students held on 13.08.25 & 18.08.25**



**Fig 7.5.B.11 Two Days workshop on Drone Applications in Farming & Automation for B.E- III Year-Electronics and Instrumentation Engineering & B.Tech- III Year- Agriculture Engineering students held on 28.07.25 & 29.07.25**







**Fig 7.5.B.12 Two Days workshop on Drone Technology in Precision Farming for B.Tech- III Year- Agriculture Engineering students held on 21.07.25 & 22.07.25**

| S.No. | Title of Skill Development Event Organized | No. of Students Participated | Participants | Duration |
|---|---|---|---|---|
| 1. | DroneXtreme | 112 | Students from Various Engineering Colleges | 03.09.2025 |






**Fig 7.5.B.13 Inaugural Event of DroneXtreme 2025, Chief Guest keynote address on Masterclass on Drone Swarm Tech for Industry 5.0 held on 03.09.2025**



**Fig 7.5.B.14 National Level Drone Racing, Payload lifting and free style Quest challenges held on 03.09.2025**

**3D PRINTED HUMANOID ROBOT (INMOOV)**



Fig.7.5.B.14.1 3D Printed Humanoid Robot (INMOOV)

Description: InMoov is a humanoid robot, constructed out of 3D printable plastic body components, and controlled by Arduino microcontrollers.

InMoov is able to perceive sound, see, speak and move independently. The robot is able to identify its environment and through micro-cameras in some projects recognize voice commands that are issued by the owner. It features different touch sensors, PIR and 3 dimensional, in addition, the Kinect allows InMoov to see and analyze the 3-dimensional space of the robots environment.

**ORNITHOPTER (BIRD LIKE DRONE)**




Fig.7.5.B.14.2 **ORNITHOPTER (BIRD LIKE DRONE)**

Description: The Ornithopter is a bird-like drone developed for stealthy aerial surveillance using biomimicry principles. It features flapping-wing mechanisms that closely mimic the flight of real birds, allowing it to operate silently and remain undetected in sensitive environments. Designed with lightweight materials, the drone offers excellent flight efficiency and maneuverability, especially in narrow or complex terrains. It is powered by microcontrollers that enable precise control of wing motion and flight stability. The Ornithopter can be equipped with miniature cameras and sensors for real-time data captureUnlike traditional drones, its natural bird-like appearance helps it blend seamlessly into the environment.

**Autonomous Smart Vacuum Cleaner**




**Fig 7.5.B.14.3 Autonomous Smart Vacuum Cleaner**

Description: The **Computerized UAV for Precision Agriculture** is an intelligent drone system designed to enhance farming efficiency through automation and data-driven insights. Equipped with GPS, multispectral cameras, and onboard processors, the UAV captures high-resolution imagery to monitor crop health, soil conditions, and pest infestations. It enables targeted interventions such as precision spraying, seeding, and irrigation. The drone uses real-time data analytics to support farmers in decision-making, reducing input costs and improving yield. Autonomous flight paths are programmed via mission

**FPV DRONE**






**Fig 7.5.B.14.4 FPV Drone**

Description: The **FPV Drone for Surveillance** project focuses on developing a First-Person View (FPV) drone specifically designed for real-time monitoring and surveillance. Equipped with a high-definition camera, the drone provides live video feeds to the operator, allowing them to observe areas from an aerial perspective with greater detail and accuracy.

This drone can be used for various surveillance applications, such as monitoring public spaces, industrial sites, construction areas, or for security purposes. The FPV system enables precise control and navigation, even in challenging or hard-to-reach areas.

**2D Plotter**

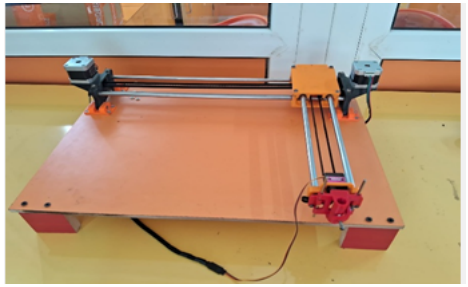


**Fig 7.5.B.14.5 2D Plotter**

Description: The **2D Plotter** project involves the design and development of a machine that can accurately draw or plot 2D designs on a flat surface. Using a pen or marker mounted on a mechanical arm, the plotter takes input from digital designs (such as CAD drawings or vector graphics) and reproduces them onto paper, cardboard, or other flat materials.

This project is ideal for applications in design, art, engineering, and education, where precise and automated drawing is needed. The 2D plotter can be used for creating architectural plans, technical diagrams, or artistic illustrations. It offers an affordable, efficient solution for transferring digital designs to physical media, making it an excellent tool for both professionals and hobbyists.

**Participation**




**Fig 7.5.B.15 Participation**

Attended Bharat **Drone Stack Conference 2025** and explored 40+ exhibits of cutting edge indigenous components of Drone at **Bangalore International Exhibition Centre, Bangalore, Karnataka** held on 05.06.25 & 06.06.25.

**7. 5. C . Utilization of Project laboratories/ Research laboratory / Centre of Excellence**

The Robotics and Automation Department ensures optimal and systematic utilization of its **Project Laboratories, Research Laboratories, and Centre of Excellence (CoE)** to enhance academic excellence, research productivity, consultancy engagement, and industry collaboration

**Effective utilization has resulted in**

| S. No. | Utilization | Outcome |
|---|---|---|
| 1 | **Increased student project output** | ◦ Undertake innovative mini and major projects<br>◦ Develop prototype models and proof-of-concepts<br>◦ Participate in hackathons, technical competitions, and funded student initiatives<br>◦ Work on interdisciplinary and socially relevant projects |
| 2 | **Funded research grants** | ◦ Facilitated submission of high-quality research proposals<br>◦ Attracted grants from Government agencies, research councils, and industries<br>◦ Supported pilot studies and preliminary investigations essential for funding approval<br>◦ Enabled collaboration with national and international institutions |
| 3 | **Research publications and patents** | ◦ Publications in indexed journals and reputed conferences<br>◦ Filing of patents and intellectual property rights (IPR)<br>◦ Development of technology prototypes and product innovations |
| 4 | **Consultancy revenue generation** | ◦ Strengthened industry–institute collaboration<br>◦ Enabled testing and certification services<br>◦ Provided expert consultancy for infrastructure, product development, and process optimization<br>◦ Generated revenue that can be reinvested in laboratory modernization |
| 5 | **Enhanced employability and industry readiness** | ◦ Practical exposure to modern tools and technologies<br>◦ Experience in solving real industrial problems<br>◦ Teamwork, leadership, and project management skills<br>◦ Understanding of industry standards, quality control, and safety practices |

**7. 5. D Relevance to POs/PSOs**

Effective utilization of **Project Laboratories, Research Laboratories, and Centres of Excellence** directly supports the attainment of Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) by providing experiential learning, research exposure, and industry interaction. The mapping is elaborated below

| 2024-2025 | | | | | |
|---|---|---|---|---|---|
| **S. No.** | **Name of the student(s)** | **Project Guide** | **Topic** | **Relevance to POs & PSOs** | **Outcomes** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | Akhilesh M L<br>Dinesh Kumar G<br>Manikandan K<br>Mohamed Sajith J | Mrs. V. Vimala | Voice Recognition based Intelligent Wheel Chair And GPS Tracking System | PO1, PO2, PO3, PO4,<br>PO5, PO6, PO9,PO10, PO11, PO12, PSO1, PSO2, PSO3 | Paper Presented in Conference | |
| 2. | Logesh Raja R<br>Mohamed Faaiz M<br>Sam Sundar S<br>Ritu Raj | Mr.M. Karthick | Autonomous Mobile Robots For Disaster Site Search Using Machine Learning | PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO1, PSO2, PSO3 | Paper Presented in Conference | |
| 3. | Mariselvam G<br>Santhosh P<br>Sathish Pandi M<br>Arulazhagan A | Dr.J.Balaji | Development of Humanoid Robot for Interactive Learning | PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO1, PSO2, PSO3 | Paper Presented in Conference | |
| **2023-2024** | | | | | | |
| 1. | Sivan R<br>Chandru P<br>Prakashraj G | Dr.D.Giridhar | Robotic Exoskeleton Bionic Arm For Rehabilitation of Disabled Individual Using EMG | PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO1, PSO2, PSO3 | Paper Presented in Conference | |
| 2. | Gokul Raj M S<br>Hariharan P<br>Kishore Kumar K N | Mr. R. Karthick | Self-Navigating Autonomous Vehicle For Blind People | PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO1, PSO2, PSO3 | Paper Presented in Conference | |
| 3. | Mohith S<br>Ralph Anto J<br>Tamilarasu K | Mr.M.Karthick | Touchless Operating Wheelchair Mobility with Integrated Head Motion and Pulse Monitoring System | PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PO12, PSO1, PSO2, PSO3 | Paper Presented in Conference | |

**7.5. Patent Publications**

**Table No. 7.5.3: List of patents**

| S.No | Name of the Faculty | Application/Reg. number | Date | Status | Title |
|---|---|---|---|---|---|
| 1 | Suresh S | 202541017647 | 14.03.2025 | Granted | Design patent on "Multiplanar 2D Plotter for Floor and Wall Art Work" |

**Prototype Development**

**Table No.7.5.5 Faculty Research Activities and Prototype Development Supporting Student Projects**

| S.No. | Title of the Prototype/Working model | Description | Lab |
|---|---|---|---|
| 1. | A sustainable and Inclusive 3D-Printed Humanoid Robot | A Sustainable and Inclusive 3D- Printed Humanoid Robot is a human-like robot made using eco- friendly 3D printing, enabling low-cost, customizable, and accessible design for inclusive applications in education, healthcare, and social interaction. | Innovation and incubation foundation Incubation |
| 2. | Smart Autonomous Ornithopter for surveillance &Environmental monitoring | A Smart Autonomous Ornithopter is a bird-inspired flying robot that uses flapping wings for quiet, energy-efficient surveillance and environmental monitoring, ideal for wildlife observation and remote area | Drone development centre |
| 3. | Autonomous Flight computer for Surveillance and Tracking UAVs | The Autonomous Flight Computer for Surveillance and Tracking UAVs project involves developing an embedded system that enables UAVs to perform autonomous navigation, surveillance, and target tracking. It integrates sensors, communication, and control algorithms to improve mission reliability and supports outcome-based learning in robotics and embedded systems. | Drone development centre |
| 4. | Smart Autonomous 3D Printed Quadrupted Robot for Sustainable Disaster Response and Public Safety | The Smart Autonomous 3D Printed Quadruped Robot for Sustainable Disaster Response and Public Safety project focuses on developing an intelligent robotic system capable of navigating hazardous environments for search, rescue, and monitoring. It integrates autonomous control, sensors, and sustainable design to enhance safety, operational efficiency, and real-world problem solving. | Innovation and incubation foundation Incubation |

| | | | |
|---|---|---|---|
| 5. | Robotic Exoskeleton Bionic Arm for Rehabilation of Disabled Individual using EMG | The Robotic Exoskeleton Bionic Arm for Rehabilitation of Disabled Individuals using EMG project focuses on developing an assistive robotic arm that interprets muscle signals to support movement and therapy. It integrates EMG sensing, control systems, and biomechanics to improve rehabilitation outcomes and enhance functional independence. | Innovation and incubation foundation Incubation |
| 6. | Python Powered SCARA Robot:color and shape Identification with computer vision using Firmata | The Python Powered SCARA Robot: Color and Shape Identification with Computer Vision using Firmata project involves developing an automated robotic system that detects and classifies objects based on color and shape using computer vision. It integrates Python programming, SCARA robot control, and Firmata communication to enhance automation and intelligent sorting applications. | Innovation and incubation foundation Incubation |
| 7. | Wall Climbing Robot | The Wall Climbing Robot project focuses on developing a robotic system capable of adhering to and moving along vertical surfaces for inspection, maintenance, and surveillance tasks. It integrates adhesion mechanisms, sensors, and control systems to enhance operational safety and real-world problem solving. | Innovation and incubation foundation Incubation |
| 8. | Quadcopter Drone | The Quadcopter Drone project focuses on the design and development of an unmanned aerial system capable of stable flight, navigation, and aerial monitoring. It integrates flight control, sensors, and communication systems to support applications such as surveillance, mapping, and environmental monitoring. | Drone development centre |

## ESEC MACHINING SOLUTIONS

CNC Lathe Machine: ACE Micromatic J300LM Jobber Elite



*MACHINE SPECIFICATION*

- Model: ACE Micromatic J300LM
- Control System: FANUC Series
- Spindle Speed: 3500RPM
- Max Turn Dia: 180 mm
- Max Turn Length: 200 mm
- Turret Head: 8 Station

CNC Milling Machine: Ace Micromatic 540V Vertical Machining Center




*MACHINE SPECIFICATION*

- Model: ACE Micromatic 540V

- Control System: FANUC Series
- Spindle Speed: 4000RPM
- Bed Size: 750 X 400 mm
- Z axis Travel: 300 mm
- Magazine Capacity: 20 Station

OUTCOMES OF ESEC - CNC MACHINING CENTRE ESTABLISHMENT:

- Enhanced Technical Skills – Students and trainees gain hands-on experience in CNC programming, operation, and maintenance.
- Industry-Ready Workforce – Graduates acquire job-ready skills aligned with manufacturing industry demands.
- Improved Research & Innovation – Enables prototyping and advanced research in mechanical, aerospace, and automation fields.
- Increased Employability – Equips learners with certifications and competencies for high-demand CNC machining roles.
- Support for Local Industries – Provides precision machining services to small and medium enterprises (SMEs).
- Curriculum Enhancement – Strengthens engineering and vocational programs with practical, industry-standard training.
- Cost-Effective Production – Reduces outsourcing needs by enabling in-house part fabrication for institutional projects.
- Promotion of Advanced Manufacturing – Encourages adoption of automation and smart manufacturing technologies.

**COURSE DETAILS:**

1. CNC Turning Machine Operation & Programming

- Duration: 15 days
- Level: Beginner to Intermediate
- Prerequisites: Basic machining knowledge (manual lathe experience preferred)
- Software Used: Fanuc or G-code-based CNC simulators
- Hands-on Training: Live projects on CNC lathe machines
- Certification: CNC Turning Operator/Programmer Certificate
- Assessment: Practical machining test + written exam

Course Objectives:

- Understand CNC turning principles, components, and machine setup.
- Learn to read and interpret engineering drawings for turning operations.
- Master G-code and M-code programming for CNC lathes.
- Operate CNC turning machines safely, including tool and workpiece setup.
- Perform facing, turning, grooving, threading, and taper turning operations.
- Optimize cutting parameters (speed, feed, depth of cut) for efficiency.
- Troubleshoot common CNC turning errors and tool wear issues.
- Apply quality control techniques using precision measuring instruments.

Course Outcomes:

- Explain CNC Turning Fundamentals.
- Interpret Engineering Drawings.
- Write CNC Turning Programs.
- Safely Operate CNC Lathes.
- Perform Machining Operations.
- Optimize Machining Parameters.
- Diagnose & Resolve Issues.
- Ensure Quality Standards.

2. CNC Milling Machine Operation & Programming

- Duration: 15 days
- Level: Beginner to Intermediate
- Prerequisites: Basic machining knowledge (manual milling preferred).
- Software Used: Fanuc, or CAM software.

- Hands-on Training: Practical sessions on 3-axis CNC milling machines
- Certification: CNC Milling Operator/Programmer Certificate
- Assessment: Practical machining test + written exam

Course Objectives:

- Understand CNC milling machine components, axes, and operations.
- Read and interpret part blueprints for milling applications.
- Write and edit G-code programs for 2D and 3D milling operations.
- Set up tools, workholding devices, and workpiece zero positions.
- Perform face milling, pocketing, drilling, contouring, tapping and slotting.
- Optimize machining parameters for surface finish and tool life.
- Operate CNC milling machines with safety protocols.
- Inspect finished parts using micrometers and calipers.

Course Outcomes:

- Explain CNC Milling Fundamentals.
- Interpret Part.
- Program CNC Milling Machines.
- Set Up Machines & Workpieces.
- Perform Machining Operations.
- Optimize Machining Parameters.
- Apply Safety Best Practices.
- Inspect Finished Parts.

**PRODUCTION JOB ORDERS CARRIED OUT AT ESEC-CNC MACHINING CENTRE**







| Name of the Training | Period of Training | Topics Covered | Beneficiaries |
|---|---|---|---|
| CNC & VMC Basic Training | 1 day | About CNC & VMC, G Codes and M Codes, Basic Programming | 986 I year students of ESEC |
| CNC & VMC Basic Training | 1 day | About CNC & VMC, G Codes and M Codes, Basic Programming | 1023 I year students of ESEC |
| CNC & VMC Basic Training | 1 day ($6^{th}$ to $30^{th}$ 2024) 4 Batches / Day | About CNC & VMC, G Codes and M Codes, Basic Programming | 1283 I year students of ESEC |
| CNC & VMC Advanced Training Program | 15 days ($3^{rd}$ to $22^{nd}$ October) | SOLIDWORKS, Master CAM, CNC Setting, Hands on Training & Projects | 20 Final year Mechanical Engineering Students |
| Mastering CNC Programming: A 15 days Intensive Training Program | 15 days (17.02.2025 to 07.03.2025) | G-code and M-code programming, CNC machine setup, tool-path simulation, GD&T. | 15 Third year Mechanical Engineering Students |





**Students Training**

**Industry Collaboration for Consultancy Work**

- **Glory Engineering Works-Coimbatore.**
- **SKM Industry-Salem.**
- **Zenitek Industry-Erode.**
- **MM Gears-Perundurai.**

**ELECTRICAL VEHICLE CENTER of EXCELLENCE**

We’re thrilled to announce the establishment of an Electric Vehicle Center of Excellence (EV COE) at Erode Sengunthar Engineering College, in proud association **with Decibels Lab Bangalore.**

This center is designed to empower students with h ands-on skills tailored for the fast-evolving automotive and EV industry. It also opens up avenues for faculty, industry experts, and research scholars to collaborate on cutting-edge R&D initiatives.

The EV COE is equipped with:

- Cell Testing & Pack Testing
- Pack Manufacturing Unit
- Single & Multi-cell Algorithm Development Kits
- Advanced Powertrain Bench
- Vehicle Testing Facilities
- Motor Testing Setup
- CAN Communication Unit

This initiative is a big step towards bridging the gap between academic learning and industry demands.


ELECTRIC VEHICLE COMPONENTS
DEMONSTRATION KIT
EV CONNECTOR & CONTACTOR




LITHIUM-ION CELL TESTING AND CHARACTERIZATION UNIT
LITHIUM-ION CELL AND PACK THERMAL TEST CHAMBER
Li-ion Cell Testing & Characterization Unit


DECIBELS / Li-ion Battery Pack Manufacturing Lab
Erode, Tamil Nadu, India


Erode, Tamil Nadu, India


Erode, Tamil Nadu, India


DECIBELS / Advance EV Powertrain setup
Erode, Tamil Nadu, India

**RAPID PROTOTYPING CENTRE**

**3D Printing CoE**

The Centre of Excellence in 3D printing at Erode Sengunthar Engineering College is a state-of-the-art facility established to foster innovation, research, and h ands-on training in the field of additive manufacturing. The center aims to bridge the gap between academic knowledge and industrial applications by providing a platform for interdisciplinary collaboration, advanced prototyping, and real-world problem-solving using cutting-edge 3D printing technologies

**Key Features**

- Advanced multi-material 3D printers capable of working with PLA, ABS, PETG, Carbon PETG, TPU, and other engineering-grade polymers.
- Research-focused initiatives on sustainable, functional, and customized manufacturing processes.
- Collaborative projects with industries, start-ups, and research institutions.
- Skill development and certification programs for students and professionals.
- Support for student innovation through prototyping and product development assistance.

**Facilities@ 3D Printing CoE**

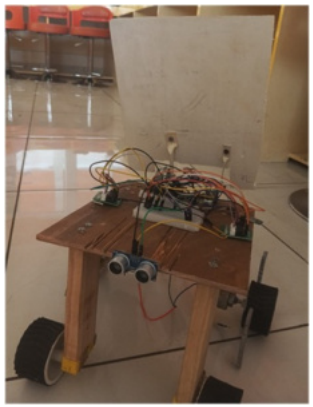



FLASHFORGE



**IoT Laboratory**

- 40 systems are available with all required software's and internet facilities.
- Arduino Uno R3 development Kit is available for student projects
- Students are allowed to utilize the project laboratory on working days.
- It is designed to create an eco-system to impart effective engineering education.
- It provides guidance and support for doing projects in IoT and Robotics.
- Value added course & workshops are organized periodically.
- Recently 7 projects have been completed by the students in the last year using this lab facility.



**Intelligent Mobility Assist Wheelchair**




Skill development Programmes organized

# PART E: First Year faculty and financial Resources

**(Data to be filled in for the first year course faculty and budget allocation and utilization)**

**E1. First Year Student-Faculty Ratio (FYSFR)**

Table No. E1.1: FYSFR details.

| Year | Sanctioned intake of all UG programs (S4) | No. of required faculty (RF4= S4/20) | No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1) | No. of faculty members in Engineering Science Courses (NS2) | Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage= ((NS1*0.8) +(NS2*0.2))/RF |
|---|---|---|---|---|---|
| 2023-24(CAYm2) | 1140 | 57 | 44 | 19 | 68 |
| 2024-25(CAYm1) | 1440 | 72 | 50 | 22 | 62 |
| 2025-26(CAY) | 1530 | 76 | 57 | 21 | 66 |

**E2. Budget Allocation, Utilization, and Public Accounting at Institute Level**

Table No. E2.1: Budget and actual expenditure incurred at Institute level.

| Items | Budgeted in 2025-26 | Actual Expenses in 2025-26 till | Budgeted in 2024-25 | Actual Expenses in 2024-25 till | Budgeted in 2023-24 | Actual Expenses in 2023-24 till | Budgeted in 2022-23 | Actual Expenses in 2022-23 till |
|---|---|---|---|---|---|---|---|---|
| Infrastructure Built-Up | 265000000 | 251988999 | 250000000 | 225294703 | 175000000 | 159757851 | 132000000 | 118157265 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Library | 2250000 | 1799815 | 1780000 | 1269047 | 1661000 | 1292799 | 1470000 | 1373170 |
| Laboratory equipment | 15250000 | 12212372 | 42000000 | 36615624 | 17900000 | 17864447 | 24750000 | 20848397 |
| Teaching and non-teaching staff salary | 210000000 | 205917277 | 172400000 | 163742912 | 122100000 | 119034857 | 107000000 | 98685697 |
| Outreach Programs | 1350000 | 1294219 | 1800000 | 1638025 | 1000000 | 800730 | 3000000 | 2641751 |
| R&D | 16000000 | 14679745 | 12400000 | 11904352 | 10550000 | 9937090 | 5335000 | 4749606 |
| Training, Placement and Industry linkage | 3700000 | 3583438 | 4725000 | 3790981 | 4605000 | 4048026 | 3275000 | 2351019 |
| SDGs | 16000000 | 15810939 | 10070000 | 9919802 | 8185000 | 7964860 | 6210000 | 5835394 |
| Entrepreneurship | 1800000 | 1756270 | 700000 | 597217 | 300000 | 247317 | 150000 | 97363 |
| Others, specify | 180845000 | 164789030 | 157690000 | 149870896 | 145475000 | 125798143 | 102295000 | 96045147 |
| **Total** | **712195000** | **673832104** | **653565000** | **604643559** | **486776000** | **446746120** | **385485000** | **350784809** |

**E3. Budget Allocation, Utilization, and Public Accounting at Program Specific Level**

Table No. E3.1: Budget and actual expenditure incurred at program level.

| **Items** | **Budgeted in 2025-26** | **Actual Expenses in 2025-26 till** | **Budgeted in 2024-25** | **Actual Expenses in 2024-25 till** | **Budgeted in 2023-24** | **Actual Expenses in 2023-24 till** | **Budgeted in 2022-23** | **Actual Expenses in 2022-23 till** |
|---|---|---|---|---|---|---|---|---|
| Laboratory equipment | 2000000 | 1930730 | 250000 | 186183 | 5000000 | 4762061 | 5000000 | 4785446 |
| Software | 200000 | 197868 | 200000 | 185121 | 150000 | 140424 | 150000 | 129468 |
| SDGs | 500000 | 440019 | 250000 | 242874 | 250000 | 177837 | 150000 | 129638 |
| Support for faculty development | 200000 | 189948 | 150000 | 120627 | 150000 | 149576 | 150000 | 136139 |
| R & D | 3000000 | 2928927 | 750000 | 701241 | 4200000 | 4073163 | 2000000 | 1905017 |
| Industrial Training, Industry expert, Internship | 200000 | 199727 | 200000 | 192817 | 150000 | 81649 | 200000 | 152230 |
| Miscellaneous Expenses* | 15515000 | 14726444 | 11530000 | 11291858 | 9620000 | 9409982 | 8420000 | 7876271 |
| **Total** | **21615000** | **20613663** | **13330000** | **12920721** | **19520000** | **18794692** | **16070000** | **15114209** |