



Electronics & Communication Engineering (ECE) Department
SRM University AP

ECE Engineering is a combination of



Radar Technology



VLSI



Satellite Communication



AI/ML



Underwater Communication



Space Communication



Autonomous Vehicle



5G Communication



Internet of Things



Signal Processing



Medical Image Processing



Robotics

SECTOR HIGHLIGHTS

The Indian electronics industry:

- The **2nd** largest smartphone manufacturer in the world

- estimated to reach **USD 400 Bn** by 2025

The production of LCD-LED TVs has gone up from 8.7 Mn units in 2014-15 to 30 Mn in 2017-18. Production of Mobile Phones has increased from **60 Mn units** in 2014-15 to **225 Mn units** in 2017-18

Fastest growing smartphone market in the Asia Pacific

100% FDI allowed through automatic route

GROWTH DRIVERS

01 Government Policies:

The Government has recognised ESEI as one of the core sectors for investment promotion and has undertaken initiatives to create a strong and robust electronics ecosystem

02 Rising Middle Class Population:

By 2030, 25% of the global middle class is projected to be Indian, creating strong demand for electronics

03 Improving Infrastructure:

One of the key drivers of economic growth is the government's investment boost to the infrastructure sector (Government provision of USD 62 Bn in FY 2018 budget compared to USD 61 Bn in 2017)

Mobile phones and Consumer Electronics are the **2 largest** segments that have powered domestic manufacturing

268 manufacturing units have come up since 2014

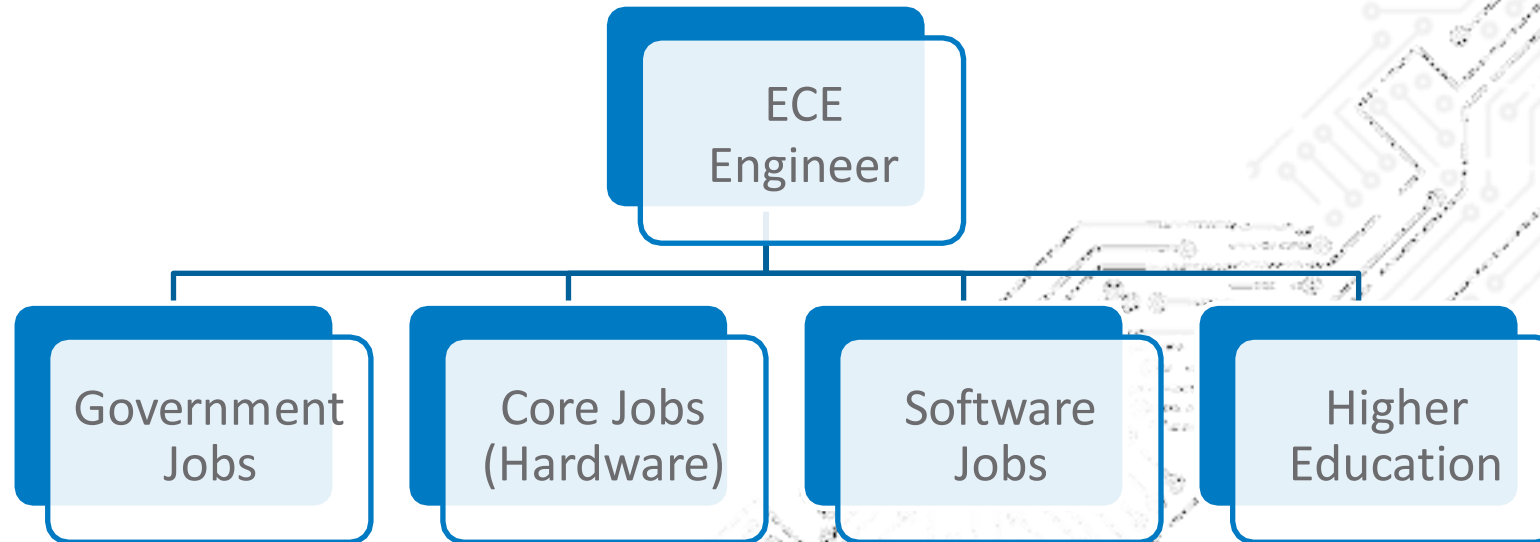
The consumer electronics and appliances industry in India is expected to become the **5th largest** in the world by **2025**



Benefits of B.Tech in ECE

- A degree which is a combination of hardware and software.
- Secured job Environment.
- Flexibility in higher education and decide on jobs in government and private organizations.
- Professional Growth.
- High package core company jobs.
- Adaptability to other branches (ex: CSE, Electrical, Mechanical).
- High Package Central Govt. Jobs (ONGC, NTPC, ECIL, AAI, IES)

Career Options for ECE Engineers





Government Jobs

Central Government Jobs

1. **ISRO** - VLSI, IT (Networking) and Radar
2. **DRDO** - Embedded Systems, VLSI and Automation
3. **BARC**- Nanotechnology
4. **NIELIT** - Information Security, VLSI and Auditing
5. **BIS** - Auditing
6. **Prasar Bharati** - Telecom
7. **Engineering Service** - Managerial
8. **DGQA** - Auditing
9. **CEERI, Pilani** - VLSI and Microwave
10. **SAMEER**- VLSI and Microwave
11. **RAW, Cabinet Secretariat** - Cryptography
12. **NAL, CSIO (CSIR Labs)** - Research

Central PSUs (Semi-government)

1. **BEL** - VLSI and Embedded systems
2. **HAL** - Embedded Systems
3. **ECIL** - PCB design
4. **AAI** - RADAR and Antennas
5. **BSNL , MTNL**- IT networking and security, Telecom
6. **Powergrid, Railtel**- IT networking and security
7. **NTPC** - Managerial
8. **BPCL, IOCL, ONGC, IOCL, HPCL, GAIL** - Managerial
9. **BHEL**- Embedded systems and IT
10. **BDL**- Embedded Systems, VLSI and Automation
11. **SAIL, CIL, NMDC** - Managerial
12. **NPCIL** - Managerial



Government Service Jobs

Railway Jobs

1. Indian Railway Service of Signal Engineers
2. Indian Railway Stores Service (Telecommunication/ Electronics Engineering Posts)
3. Section engineer
4. Junior Engineer

Exams: IES/ESE/RRB

Defence Forces

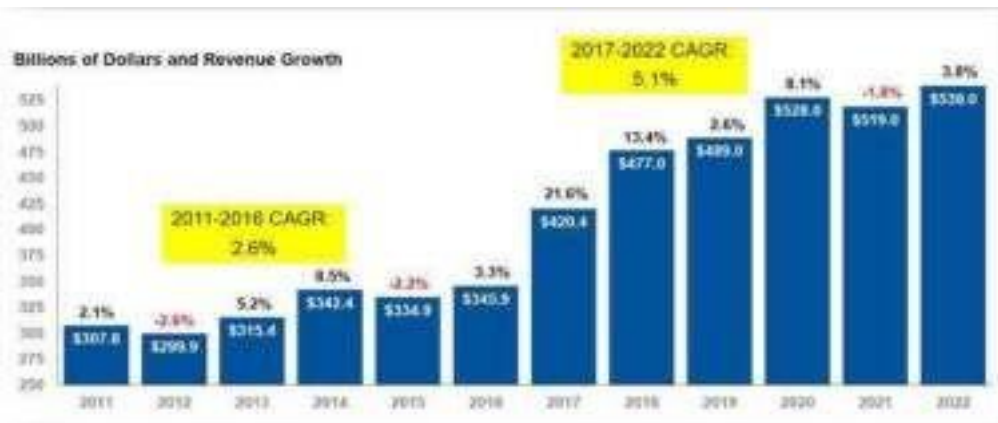
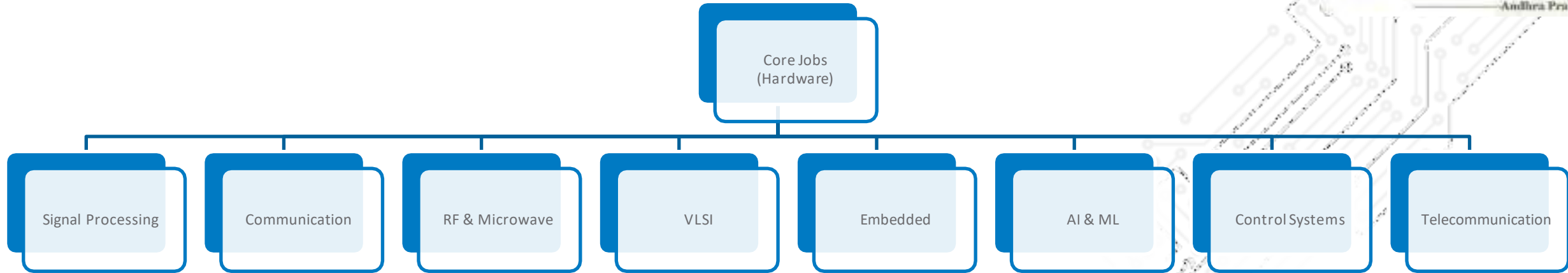
1. Indian Naval Armament Service (Electronics Engineering Posts)
2. Assistant Executive Engineer Group 'A' (Electronics & Telecommunication Engineering Posts) in the Corps of E.M.E., Ministry of Defence.
3. Assistant Naval Stores Officer Grade-I (Electronics & Telecom Engineering Posts) in Indian Navy.
4. AFCAT (Air Force Common Admission Test)
5. Asst. Commandant in Indian army
6. TGC (Engineers) in Indian army
7. UES (University Entry Scheme): Final and Pre Final Year

Students can apply
UES (University Entry Scheme): which is used to join in any defense academy. This exam is conducted by UPSC.

9. NDA (National Defence Academy) conducted by UPSC to join in defense service.

10. DRDO scientist jobs which will mainly work on defense area, you can choose path in this area also.

Core Jobs (Hardware) for ECE Engineers

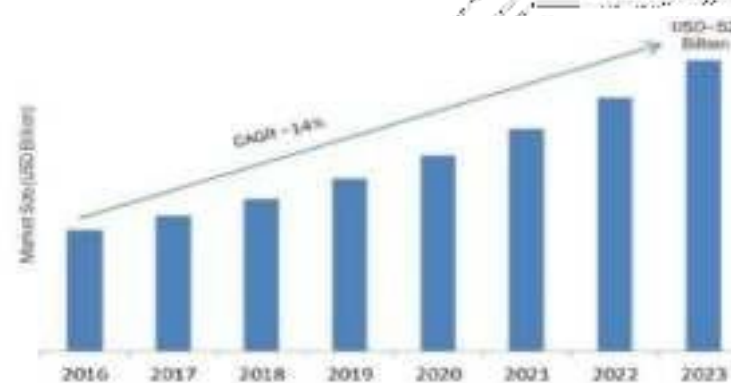


VLSI In India

<https://www.eetindia.co.in>

About 150 VLSI Companies + Many more Service Companies

Link: <http://basicvlsi.blogspot.com/p/vlsi-companies.html>

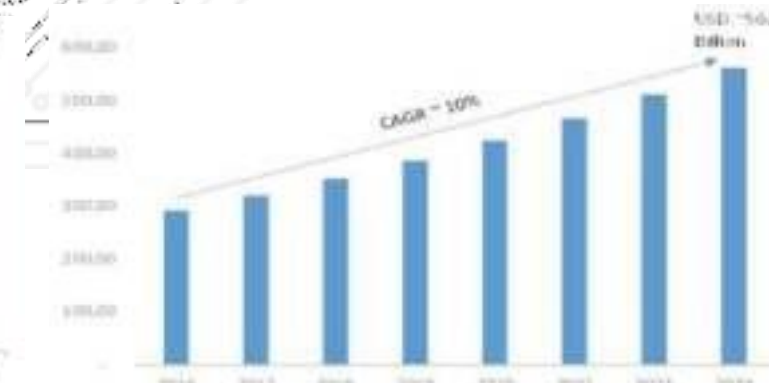


Embedded In India

<https://menafn.com/>

About 50 Embedded Companies + Many more Service Companies

Link: <https://www.fundoodata.com/companies-in/list-of-it-embedded-eda-vlsi-companies-in-india-i126>



Telecommunication In India

<https://menafn.com/>

List of Telecom Companies in India

Link: <https://www.fundoodata.com/companies-in/list-of-telecommunication-mobile-companies-in-india-i28>

Growth in Job Market for ECE Engineers (2023-2024)

SIX SUB SECTORS



Employment growth in the six segments of Electronics industry



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Software Jobs for ECE Engineers

Product Based IT Companies

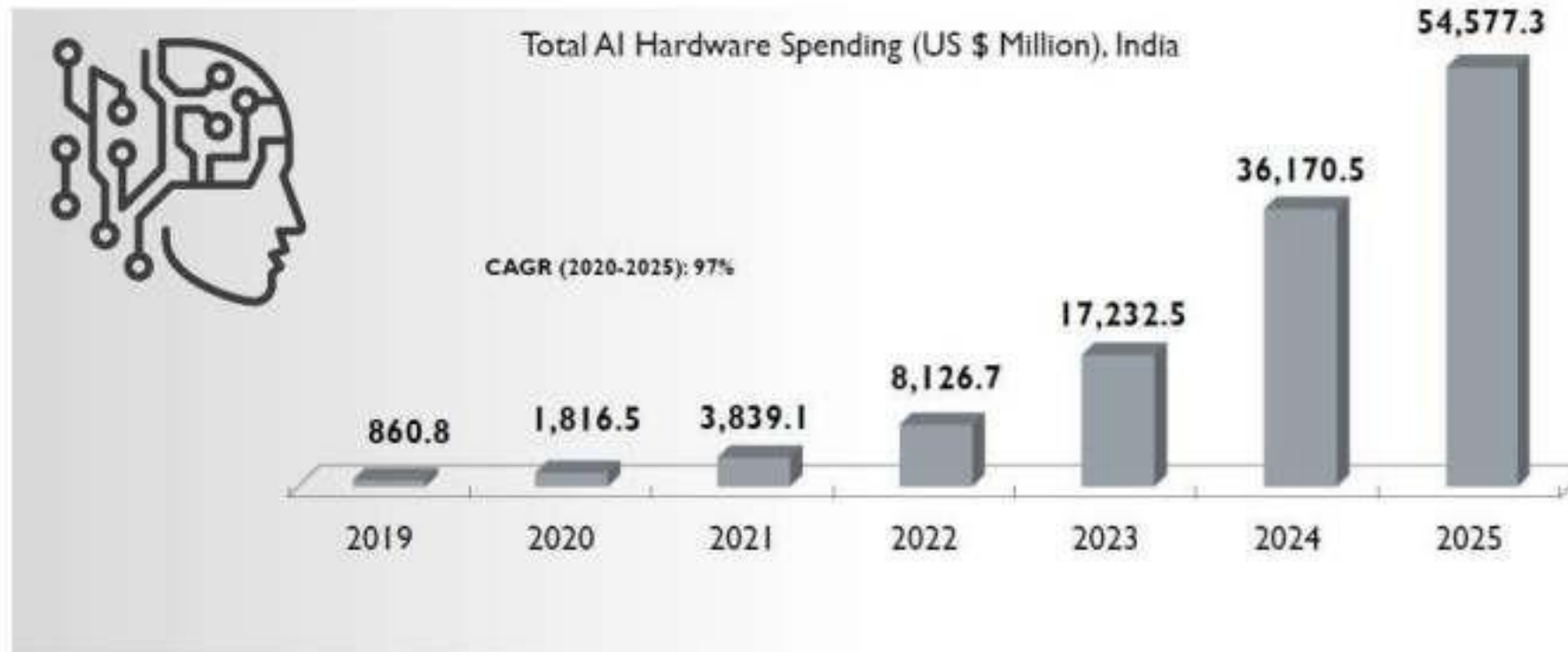
1. Microsoft
2. Google
3. IBM
4. Amazon
5. EMC
6. BMC
7. Paypal
8. Oracle
9. VMWare
10. Redhat
11. Drupal
12. Allscripts
13. Amdocs
14. Symantec
15. Adobe

Service Based IT Companies

1. TCS
2. CTS
3. Infosys
4. Wipro
5. HCL Technologies
6. Tech Mahindra
7. Oracle Financial Services
8. L&T Infotech
9. Mphasis
10. Mindtree

Growth in Job Market for ECE Engineers – AI Hardware (2023-2025)

TOTAL SPENDING ON AI HARDWARE TO DOUBLE EVERY YEAR IN INDIA

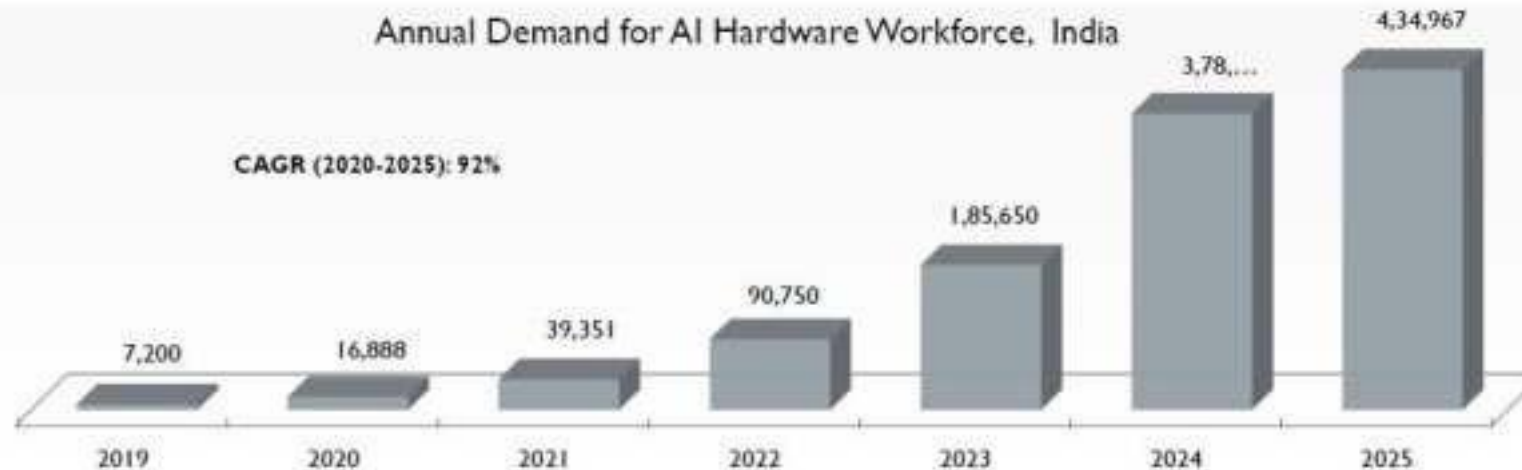


Growth in Job Market for ECE Engineers – AI Hardware (2023-2025)

MOBILITY & AGRI/FOODTECH TO DRIVE DEMAND FOR AI HARDWARE PROFESSIONALS



Annual Demand for AI Hardware Workforce, India



Note: Assumption - average per annum spend on 1 AI resource = INR 8 L = US\$10,750 for 2019 progressively increasing to US\$12,000 per annum for 2025

- Research indicates that the overall count of AI professionals in India was estimated at 72,000. Our research shows that hardware professionals would account for 10-12% of this workforce currently.
- The annual demand for AI hardware professionals is expected to grow at a CAGR of 92% over the next five years driven by the increasing use cases for AI that shall influence increased adoption across key sectors. While mobility is expected to account for 32% of this demand by 2025, followed by agriculture and healthcare at 23% and 22% respectively.



Higher Education

Opportunities

M.Tech: This course is of 2 years duration and requires a knowledge of graduate courses. There are various M.Tech programs offered in different specialization in electronics in IITs, IISCs, NITs and top deemed universities. Admission to such programs is offered on the basis of **GATE** (Graduate Aptitude Test in Engineering) as well as a self-written test conducted by some universities/Institutes. Some of the major specializations in electronics which are trending in the market are M.Tech. in Automotive Electronics, Communication Engineering, Nanotechnology, Sensor System Technology, Network & Internet Engineering, VLSI Design, Microelectronics and Embedded Systems, AI & ML, Signal Processing.

MBA: If a candidate wants to excel his career in Marketing and Sales companies, He can opt for MBA which is a 2- year duration course. For pursuing MBA, the candidate has to qualify **CAT, SNAP, GMAT, NMAT, XAT** sort of exams to join renowned institutes like IIM and some top private universities. After pursuing MBA, Handsome and high paid jobs are provided.

PhD: There are some institutes which offer integrated (M.Tech & PhD) and direct PhD programs. A candidate who is looking for the field of research can opt this program. The same research area of M.Tech. could be forwarded to PhD Candidates who pursue this course are offered grade pay of Associate professor/Scientist Engineering.

M.S.: Students can pursue higher education through abroad can opt for this program. One has to appear for **Graduate Record Examinations (GRE)** and or **Test of English as a Foreign Language (TOEFL)** or **International English Language Testing System (IELTS)** for doing M.S in foreign countries.

M.S. (Research): This course is offered by some IITs in India based on your GATE course. Can be opted by students interested in Research.

Benefits of B.Tech in ECE @ SRM University AP

Faculty

- All Faculty with Ph.D's from Premier Institutes in India & Abroad
- Rich Research and Industrial Experience
- Research Projects in collaboration with industry
- Publication in High Impact Journals such as IEEE, Elsevier, Springer

Industry Read Labs

- Electronics Lab
- Communication Systems Lab
- Microprocessor /Microcontroller Interface lab
- Microwave Lab
- DSP & VLSI Lab

Two Crore Research Funding

- Next Generation Battery Systems
- Deconvolution and Denoising of reflection Sismic Data
- UWB and smart antennas for different radio systems
- Artificial Intelligence Enabled Early Detection Of Cervical Cancer In Tertiary Care Settings And Extended Community
- Studies on the Prognostic Value of Alterations in Thyroid Hormones with Management of Acute Coronary Syndrome (ACS) at Tertiary Healthcare Centres,

Board of Advisors

- Faculty from Premier Research institutes such as IIT's and NITs
- Members from industries such as GE, Intel, ISRO
- Directors of Various IIT's are part of Research Advisory Board.

Benefits of B.Tech in ECE @ SRM University AP

Student Abroad Program (SAP)

- As part of Student Abroad Program students spend a semester of their education abroad.
- Students have studied in University of California Berkeley, University of Wisconsin, Madison as part of Study Abroad Program.
- Department has a twinning program with Illinois Institute of Technology (IIT) Chicago where the student spends two years at SRM University AP and two years at IIT Chicago and will be awarded an Undergraduate degree from IIT Chicago.

Student Research Internship

- As part of student Research Internship students get an opportunity to work with Professors from Reputed Institutes. This experience will help students when they are applying for higher education.
- Currently students are pursuing Student Research Internship with faculty from NTU Singapore, Georgia Tech University, USA, University of California Davis, USA.

Student Industrial Internship

- As part of Student Industrial Internship students get an opportunity to work with MNC's and various Government organizations.
- As part of Student Internship program students have pursued internship in various organizations such as BSNL, ECIL, Flextronics, Coca Cola, Innogeecks, GKN Drive Line, Robic Rufarm, BHEL, Satish Dhawan Space Centre, Vizag Steel Plant, Eeftronics, ONGC etc.

Centre for Academic Assistance

- This is a unique initiative of the department to assist students in academics and help students to become academically strong.
- Advice and Assist students with higher education

Faculty Members in ECE



S No	Name	Designation	Ph.D
1	Prof Siva sankar Yellampalli	Professor	Louisiana State University
2	Prof. Jiji CV	Professor	IIT Bombay
3	Dr Ramesh Vaddi ((HOD)	Associate Professor	IIT Roorkee
4	Dr. Ramakrishnan Mahajan	Associate Professor	Anna University
5	Dr. K.A Sunitha	Associate Professor	SRM IST
6	Dr. Sreenivasulu Tupakula	Assistant Professor	IISc Bangalore
7	Dr Pradyut Kumar Sanki	Assistant Professor	IIT Kharagpur
8	Dr. V. Udaya Sankar	Assistant Professor	IISc Bangalore
9	Dr. V Sateeshkrishna Dhuli	Assistant Professor	IIT Kanpur
10	Dr. E Karthikeyan	Assistant Professor	IIT Delhi
11	Dr. Anuj Deshpande	Assistant Professor	IIT Kharagpur
12	Dr. Sunil Chinnadurai	Assistant Professor	Chonbuk National University
13	Dr. Anirban Ghosh	Assistant Professor	North Dakota State University
14	Dr. Divya Chaturvedi	Assistant Professor	NIT Tiruchirappalli
15	Dr Sibendu Samanta	Assistant Professor	IIT Kharagpur
16	Dr. Goutam Rana	Assistant Professor	IIT Bombay
17	Dr Sudhakar Tummala	Assistant Professor	University of Copenhagen
18	Dr. Satisk K. Tiwari	Assistant Professor	IIT Indore
19	Dr. Swagata Samanta	Assistant Professor	IIT Kharagpur
20	Dr. Monoj K Singha	Assistant Professor	IISC Bangalore
21	Dr. Arjit Dutta	Assistant Professor	NIT Agartala
22	Dr Syed Tajammul Ahmad	Assistant Professor	IIT Kanpur

ECE NON-TEACHING STAFF

S.No	Employee ID	Status Active /In Active	Division Management/ Academic/Non-Academic	Name	Designation	Department
1	20177	Active	Non-Academic	Mr. Kurapati Suresh Babu	Lab Assistant	ECE
2	21127	Active	Non-Academic	Ms. Sarekukka Supriya	Lab Assistant	ECE
3	21128	Active	Non-Academic	Mr. Chowdari Ravi Kumar	Lab Assistant	ECE
4	21130	Active	Non-Academic	Mr. Chittipotula Brahmaiah	Lab Assistant	ECE
5	22010	Active	Non-Academic	Ms. Kolusu Srilakshmi	Lab Assistant	ECE
6	22159	Active	Non-Academic	Mr. VenuGopal Reddy	Executive	ECE
7	22186	Active	Non-Academic	Ms. Vanama Yamini	Lab Assistant	ECE
8	22187	Active	Non-Academic	R. Ratna Prabha	Lab Assistant	ECE
9	22189	Active	Non-Academic	Mr. Shaik Ibrahim	Lab Assistant	ECE
10	22208	Active	Non-Academic	Ms. Moka. Kiranmai	Lab Assisatnt	ECE

Departmental Leadership

Individual tasks/Coordination	Faculty member
Head of the Department	Dr. Ramesh Vaddi
M.Tech IoT Course and Admissions Coordinator	Dr. Rama Krishnan
M.Tech VLSI Course and Admissions Coordinator	Dr. Durga Prakash
Faculty Lab Incharge of Electronics Lab X-201	Dr. Monoj
Faculty Lab Incharge of Communication Systems Lab X-202	Dr. Satish Tiwari
Faculty Lab Incharge of Digital Systems Lab X-204	Dr.Kartikeyan
Faculty Lab Incharge of VLSI Lab X-205	Dr. Ramesh
Faculty Lab Incharge of RF and Microwave Lab X-207	Dr. Goutam Rana
Faculty Lab Incharge of IoT Lab X-208	Dr. Rama Krishnan
Faculty Lab Incharge of Embedded Systems Lab	Dr. Rama Krishnan
Faculty Lab Incharge of Smart Computer Vision, AI Hardware Lab	Prof Jiji
Faculty Lab Incharge of Advanced Communications Lab	Dr. Sunil Chinnadurai
ECE UROP Coordinator	Dr. Sudhakar T
ECE Capstone project Coordinator	Dr. Goutam Rana
Department Library Books Coordinator	Dr. Pradyut
Faculty Advisor and Mentor for 2020 batch	Dr. Sunitha
Faculty Advisor and Mentor for 2021 batch	Dr. Sujith K
Faculty Advisor and Mentor for 2022 batch	Dr. Sreenivas T
Department Website Coordinator	Dr. Divya Chaturvedi



Labs in ECE Department



Students Placed in Companies

Avalara Awign B Health



balco

BLP

BlackRock

BLUEBINARIES

BOMBARDIER

BYJU'S

CACTUS



WE FUEL AMAZING

Capgemini

CAPITAL FIRST

CavinKare
Making Lives Happier

CEAT

Cerner

CGI

CHALK STREET

Chargebee

Chola
Enter a better life

CISCO

clear tax

Climber.com

CNSI

CodeNation

CODINGMART



Cogitate

Cognizant

Students Placed in Companies





Scholarships

- CBSE Students with above 95 % PCM (Physics+ Chemistry+ Math's) average will be given 75 % Tuition waiver.
- CBSE Students with 90- 95 % PCM (Physics+ Chemistry+ Math's) average will be given 50% Tuition waiver.
- All State Toppers (excluding CBSE) will be given 50 % Tuition Waiver
- All students (All Boards) with 90% (Physics+ Chemistry+ Math's) and above will be given 50% Tuition Waiver

For Admission Related Questions Please Contact

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Electronics and Communication Engineering
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Dr. Durga Prakash M
Admission Coordinator
Electronics and Communication Engineering
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email - durgaprakash.m@srmap.edu.in



THANK YOU

Website: <https://srmap.edu.in/seas/electronics-and-communication-engineering/>

Dr. Ramesh Vaddi
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