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DEPARTMENT ASSOCIATION OF

ELECTRONICS AND COMMUNICATION ENGINEERING

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YELECTRAZE 9.0 VERSION 2.0

2021-22

SPECTRUM MAGAZINE





DR MAHALINGAM COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

NPTC-MCET Campus, Udumalai Road Pollachi-642003 Ph no 4259-236030/40/50; Fax-04259-236070

VISION OF THE INSTITUTE

We develop a globally competitive workforce and entrepreneurs.

MISSION OF THE INSTITUTE

Dr. Mahalingam College of Engineering and Technology, Pollachi endeavours to impart high quality, competency based technical education in Engineering and Technology to the younger generation with the required skills and abilities to face the challenging needs of the industry around the globe. This institution is also striving hard to attain a unique status in the international level by means of infrastructure, state-of-the art computer facilities and techniques.

VISION OF THE DEPARTMENT

To strive for excellence in Electronics and Communication Engineering education, research and technological services imparting quality training to students, to make them competent and motivated Engineers.

MISSION OF THE DEPARTMENT

Department is committed to

- ✓ Impart high quality technical education in Electronics and Communication Engineering through effective teaching-learning process and updated curriculum.
- ✓ Equip the students with professionalism and technical expertise to provide appropriate solutions to societal and industrial needs.
- Provide stimulating environment for continuously updated facilities to pursue research through creative thinking and team work.

Programme Educational Objectives (PEOs)

The graduates will:

- **PEO1.** Actively apply knowledge and technical skills in engineering practices towards the progress of the organization in competitive and dynamic environment.
- **PEO2.** Own their professional and personal development by continuous learning and apply the learning at work to create new knowledge.
- **PEO3.** Conduct themselves in a responsible, professional and ethical manner supporting sustainable economic development which enhances the quality of life.

Programme Outcomes (POs)

Graduate of Electronics and Communication Engineering Programme will be able to:

- **PO 1. Engineering Knowledge:** Apply the knowledge of Mathematics, Science and engineering to solve problems in the field of Electronics& Communication engineering.
- PO 2.Problem Analysis: Identify, formulate/model, analyse and solve complex problems in the field of Electronics & Communication Engineering.
- **PO 3. Design and Development:** Design an electronic system/component, or process to meet specific purpose with due consideration for economic, environmental, social, political, ethical, health and safety issues.
- PO 4. Conduct Investigations: Design and conduct experiment, analyze and interpret data to provide valid conclusions in the field of Electronics and Communication Engineering.
- PO 5. Modern Tool Usage: Apply appropriate techniques and modern software tools for design and analysis of Electronic systems with specified constraints.
- PO 6. Engineer and Society: Apply contextual knowledge to provide engineering solutions with societal, professional and environmental responsibilities.
- PO 7.Environment and Sustainability: Provide sustainable solutions with societal, environmental contexts for problems related to Electronics and Communication Engineering.

- PO 8. Ethics: Comply with code of conduct and professonal ethics in engineering practices.
- PO 9. Individual and Team work: Perform effectively as a member/leader in multidisciplinary teams.
- PO 10. Communication: Communicate effectively to engineering community and society with proper aids and documents
- PO 11. Project Management & Finance: Demonstrate knowledge and understanding of the engineering and management principles to manage projects in multi-disciplinary environment.
- PO 12. Lifelong Learning: Recognize the need for, and have the ability to engage in independent and lifelong learning.

Programme Specific Outcomes (PSOs)

- **PSOI. Technology Deployment:** Apply technologies of electronics, embedded systems, signal processing, communication and networking in the field of industrial automative, consumer, medical and defense electronics industries.
- PS02. IC Design: Apply the design flow of Very Large Scale Integrated circuits to design and test Integrated Circuits in Semiconductor industries.

PHOTO SESSION

Just as the remarkable begining of this year's travel in spectrum members were photographed together with our HOD and Association coordinators.







ALUMNI TALK AND FIRST YEAR INTERACTION.

Date –January 6,2022

Venue - Electrical Seminar Hall

The Event of the day begun with the prayer song at 10:45 am, sung by spectrum members of Third year. It was an interactive session with around 120 members from Ist year ECE students and 10 members from 3rd year (excluding spectrum members). The welcome address was delivered by S.krisha, Magazine editor of spectrum.

Our Alumi was Mr.M.K.Sethupathy Senior software Engineer at Robert Bosch ,Coimbatore,our HOD Dr.R.Sudhakar sir and shafeek sir joined the diaz and president Mohammed Nazeem.

HOD sir gave his talk for students. Alumni Introduction was given by Sandhiya , Secretary .

Our alumni Mr.Sethupathy (2011-2015) shared his Experiences of Workspace. Overview about various domain and streams which students can choose were explained by guest. Strategies to focus and placement preparation were provided.

He gave his idea on how to make use of the current websites and time very effectively. He also made a presentation on basic requirements need to be done as a engineer and for placements. He also shared his personal Work experience as a Beginner also as an Team Lead and as a PG student.

Question Session

We had question session where students asked their perception on placements and workspace.

He also shared his linked in profile and resumae which was very useful as a reference.

Fun events

Fun events were conducted on technical basics to provide basic knowledge and to get interaction with seniors. And to develop interest and involvement in such basic activities. Basic electronics, Connections, voice personalities, puzzles were all conducted where First year enjoyed the event.

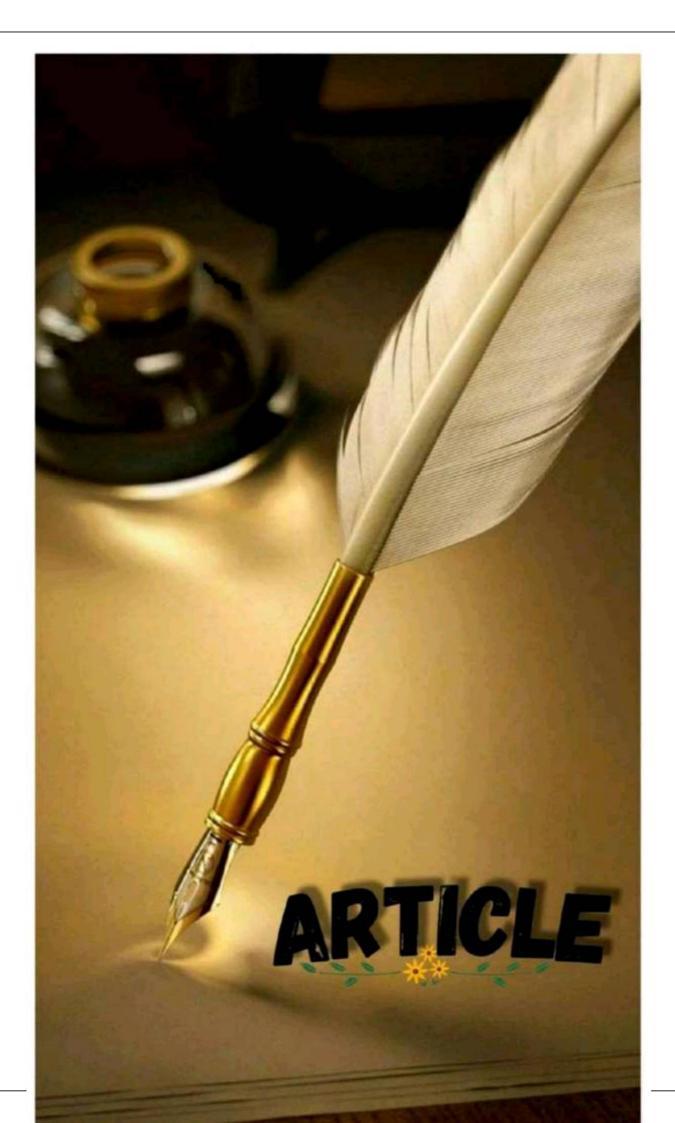
Vote of thanks was by Amsupriya, Treasurer .

Pictures of the event









பிரிவு

கரை அருகே குளிர் காற்றில் வீழ்ந்துவிடும் என தெரிந்தும் மன(ல்)வீடுகள் அமைப்போர் மத்தியில் அன்பாய் வந்து அரவணைத்துப் பிரியும் அலைகளின் அருகில் கடற்கரையில் அமர்ந்திருந்தேன்.... வானை வீடாய் கொண்ட உதயத்தின் பிரிவு - நிலவிற்காக.... இரவை இராஜியமாய் கொண்ட நிலவின் பிரிவு -நட்சத்திரத்திற்காக.... புதிதாய் பிறப்பதற்கே பிரிவு என்றாலும் புரியாமல் பிரிந்தவர்மேல் பிரியம் கொண்டு புரியவைக்க எண்ணுகிறது

> - அம்சு பிரியா.பா 19BEC044- ECE-B



Take time

Take time for now.

This is the only moment you are sure of.

Take time for friends.

They will help you through the very worst days.

Take time for family.

You will miss them immeasurably, when they are gone.

Take time for work.

But don't let work, take all of your time.

Take time to laugh.

Laughter rises spirits and lifts the gloom.

Take time for music.

It will feed your soul and bring you joy.

Take time to exercise.

You have one body, you should look after it well.

Take time for you.

For if you keep dividing yourself, what will be left?

Take time to understand.

That we cannot save time.

We can just try to use it wisely.

Take time to live.

Aruna.S 19bec068 2nd year ECE B

IN-EQUALITY

Today many think men and women share equal spaces of respect in the society but the truth is that they DON'T. It is observable that men domination over women is decreasing gradually but not constantly. In some aspects men seem to be stronger where women don't and some cases women are stronger seeming to be stronger than men. Why am I telling all these? It's all about gender and its discrimination over weaker ones. Not all the areas women face gender discrimination. In fact, they are majorly facing it. There are no places women don't face discrimination. They feel it everywhere, in schools, at work places, public places and transports, home etc. You could ponder why is there the discrimination still in us. Many do it purposely and their younger generations follow it blindly. Let's go deeper into this issue.

In my perspective, inequality arises when somebody does that in front of you, we think that to be right and start following it. Firstly, it does come with our parents' guidance. If you think twice to thrice about the previous lines, you may come to understand a bit about the reality. If you're being the elder son or daughter, you might have felt that. All the pressures of the family would have come to you after your parents' inability. If you're an elder daughter most un educated families, try to make her marriage soon. This point is where discrimination arises first, within your own family. Secondly, it is also the time when relations spend time with us. They act different with their kids and us. Many a times they seem to be little richer than us. Having all those costly things which we won't have will make us feel down from them. This feeling down turns into discrimination when you grow up, because you're not being treated equally. Also, it is the prime responsibility of parents who must teach their children about equality in society. Thirdly, a kid feels discriminated in its education based on its physical qualities, mental abilities, caste background, financial background etc. Really, it does happen still in many schools and parts of our country. A capable and talented student is getting rejected or moved backwards based upon the discriminating factors mentioned previously. A student with a larger financial background is able to achieve anything he wants. Being frank, some(actually many) educational institutions support this. All these years of adolescence the student faces many discriminations and subconsciously starts following it. When he/she thinks independently and tries to move away from the discrimination the hierarchical power in the work place pulls them to it. Ok, seems like we have moved towards a different direction from the title of this article. But the truth is, these are the base for gender discrimination which leads to gender inequality. How? Think! All the way we have come through these lines, it would have told us about discrimination felt by a person at different stages of life. In those same stages, wherever there is dominance of gender there comes the inequality. Mainly women face the dominance of men in all stages of life which in real turns into gender inequality. Indeed, that's the reality. If you think men don't face gender inequality, that's where you are wrong. Actually, men too face gender inequality, when a women try to be a feminist without understanding its true meaning. Organization for women doesn't work when men are being harassed by women in public thinking of being a feminist. Men too make huge mistakes. The reality is when a woman is being gender-discriminated the support she gets is very

larger than that of man for his happenings. Nobody in this world is a good one to be that perfect. Mistakes are all the people who follow it and make others do it. Many women feel difficult of facing inequality, have you ever thought the life of a gender whom we haven't still spoken about. The Transgender. If you feel inequal then think about the life of a transman or a transwoman. Till today we treat them very bad, that they have chosen their own lifestyle in public places. We wouldn't have seen a transchild being grown up like a normal child like you and me! If that happens it would be abnormal. How many of us would have felt bad for the way we treat them? The root cause for this problem also, are the discriminations faced in each stage of life.

What shall we do now? To overcome all those discriminations, inequality, overdominance etc. The first quality we need is the understanding ability. Only when we understand the problem, we can find a solution to it. Without understanding it, we would be the reason for the problem to grow. Many supports had arisen for the hijab issue, but nobody thought what and who's the main reason behind it. Here too girls were treated unequal based on religion. Seeing this without any understanding, another group started wearing saffron scarfs on their neck to support their religion. If they had understood the problem properly, they would have solved the issue in days! But the familiar fact is that they didn't try to control instead grew it in different ways they could. The second quality we need is acceptance. Be it a girl child born, treat her the way you do for your son. If your child is different from others, accept that. Whatever be situation, acceptance is the prime key to overcome the inequality. If you accept a friend from different caste/religion, your friendship does live long even after your death. Say the friendship of Dr A.P.J. Abdul Kalam and Ramanadha Shastry! Thus, understand and accept the gender and their difficulties only then the rate of reduction of inequality gets down rapidly. Its all lies in our way of thinking. Think positive and start accepting the disability, so that we shall live in-equality rather following inequality.

> ADITYA SAGAR P 3RD YEAR ECE A 19BEC043

When nothing is going your way

Compare the fern with the bamboo. The fern ,you plant the seed, and its grown up in a few weeks. The fern is out there. And the bamboo, you plant the seed, you keep on watering it, watering it, watering it. For first year you see nothing on the surface has come out. The second year again nothing has come out. The third year again nothing. Five years in succession nothing comes, and then all of a sudden, the bamboo starts shooting out. And within six months, it has shot a hundred feet.

What was it doing for those five years? You'd say it was doing nothing. It was deepening its roots because for it to rise a hundred feet, it needs such solid roots. If the roots are not strong, it's going to fall over, Like the sequoia groves.

Those sequoias are a huge trees, and if by chance the sequoia seed has fallen in a place that is not strong enough, after 200 years the tree falls over. The roots cannot sustain. The bamboo needs such strong roots. It's going to shoot a hundred feet up.

Those five years it is strengthening its roots.

Similarly, god wants us to reach that perfection. It will take time. And in this time there will be mistakes. There will be errors, there will be times when we fall. Never get discouraged. See all these as opportunities to learn, and to progress. The world may say you are a failure, but god will never say it. So many things in this world were rejected as failures, and later on they become great successes.

We have all heard of Walt Disney. He was such a failure that he was working on some cartoons for some church, and the only place he had to stay was a rat infested place. That is where he got the idea of the rat cartoon. So there is no such thing as a failure. It's a constant learning process.

Aruna.S 19bec068 2nd year ECE B

Finding Selflove

The concept of finding self love and inner peace in stressful life can be very challenging. People are still in a wrong belief that self love equals selfishness .It's okay to be selfish if it means rediscovering yourself and happiness with atmost power .The wrong perspective of selfishness among the minds of people ended up in denying the fact that everything in the world starts with one's own self and everyone around you and not just you are benefitted when we love yourself. They forget to analyse that selflessness is a prized virtue in many circles, many believe self love is egostic. They have a different perspective view on selflove and forget to analyze that caring for others is important, but it shouldn't come at the expense of our well-being.

Critizing yourself for the flaws and your weakness reduces your self esteem. This might be challenging to a person to feel confident during their weak moments of criticism. This can even end up in depression, stress and ignorance in minds of people with low esteem. But people with healthy self love will handle criticism without taking it personally with knowledge that your worth isn't dependent on opinion of others. When we start loving ourself, we don't feel seprated or ignored from people, places or things. We feel closer to everything when we have the notion to follow our true joy with openness and courage.

The power of self love doesn't happen in overnight. The way of acknowledging yourself that you aren't perfect, but still worth of acceptance and support. This acceptance and sense of care and love towards yourself brings out higher satisfication of life by analyzing your flaws and ready to adapt the changes required according to the present circumstances. Self love makes us realize that our dreams and self wellbeing deserves priority but not selfish. Living a life in a way that fulfills cannot be accounted as selfishness.

The feel of self love ends with loving the version of yourself more and more everyday. Finding self love in yourself deserve to be the best version of yourself and thus you realize your worth. Instead of becoming what people want you to be... Choose to be you....

Akhila Krishnan K 20BEC007 2nd year ECE -A

Artificial Intelligence

Artificial intelligence (AI) is intelligence demonstrated by machines, as opposed to natural intelligence displayed by animals including humans. Leading AI textbooks define the field as the study of "intelligent agents": any system that perceives its environment and takes actions that maximize its chance of achieving its goals.

Main Goal:

The general problem of simulating (or creating) intelligence has been broken down into sub-problems. These consist of particular traits or capabilities that researchers expect an intelligent system to display. The traits described below have received the most attention.

Reasoning, problem solving

Early researchers developed algorithms that imitated step-by-step reasoning that humans use when they solve puzzles or make logical deductions. By the late 1980s and 1990s, AI research had developed methods for dealing with uncertain or incomplete information, employing concepts from probability and economics.

Many of these algorithms proved to be insufficient for solving large reasoning problems because they experienced a "combinatorial explosion": they became exponentially slower as the problems grew larger .Even humans rarely use the step-by-step deduction that early AI research could model. They solve most of their problems using fast, intuitive judgments.

Applications:

AI Application in E-Commerce

Personalized Shopping

Artificial Intelligence technology is used to create recommendation engines through which you can engage better with your customers. These recommendations are made in accordance with their browsing history, preference, and interests. It helps in improving your relationship with your customers and their loyalty towards your brand.

AI-powered Assistants

Virtual shopping assistants and chat bots help improve the user experience while shopping online. Natural Language Processing is used to make the conversation sound as human and personal as possible. Moreover, these assistants can have real-time engagement with your customers. Did you know that on amazon.com, soon, customer service could be handled by chat bots.

Fraud Prevention

Credit card frauds and fake reviews are two of the most significant issues that E-Commerce companies deal with. By considering the usage patterns, AI can help reduce the possibility of credit card frauds taking place. Many customers prefer to buy a product or service based on customer reviews. AI can help identify and handle fake reviews.

AI Applications in Gaming

Another sector where Artificial Intelligence applications have found prominence is the gaming sector. AI can be used to create smart, human-like NPCs to interact with the players.

It can also be used to predict human behavior using which game design and testing can be improved. The Alien Isolation games released in 2014 uses AI to stalk the player throughout the game. The game uses two Artificial Intelligence systems – 'Director AI' that frequently knows your location and the 'Alien AI,' driven by sensors and behaviors that continuously hunt the player.

AI Applications in Automobiles

Artificial Intelligence is used to build self-driving vehicles. AI can be used along with the vehicle's camera, radar, cloud services, GPS, and control signals to operate the vehicle. AI can improve the in-vehicle experience and provide additional systems like emergency braking, blind-spot monitoring, and driver-assist steering.

Conclusion

Artificial Intelligence is revolutionizing the industries with its applications and helping solve complex problems. Do you agree with our list of Artificial Intelligence Applications? Think we missed anything important? Or do you have any questions for us? Feel free to share them with us in the comments section of this article. We'd be thrilled to hear from you!

Also, if you are looking to advance your career in this exciting field, check out our Post Graduate Program in AI and Machine Learning. Offered in partnership with Purdue University and in collaboration with IBM, this comprehensive online boot camp provides students with all the knowledge, tools, and techniques they need to boost their career.

Hemaritha V 20BEC029 2nd year ECE-A

Water Conservation

Introduction

We know how water, an essential resource on which the entire human race depends on is becoming scarce. There are lakhs of people in India who are already facing the brunt of irregular water supply or are living without clean drinking water. As a result, citizens are getting affected by waterborne diseases. Even though we have been taught about water conservation since the early years of our lives, yet the contribution from everyone is not as significant as it should be.

Problems Around 71% of the earth's surface is covered by water out of which, 97% is the saline water of oceans and seas which is unfit for drinking. The remaining 3% of drinkable water comes from streams, ponds, lakes, and rivers. Rapid urbanization, irregular monsoons, expeditious use of groundwater, and unchecked sewage has further pushed the country into a dire strait and has made it quite hard to quench the thirst of the population. Today is the situation where the world is headed towards a water crisis and the day is not far enough for another country or a major city to become the next Cape Town.

Solutions and conclusion

As a citizen, it's our fundamental responsibility to supplement the efforts of the governments and organization with our actions. Using limited amount of water while washing clothes and utensils, brushing teeth, and bathing and farming is the first step in this. Schools and offices should start planting as many trees as possible; NGOs must come up with plausible solutions and spread awareness amongst masses about the importance and the techniques to conserve water. To every problem, there is a solution and here, it is "we". In order to bring out the change, our actions need to be changed.

Femina M 20BEC017 2nd year ECE

PHOTOGRAPHY

Taking an image, freezing a moment, reveals how rich reality truly is



K. NANDHINI ECE- II year





THIYAGU MANI.R



R. G. MAUNITHAA





NIKILESH ECE-A Ilyear



M.J.HIRUTHIKA









M.PRANAV PRASAD

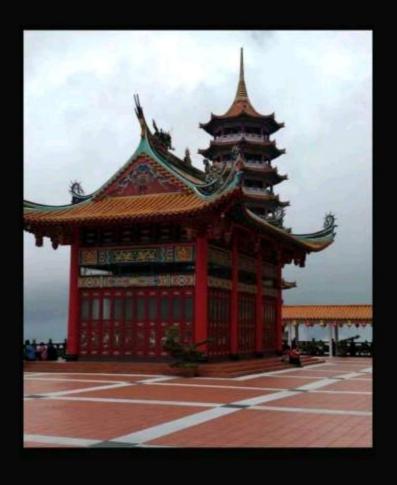






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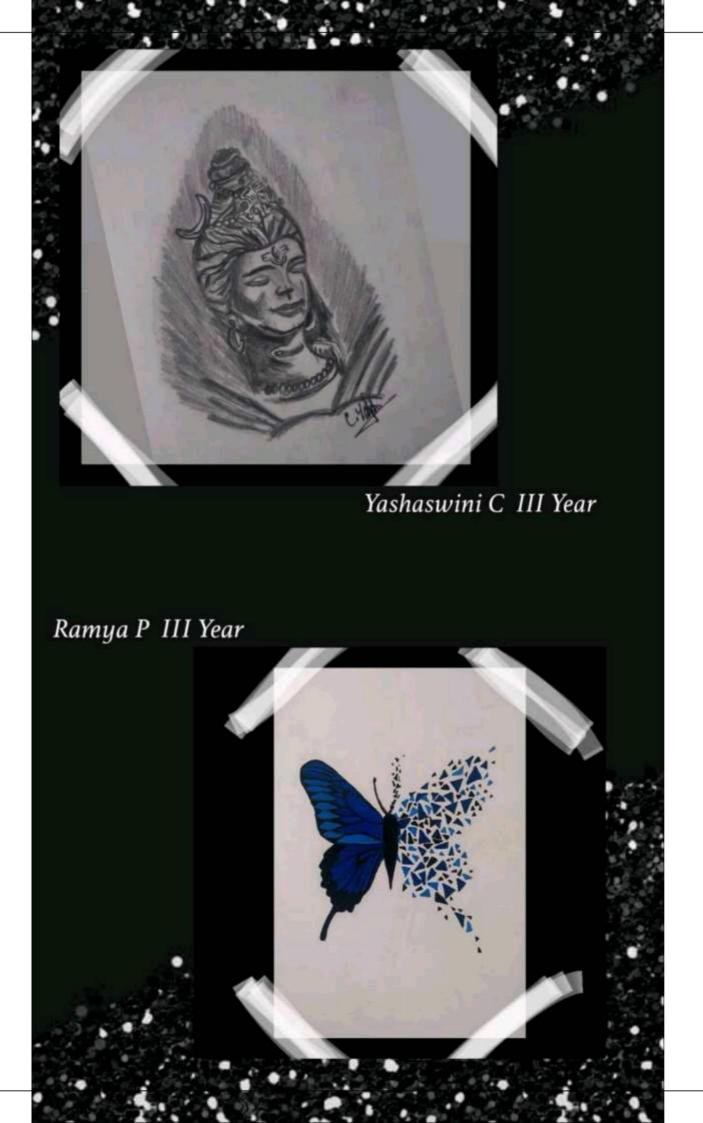


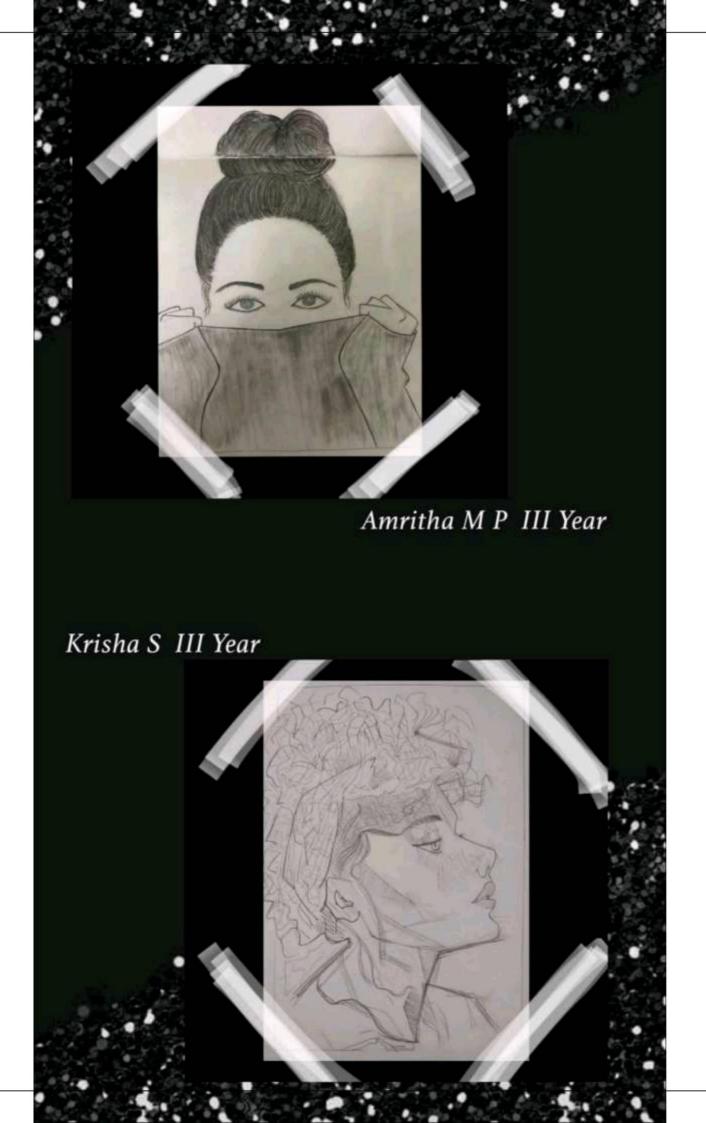


ARTISTRY

HEART OF PERFECT DESIRE





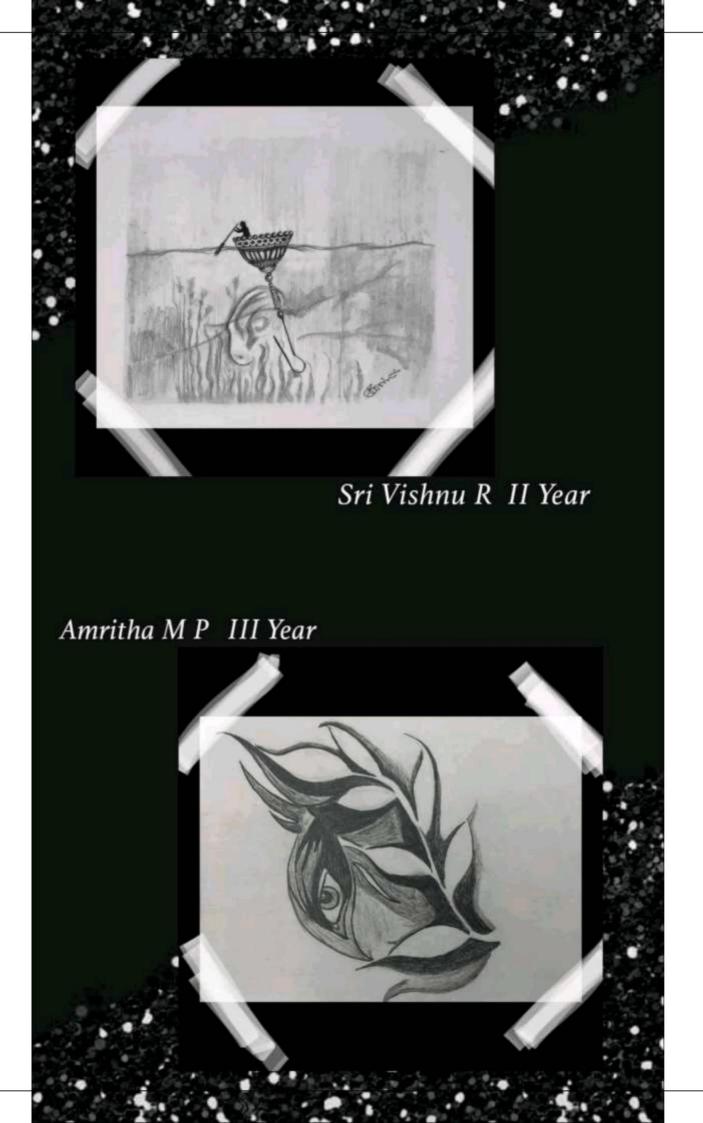


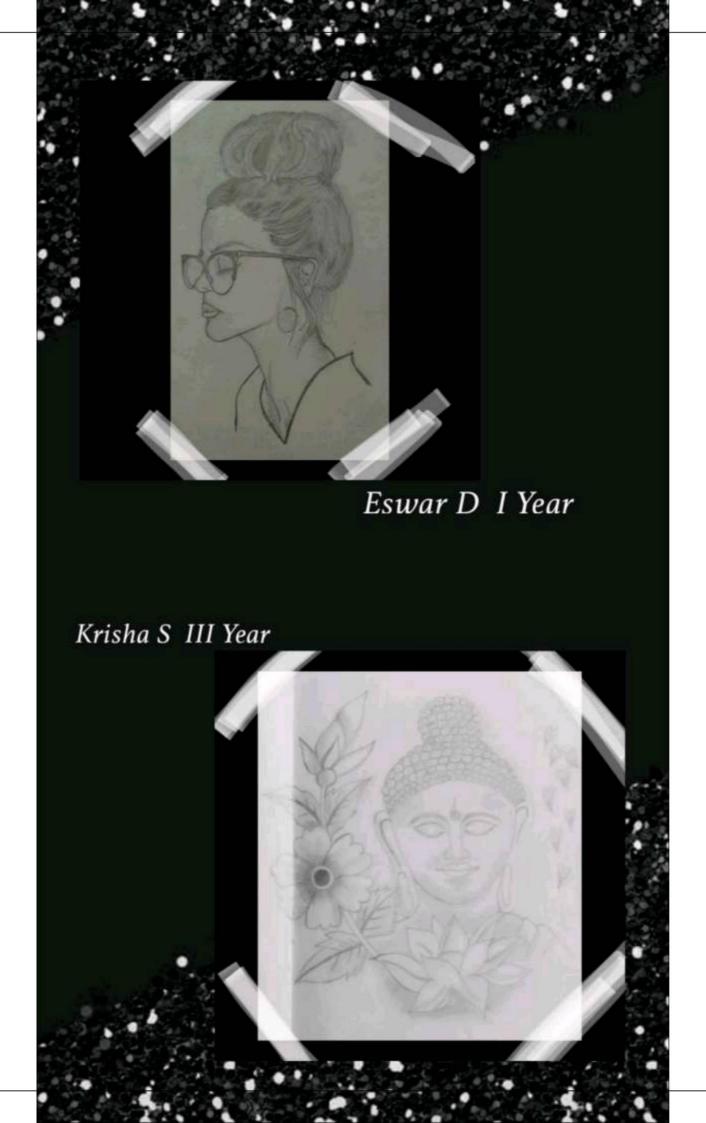


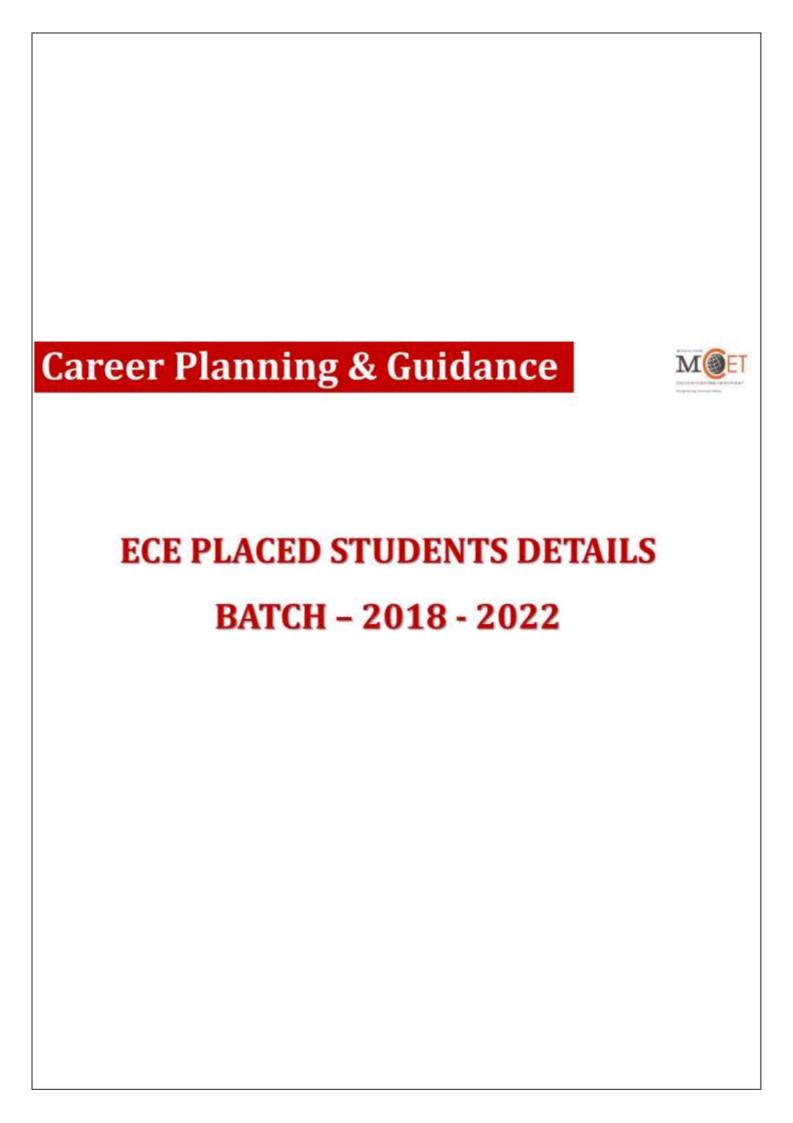
Sri Vishnu R II Year

Poojaa T G I Year









ECE PLACEMENT CONSOLIDATED LIST MOET

Company Name	No of students Placed	CTC (LPA)
Capgemini	1	7.5
KAAR Technologies	1	6.5
Zoho	1	5.6
Lucas TVS	1	4.36
VVDN	34	4
CTS GENC	27	4
TCS Ninja	7	4
Mphasis	7	4
Tessolve	6	4
Accenture	5	4
Capgemini	5	4
Full creative	3	4
One Bill	1	4
Infosys	1	3.6
GainInsight	2	3.5
Wipro	5	3.5
NTT data	3	3.5

Total Students Placed: 82 Total Offers: 110

CAPEGMINI Placed student





NIVITAA R 18BEC030

KAAR Placed student





YOGESHWARI P 18BEC042

ZOHO Placed student





JASHWINRAJ A 18BEC022

LUCAS TVS Placed student





SHALIN SANDAR G 19BEC314

VVDN Placed students





SILVAS MELSHIA L K 18BEC002



SUBHASHINI S 18BEC005



PRATHIUSHA K 18BEC009



SRIDHARAN L 18BEC010



SUBAPIRATHA R K 18BEC011



DEVI PRIYAA M R 18BEC016



HAMIRDHAVALLE D V 18BEC019



RUBAN ROZARIO I 18BEC024



SANGAVI M 18BEC025



ALLAN PRADEEP R 18BEC031



KEERTHANA S 18BEC037



YOGESHWARI P 18BEC042



SARAVANAKUMAR A 18BEC044



HARISH KUMAR T 18BEC048



SHREERANJANI G 18BEC051



BOOPATHI RAJA P 18BEC052



ARAVIND B 18BEC054



RANJITH S 18BEC055



VIMAL RAJ R 18BEC061



KAAMIL HASAN KHAN A 18BEC066



VIGNESH S 18BEC078



NIVEDHA S P 18BEC085



MANOJ K 18BEC089



GANGATHARAN R 18BEC092



ARUN
PANDEESWARAN RV
18BEC095



SRIRAJAN S 18BEC096



AADITHYA D 18BEC101



TRISSAAN A S 18BEC104



RANJITH M 19BEC302



HARI HARAN D 19BEC321



SNEHAA S 18BEC028



KEERTHANA LAKSHMI A 19BEC312



PREETHI V 19BEC311



DINESHWARAN B 18BEC047

CTS Placed students





ARUN PRASSATH A S 18BEC063



JASPER T 18BEC036



YOGESHWARI P 18BEC042



PRATHIUSHA K 18BEC009



ABINAYA SOUNDHARYA I 18BEC041



SARANYA M 18BEC062



SANGEERTHANA V 18BEC050



SIVANESAN S 18BEC015



ANISHA S 18BEC029



SUJITHA T 18BEC017



JANANI A 18BEC033



SATHEESH KUMAR N 18BEC079



HARI PRASATH K 18BEC091



NIVETHA M 18BEC102



NITHISHKUMAR S P 18BEC021



JOTHIKA S 18BEC035



ABARNA A 18BEC043



PRADEEPKUMAR R 18BEC045



SABAREESH R 18BEC086



KAVYA S 18BEC088



BHOOMIKA G M 19BEC310



VIKASHINI S 18BEC071



SRINATH S 18BEC012



SOWMIYA S 18BEC073



RATHEESH V 18BEC026



SOWTHIKNIKASH K M 18BEC099



RUPASREE K 18BEC032

TCS Placed students





ABIRAMI P 18BEC001



MOHAMMED JAVITH A 18BEC068



RAMYA D 19BEC319



SARANYA M 18BEC062



NIVETHA M 18BEC102



PALANIAPPAN A L 18BEC007



AKIL G 19BEC305

MPHASIS Placed students





GIRIVAISHNAV N 18BEC018



SNEHAA S 18BEC028



JASPER T 18BEC036



ARUN PRASSATH A S 18BEC063



KARTHICK NARAYANAN S 18BEC075



PREM KR 18BEC093



BHOOMIKA G M 19BEC310

Tessolve Placed students





ABIRAMI P 18BEC001



MANJUBALA M 18BEC056



VARUNA B 18BEC060



SRIMATHY R 18BEC082



AKIL G 19BEC305



VINITH RAHUL M 19BEC323

Accenture Placed students





18BEC009



PRATHIUSHA K ABINAYA SOUNDHARYA I 18BEC041



PRADHEENA G 18BEC058



MYTHILY R 18BEC103



SANGEERTHANA V 18BEC050

CAPEGMINI Placed student





PRATHIUSHA K 18BEC009



SIVANESAN S 18BEC015



GIRIVAISHNAV N 18BEC018



NITHIYASREE S 18BEC040



PRADHEENA G 18BEC058

Full Creative Placed students





JASHWINRAJ A 18BEC022



YOGESHWARI P 18BEC042



NAGAYASASHWINI N 18BEC094

ONEBILL Placed student





MADHUMATHI A 18BEC020

INFOSYS Placed student





GANGATHARAN R 18BEC092

GainInsights Placed students





SANGEERTHANA V 18BEC050



ANISHA S 18BEC029

WIPRO Placed students





TRISSAAN A S 18BEC104



MOHAMMED JAVITH A 18BEC068



SABAREESH R 18BEC086



RATHEESH V 18BEC026



SUJITHA T 18BEC017

NTT DATA Placed students





MOHAMMED NAZEEM I 18BEC067



MADHAN KUMAR S 18BEC064



VIGNESHWARAN M 18BEC039



M ET

DEPARTMENT ASSOCIATION OF

ELECTRONICS AND
COMMUNICATION ENGINEERING

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YELECTRAZE 9.0 VERSION 2.0

2021-22

SPECTRUM MAGAZINE

