CHAITANYA BHARATI INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Stake holder involvement in Curriculum Development

AY 2020-21

Suggestions Received From Stake Holders

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DEPARTMENT OF ECE
Chaitanya Bharathi Institute of Technolog
Hyderabad-500 075

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Stake holder involvement in Curriculum Development

AY 2020-21

Suggestions Received From Stake Holders

1) Industry

S.no	Name of the Industry expert	Company & Designation	Mobile No Mail ID	Suggestions & opinion	
1	Sitaram R N V	24x7 (Ex Senior Manager) HP, Bangalore	9845719381 sitaram.rnv@gmail.com	In 7th semester you could introduce "Computer Vision", the syllabus could be: 1) Descriptors/Features for image recognition like SIFT, SURF, (2 weeks) 2) Multiple view geometry and homography, etc., matrices etc (4 weeks) 3) Image registration and RANSAC (1 or 2 weeks) 4) Image classification using CNNs (one week) 5) Image retrieval using visual words and/or deep learning approaches (one lecture) 6) Object detection using DNNs (one or two lectures). If you have faculty you could have a chapter on some augmented reality fundamentals or computer graphics, or some CSA faculty can teach this chapter if it is possible.	
2	A.Srilakshmi	DRDO Scientist -E	9440846029 akellasrilu@gmail.com	1	Computer architecture and microprocessor lab is missing. The students may be taught how to setup ethernet, create routing tables, establish wifi communication, implement bluetooth and zigbee protocols to communicate with analog and digital sensors. Establish TCP-IP or UDP protocols.

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				2	Emphasis to be given more on assignments, lab work and mini projects. It is the strategy followed by many IITs. The assignments should cover entire course content, which enable the students to orient their thinking towards application of concept and problem solving. 5 questions per assignment may be given on weekly or bi-weekly basis. Mini projects may be defined for few courses like antenna theory/ microwave theory/embedded systems/IoT etc. However the projects to be done on single person basis to strengthen each student. The list of projects to be defined by the college based on college undertaken projects. This helps in bridging the gap between college and industry. (This is based on the observation that many students face difficulty in taking up short tasks or even write short pieces of code after joining industry.)
3	B.L.Penchala Rao	General manger, Air port authority of India.	9491211180 blprao@aai.aero	1	Surveillance: a) RADAR (Primary and Secondary) b) ADS-B c) MLAT (Multilateration) ~~d)~~ ASMGCS (Advanced surface movement guidance and control system)

1) Industry(Proof)

C.B.I.T
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Dr. P.Narahari Sastry Professor (CAS) <naraharisastry_ece@cbit.ac.in>

Invovement in our Curriculum Development

Sitaram R N V <sitaram.rnv@gmail.com> Fri, Jan 28, 2022 at 9:09 PM
To: "Dr. P.Narahari Sastry Professor (CAS)" <naraharisastry_ece@cbit.ac.in>

Dear Dr. Narahari Sastry,

I went through the curriculum.:

1) General comments: Reduce the course load in 2nd year, students are not learning subjects thoroughly as too many subjects per semester is difficult for the average student. Especially see if you can push one subject from 3rd semester to next semester or next year (it is heavy). Can you totally drop Chemistry so that you can free that slot and adjust some general subject into first year?

2) DSP could be advanced to 5th semester as elective, because image processing and video processing are offered in 5th sem, they may need DSP as prerequisite. Or move Image processing and video processing to the next semester after offering DSP in the current slot.

3) What is the syllabus of Principles of applications of AI? - this could be dropped and DSP could be kept in its place. Anyway you are offering PR and ML, which is good enough.

4) What is the syllabus for Data Analytics for Signal Processing? topics in it may have been already covered in some other subjects before.

5) In 7th semester you could introduce "Computer Vision", the syllabus could be: 1) Descriptors/Features for image recognition like SIFT, SURF, (2 weeks) 2) Multiple view geometry and homography, etc., matrices etc (4 weeks) 3) Image registration and RANSAC (1 or 2 weeks) 4) Image classification using CNNs (one week) 5) Image retrieval using visual words and/or deep learning approaches (one lecture) 6) Object detection using DNNs (one or two lectures). If you have faculty you could have a chapter on some augmented reality fundamentals or computer graphics, or some CSA faculty can teach this chapter if it is possible.

6) Machine learning using Python is taught too late, people teach now a days in 3 or 4th semester.

7) In the Speech processing I hope you are covering speech recognition using HMMs, RNNs, you can ask students to use Kaldi or HTK and build speech recognizers for Telugu, Hindi etc..

Let me know if you want to discuss.

C.B.I.T
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Dr. P.Narahari Sastry Professor (CAS) <naraharisastry_ece@cbit.ac.in>

involvement in our curriculum development.

A Srilakshmi <srilakshmi.a@rcilab.in> Mon, Feb 7, 2022 at 12:19 PM
To: "naraharisastry_ece@cbit.ac.in" <naraharisastry_ece@cbit.ac.in>
Cc: "akellasrilu@gmail.com" <akellasrilu@gmail.com>

Dear Sir,
I have gone through all the details furnished by you.
I would like to suggest the following changes :

1. Personality development may be included to empower students who are stepping out of campus to stand with confidence and face the taste of real life. (As I have observed, many engineering students are having very weak mentality that they cannot bear slight refusal or stress.).
There are many incidents, even in IITs, where students commit suicide being unable to handle few handful tasks. Rather they should have self confidence built up that they can do something even in adverse conditions.
If we observe the way children are grown till engineering, they only know how to prepare for exam rather than attempting to solve a problem. This is a very big gap between college and industry.

2. Basics of Biology - Does it mean/include Biological instrumentation? Biometric and biological instrumentation is

3. Gender sensitization (Sem -VII) - I think it may not be required for engineering students. The students are already grown up by now and have got good clarity of the topic.

4. History of science and technology in Sem -VIII may please be looked into. Please check if it can be replaced with any other.

5. Computer architecture and microprocessor lab is missing. The students may be taught how to setup ethernet, create routing tables, establish wifi communication, implement bluetooth and zigbee protocols to communicate with analog and digital sensors. Establish TCP-IP or UDP protocols.

5. Software engineering concepts should be introduced.

6. Projects on Multi core programming of FPGA, radar signal processing, working with Microwave circuits like circulator, direction coupler, antenna design, etc to be encouraged (areas required for industry)

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Dr. P.Narahari Sastry Professor (CAS) <naraharisastry_ece@cbit.ac.in>

Involvement in our curriculum development.

B.L.Penchala Rao <blprao@aai.aero> Mon, Feb 7, 2022 at 11:05 AM
To: "Dr. P.Narahari Sastry Professor (CAS)" <naraharisastry_ece@cbit.ac.in>

Dear sastry,

I would like to suggest the following topics that may be considered for inclusion in your syllabi which pertains to the use of electronics and communication in aviation industry.

The following components i.e Communication Navigation and Surveillance are vital in providing Air traffic services to aircraft.

Communication:

1. VHF Communication
2. HF Communication
3. Data Communication (CPDLC-Controller Pilot Data link Communication)

Navigation:

1. VOR (VHF Omni Range)
2. NDB
3. ILS (Instrument Landing system – (Localizer+Glide Path)
4. GNSS

Surveillance:

1. RADAR (Primary and Secondary)
2. ADS-B
3. MLAT (Multilateration)
4. ASMGCS (Advanced surface movement guidance and control system)

Apart from this emerging trends in aviation also may be added

Hope these inputs may be of some help to you

2). Alumni

S.No	Name of the Alumni	E mail Id & Ph#	Batch	Present occupation	Suggestions	
~~1~~	Deepak Raya	deepakvr@iisc.ac.in, 9177382659	2014-2018	PhD Scholar, IISC Bangalore	1	Probability & statistics and Linear algebra are very important for any field during and after bachelors, I hope it is covered in applied mathematics. If not it's better to add those courses (topics) in the syllabus (course).
2	DLN Raju	rajudln4@gmail.com 8978219990	1997-2001	SW Engineering Manager ZF TCI	1	Reduce courses and increase practical's, projects, self-learning, internships
					2	Employability Skills – instead also develop entrepreneurship.

2). Alumni (Proof)

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Dr.K.Suman Assistant Professor <ksuman_ece@cbit.ac.in>

Re: Alumni Involvement in Curriculum development

Deepak Velgapuni Raya <deepakvr@iisc.ac.in> Mon, Feb 7, 2022 at 1:08 PM
To: "Dr.K.Suman Assistant Professor" <ksuman_ece@cbit.ac.in>

Dear Ma'am,
Thank you for considering my feedback, here are the suggestions that would be helpful to students&faculty in my opinion

- two non-credit courses in the fourth semester is not a good idea, the students have more important and costly subjects it is better to shift the constitution and traditional knowledge courses to the first and second semesters. (and there is no point in learning traditional knowledge and values after completing half of the bachelors, they should learn them early)

- MOOCs/internships in the 3rd semester should be done in the summer after the second semester, during the semester students might get deviated from learning the foundations effectively which might cause problems in upcoming semesters.

- In the 7th semester, I think two labs are more than enough since the students have other things such as gate preparation/ GRE+TOEFL preparation etc, which will burden them and reduce the efficiency. (IoT and simulation lab can be canceled or shifted to appropriate semester)

- I don't think we need to have so many electives, especially the electives such as Arduino programming, CAD for VLSI, Data analytics for Signal processing, Drones and Applications, signal detection techniques.
  - Arduino programming + sensors and actuators can be learned via MOOCs (at their own pace and interest)
  - CAD, Data analytics for signal processing will be provided by industries while training the students on tools after placements.
  - Signal detection techniques basics are covered in communication systems and Radar systems, and I think that should be sufficient during bachelors.

- Probability & statistics and Linear algebra are very important for any field during and after bachelors, I hope it is covered in applied mathematics. If not it's better to add those courses (topics) in the syllabus (course).

Thank you.

From: Dr.K.Suman Assistant Professor <ksuman_ece@cbit.ac.in>
Sent: 08 February 2022 00:57
To: Deepak Velgapuni Raya <deepakvr@iisc.ac.in>
Subject: Re: Alumni Involvement in Curriculum development

External Email

Thank you for your response.

On Sun, Feb 6, 2022 at 9:02 PM Deepak Velgapuni Raya <deepakvr@iisc.ac.in> wrote:

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Dr.K.Suman Assistant Professor <ksuman_ece@cbit.ac.in>

Re: Alumni involvement in Curriculum development

dln raju <rajudln4@gmail.com> Sun, Feb 6, 2022 at 9:47 PM
To: "Dr.K.Suman Assistant Professor" <ksuman_ece@cbit.ac.in>
Cc: chandrakiran.kasula@gmail.com

Hello Suman,

Please find few comments with respect to the courses and also some instructions for the same:

- Instead of English – make it to develop – Communication skills (more practical's)
- Employability Skills – instead also develop entrepreneurship.
- Chemistry – not at all required for a graduate on ECE
- A separate course may not be required for "Engineering Economics and Accountancy ", you can combine with all such courses.
- Why 3 semesters have Maths (Calculus, Vector Calculus and Differential Equations, Applied Mathematics) ", you can combine with all such courses.
- Workshop/Manufacturing Practice, Computer Aided Design & Drafting, Engineering Mechanics-I – not at all required for a graduate on ECE – or combine all such into ONE.
- Basics of Data Structures – not basics, more expertise is required.
- Reduce courses and increase practical's, projects, self-learning, internships
- Behavioral courses which helps in training or developing ethics, self-learning, increases responsibilities, pro-activeness

Best Regards,

DLN Raju

On Tue, Jan 25, 2022, 11:16 Dr.K.Suman Assistant Professor <ksuman_ece@cbit.ac.in> wrote:

> Dear Kiran,
> The department of ECE is going to conduct a BoS meeting for V-VIII semesters of R-20 curriculum. For this, we require your valuable suggestions on the course structure of these semesters. Could you please suggest changes in the course structure or perhaps include any new course in the curriculum.
> I have attached the course structure with credits for R 20 syllabus from I-IV semesters and also syllabus of V-VIII semesters for your reference.
> Thank you
> Regards
> –
>
> *Dr.K.Suman*
> Assistant Professor
> Dept. of ECE
> Chaitanya Bharathi Institute of Technology
> Gandipet, Hyderabad-500075
> 9190023341, ksuman_ece@cbit.ac.in

3). Parent

S.no	Name Of the Parent	Name of the student	Batch	Mobile No Mail ID	Present parent occupation	Suggestions &opinion	
1.	Sri R.V. Hara Prasad	R.Krishna Sathivik	AY 2020-21 Passed out	9490749571 hararv@gmail.com	Outstanding Scientist DLRL, DRDO, Hyderabad.	1	Introduction to Electronic Warfare
						2	Introduction to Signal intelligence systems
2	Name : M V P Rajasekhar	M.V.P Bharadwaj VI sem E3 Student	AY 2019-20 Admitted	9849599321 rajasekharmvp@gmail.com	Manager new initiatives, Linkwell Telesystems pvt. Limited	1	Not only for the upcoming batches, even for the current batch I would suggest an increase in the industry interactions and provide more opportunities in the field of ECE for both placements, internships and guided projects

3). Parent (Proof)

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Dr.A.Vani Associate Professor (Adhoc) <avani_ece@cbit.ac.in>

Parent feedback to frame the Syllabus from V to VIII Semester(UG)

3 messages

Dr.A.Vani Associate Professor (Adhoc) <avani_ece@cbit.ac.in> Mon, Jan 24, 2022 at 1:31 PM
To: hararv@gmail.com

Good Afternoon sir
Sir, we are (BoS) framing the syllabus for V-VIII semester(UG).In this regard, we are involving stakeholders(Parents) to give suggestions and comments or any feedback ..Your suggestions and comments will be analyzed with BoS and concerned Course expert Group and will be included in the syllabus. For this, We have attached Course Structure and distribution of Credits and V to VIII semesters Structure. And also I to IV semesters Course structure attached for reference.
Sir, Please suggest any new topics(content) that are to be included in each course.
Sir please do the needful on before 29-01-2022
Thank you very much.

3 attachments

- Course Structure and distribution of Credits for BE(ECE).docx 34K
- R 20 BE (ECE) I to IV Semesters.docx 228K
- R 20 BE (ECE) V to VIII Semesters.docx 240K

RV HARA PRABAD <hararv@gmail.com> Wed, Feb 2, 2022 at 1:45 PM
To: "Dr.A.Vani Associate Professor (Adhoc)" <avani_ece@cbit.ac.in>

Good morning ma'am
I have gone through the course content and is fine. In higher semesters for elective courses you may consider the following:
1. Introduction to Electronic Warfare
2. Introduction to Signal Intelligence systems
3. Multi spectral surveillance sensors
Being specialised topics only the introductory portion may be included in the electives and subsequently a regular course can be considered at PG level.
Regards
Hara prasad
[Quoted text hidden]

Dr.A.Vani Associate Professor (Adhoc) <avani_ece@cbit.ac.in> Wed, Feb 2, 2022 at 1:58 PM
To: RV HARA PRABAD <hararv@gmail.com>

Thank you very much sir
[Quoted text hidden]

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Dr.A.Vani Associate Professor (Adhoc) <avani_ece@cbit.ac.in>

Parent feedback to frame the Syllabus from V to VIII Semester(UG)

4 messages

Dr.A.Vani Associate Professor (Adhoc) <avani_ece@cbit.ac.in> Mon, Jan 24, 2022 at 1:35 PM
To: rajsekharmvp@gmail.com

Good Afternoon sir
Sir, we are (BoS) framing the syllabus for V-VIII semester(UG).In this regard, we are involving stakeholders(Parents) to give suggestions and comments or any feedback ..Your suggestions and comments will be analyzed with BoS and concerned Course expert Group and will be included in the syllabus. For this, We have attached Course Structure and distribution of Credits and V to VIII semesters Structure. And also I to IV semesters Course structure attached for reference.
Sir, Please suggest any new topics(content) that are to be included in each course.
Sir please do the needful on before 29-01-2022
Thank you very much.

3 attachments

- Course Structure and distribution of Credits for BE(ECE).docx 34K
- R 20 BE (ECE) I to IV Semesters.docx 228K
- R 20 BE (ECE) V to VIII Semesters.docx 240K

Rajasekhar M V P <rajasekharmvp@gmail.com> Thu, Feb 3, 2022 at 8:40 PM
To: "Dr.A.Vani Associate Professor (Adhoc)" <avani_ece@cbit.ac.in>

Respected madam,
Apologies for the late response.
Here are my suggestions :
1.) In 6th semester ,I observed that Cryptography and Block chain technology was part of professional elective which contained other core subjects.So I would suggest to shift that cryptography to open elective so that student can opt for this technology and can learn a core subject like FPGA ,etc.
2.)Inclusion of topics like basics of biometric authentication and facial recognition in line with UIDAI and banking services
3.)Increase industry interactions with core companies like micron,Qualcomm .It came to my notice that Micron technologies does not have CBIT in its list for offering Internships.
4.)Not only for the upcoming batches, even for the current batch I would suggest an increase in the industry interactions and provide more opportunities in the field of ECE for both placements, Internships and guided projects .
Regards,
Rajasekhar
[Quoted text hidden]

Dr.A.Vani Associate Professor (Adhoc) <avani_ece@cbit.ac.in> Thu, Feb 3, 2022 at 8:58 PM
To: Rajasekhar M V P <rajasekharmvp@gmail.com>

Thank you very much sir for your kind cooperation and valuable suggestions
[Quoted text hidden]

Dr.A.Vani Associate Professor (Adhoc) <avani_ece@cbit.ac.in> Thu, Feb 3, 2022 at 9:01 PM
To: Rajasekhar M V P <rajasekharmvp@gmail.com>

No sir, we have to say apology because we have given short time and we are very much thankful for your response.

4) Professional Societies

S.no	Name of the Professional	Professional Society /Body	Position in Society/Body	Suggestions	
1	Dr.K.Niranjan Reddy	FIETE		1	CORE Professional Elective LDIC---------->Analog IC Design
				2	Microcontroller ---------->Embedded Systems
				3	VLSI Design ----------> VLSI Technology
2	Er. Nuli Namassivaya	FIETE	Honorary Secretary	1	More Industry interaction subjects are required in your curriculum.
				2	Make Software Defined Radio and Machine Learning subjects as core subjects instead of program electives
				3	IoT and its Applications are made as a single credit course and in the same semester create a lab for the course.
				4	Also try to attach a Lab course for all the subjects possible.
3	Dr.D.M.K.Chaitanya	FIETE	Associate Professor, VCE, ECE Department.	1	The vision and mission statements are well defined.
				2	English course can be there in I semester
				3	Electromagnetic Theory and Quantum mechanics are clubbed together, course syllabus may be hectic to learn in II semester
				4	Antennas and Wave Propagation course is not included in the syllabus
				5	Microwave and Radar Engineering course syllabus may only touch the basics. Instead of that course, you may include Radar and Satellite Engineering separately if possible
				6	Internship-I is good as it includes MOOCs, but Internship-II students may go with Theme based projects useful to society.

4	Dr. T.S.N.Murthy	SMIEEE, FIETE	Professor Dept. of ECE, JNTUV		Couse Structure is very nice

4) Professional Societies (Proof)

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Sri T.Sridhar Assistant Professor <tsridhar_ece@cbit.ac.in>

Sub: Requesting opinions from the stakeholders for syllabi of BE V to VIII semester -Reg

Nian Reddy <nianreddy@gmail.com> Fri, Jan 28, 2022 at 3:46 PM
To: T Sridher <tsridhar_ece@cbit.ac.in>

Thank you sir
i have seen your course structure i found some subject which are offered in Electives is is near to the core subjects
ex CORE Professional Elective
LDIC----------->Analog IC Design
Microcontroller ---------->Embedded Systems
VLSI Design ----------> VLSI Technology
Most of the colleges have almost the same syllabus under the above titles and also if you say Microcontroller is basic then in the same semester how can one choose Embedded system in the same semester similarly studying basics of VLSI and again at same time VLSI Tech in Elective (this is my opinion only. even without looking into syllabus we can not judge)
any how thank you for sending
Regards
Dr.K.Niranjan Reddy

[Quoted text hidden]

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Sri T.Sridhar Assistant Professor <tsridhar_ece@cbit.ac.in>

Sub: Requesting opinions from the stakeholders for syllabi of BE V to VIII semester -Reg

Nuli Namassivaya <nnamassivaya@gmail.com> Sat, Jan 29, 2022 at 3:56 PM
To: T Sridher <tsridhar_ece@cbit.ac.in>

Sir,
Thank you for approaching us with suggestions for improving your new R-20 curriculum structure.

These are my suggestions :

1. More Industry interaction subjects are required in your curriculum.
2. Make Software Defined Radio and Machine Learning subjects as core subjects instead of program electives.
3. IoT and its Applications are made as a single credit course and in the same semester create a lab for the course.
4. Also try to attach a Lab course for all the subjects possible.

These are suggestions from my side.

Thank you

Regards,
Er. Nuli Namassivaya
Honorary Secretary
IETE, Hyderabad

Er. Nuli Namassivaya

Connect :

On Fri, Jan 28, 2022 at 2:32 PM T Sridher <tsridhar_ece@cbit.ac.in> wrote:
[Quoted text hidden]

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Sri T.Sridhar Assistant Professor <tsridhar_ece@cbit.ac.in>

Sir, CBIT - Hyderabad - Requesting opinions from the stakeholders for syllabi of BE V to VIII semester -Reg

Chaitanya Dmk <chaitanyadmk@gmail.com> Sat, Jan 29, 2022 at 9:44 PM
To: T Sridher <tsridhar_ece@cbit.ac.in>

Dear Sir,

Seasons Greetings! Thank you very much for your mail.

I have gone through the detailed curriculum sent by you and it is well framed and the courses are nicely structured in the respective semesters. I would like to give my opinions in this regard.
1. The vision and mission statements are well defined.
2. English course can be there in I semester.
3.Electromagnetic Theory and Quantum mechanics are clubbed together, course syllabus may be hectic to learn in II semester.
4.Antennas and Wave Propagation course is not included in the syllabus.
5. Microwave and Radar Engineering course syllabus may only touch the basics. Instead of that course you may include Radar and Satellite Engineering separately if possible.
6.Internship-I is good as it includes MOOCs, but Internship-II students may go with Theme based project useful to the society.

These are some observations from my side and necessary modifications can be done at your end if you feel the feedback is genuine

Thank you very much for giving me this opportunity.

Best Regards
Dr.D.M.K.Chaitanya
Associate Professor,
VCE,ECE Department.
[Quoted text hidden]
--
Best Regards
Dr.D.M.K.CHAITANYA

SURYA NARAYANA MURTHY TUMMALA <tsnmurthyece.jntuk@ieee.org> Tue, Mar 1, 2022 at 5:58 AM
To: "Sri G.Mallikarjuna Rao Assistant Professor" <mallikarjunarao_ece@cbit.ac.in>

Dear Sir

Greetings
I have gone through the curriculum sent by you and it is well outlined and the courses are nicely structured in the respective semesters. The curriculum meets the current industry requirements.
1. The curriculum meets the current industry requirements and fulfills the companies and other takers on employability and professionalism.
2. Plan for the internships to meet the market competency.

Best regards
Sincerely yours
Murthy
[Quoted text hidden]

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Dr. T S N Murthy MIET, SMIEEE
Assistant Professor of ECE, JNTUK Vizianagaram.
Chair, IEEE Comsoc/SPS joint chapter, IEEE Vizag Bay Section.
Branch Counsellor, IEEE Student Branch, JNTUK Vizianagaram
Ph: 7673955559