



A UGC Autonomous Institution



VIGNANA BHARATHI Institute of Technology

(Approved by AICTE, Accredited by NBA & NAAC-A Grade, Affiliated to JNTUH)

(Sponsored by Swamy Vivekananda Educational Trust)

Recognised under 2(f) & 12(B) of UGC Act, 1956

Aushapur (V), Ghatkesar (M), Medchal - 501 301, Telangana, India.

Website : www.vbithyd.ac.in • Ph: 7993453628, 7993453629

Student Hand Book - 2021-2022

NAME :

ROLL NO :

CLASS :

BRANCH :

ACADEMIC REGULATIONS COURSE STRUCTURE & DETAILED SYLLABUS

FOR

B.TECH. FOUR YEAR DEGREE COURSE

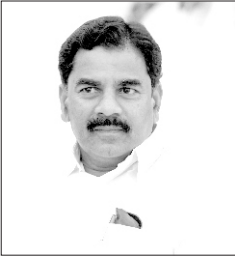
(Applicable for the batches admitted from 2021-2022)





VBIT Vision

To emerge as a premier institution for technical education in the country through academic excellence and to be recognized as a Center for Excellence in Research & Development.



VBIT Mission

To establish a strong institution by consistently maintaining state of the art infrastructure & a cohesive world class team by providing need based technical education.

From the Principal's Desk

My Dear students and their parents,

I take this opportunity to reflect on the eventful journey of VBIT from 2004 till date. VBIT is the place where allround development of every single student is ensured through high quality academics, various value-added programmes in the form of industry certifications, internship opportunities, entrepreneurship opportunities coupled with carefully planned and monitored co-curricular and extra-curricular activities. The entire VBIT family puts in all possible efforts to transform every single individual into an industry-ready and socially responsible professional.

The Institute expects from all its students high standards of discipline, integrity and commitment towards their work. All of us here expect the new students to carry forward the legacy created by their seniors. Besides, the institute earnestly appeals to them not to misuse or abuse technology but to become techno-savvy and make use of their technological expertise to find solutions to everyday problems seen around.

On behalf of the entire VBIT family, I sincerely thank all the students and their parents for reposing their faith in the Institute. We sincerely request all of you to continue your support to realize our collective dream of seeing VBIT as a university in the near future.

I wish to thank you all once again.

Wishing all the students all the very best!



Dr. P.V.S. Srinivas
Principal



COURSES OFFERED

Under Graduate Courses

B.Tech – EAMCET Counselling Code : VBIT

S.NO	NAME OF THE COURSE	LEAD TO	COURSE DURATION	TOTAL INTAKE
1	Computer Science & Engineering	B.Tech CSE	4 Years	240
2	CSE (Artificial Intelligence & Machine Learning)	B.Tech CSE (AI&ML)	4 Years	180
3	CSE (Data Science)	B.Tech CSE (DS)	4 Years	180
4	CSE (Cyber Security)	B.Tech CSE (CS)	4 Years	60
5	Computer Science and Business System	B.Tech CSB	4 Years	60
6	Information Technology	B.Tech IT	4 Years	120
7	Electronics and Communication Engineering	B.Tech ECE	4 Years	180
8	Electrical and Electronics Engineering	B.Tech EEE	4 Years	60
9	Civil Engineering	B.Tech Civil	4 Years	60
10	Mechanical Engineering	B.Tech Mechanical	4 Years	60

Post Graduate Courses

M.Tech

PGECET/GATE Counselling Code : VBIT

S.NO	NAME OF THE COURSE	OFFERED BY	COURSE DURATION	TOTAL INTAKE
1	Communication Systems M.Tech (CS)	ECE	2 Years	30
2	Computer Science & Engineering M.Tech (CSE)	CSE	2 Years	30
3	Electrical Power Systems M.Tech (EPS)	EEE	2 Years	18
4	Power Electronics & Electrical Drives M.Tech (PEED)	EEE	2 Years	30
5	Structural Engineering M.Tech (SE)	CE	2 Years	18

MBA

ICET Counselling Code : VBIT

S.NO	NAME OF THE COURSE	LEAD TO	COURSE DURATION	TOTAL INTAKE
1	Master of Business Administration (MBA)	MBA	2 Years	120



Counselling Code : VBIT



VIGNANA BHARATHI
Institute of Technology

®

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MEMBERS OF GOVERNING BODY

S. NO.	NAME	DESIGNATION	CATEGORY
1.	Dr. N. Goutham Rao	Chairman, Swamy Vivekananda Educational Trust (SVET)	Management Nominee
2.	Dr. S.K. Singh	Professor, Dept. of Civil Engineering, Delhi Technological University, New Delhi	UGC Nominee
3.	Dr. G. Sateesh Reddy	Chairman, DRDO, Govt. of India	Management Nominee
4.	Dr. E. Sai Baba Reddy	Professor, Dept. of Civil Engineering, JNTUH College of Engineering, Hyderabad	State Govt. Nominee
5.	Dr. Bannoth Anjaneya Prasad	Professor of ME & Chairman, Board of Studies	University Nominee
6.	Dr. N.V. Ramana Rao	Director, NIT-Warangal	Management Nominee
7.	Dr. V. Kamakshi Prasad	Professor of CSE , JNTUH, Hyderabad	Management Nominee
8.	Dr. G. Manohar Reddy	Secretary, Swamy Vivekananda Educational Trust (SVET)	Management Nominee
9.	Mr. Bhanu Prakash Varla	Founder &CEO, Beenfield Consulting, Hyderabad	Industrialist
10.	Dr. Jayant Kulkarni	Professor of Physics & Director, IQAC	Faculty Nominee
11.	Dr. K. Neelima	Professor & HOD, Dept. of EEE, VBIT	Faculty Nominee
12.	Dr. P.V.S. Srinivas	Principal, Professor, Dept. of CSE, VBIT	Convener



ACADEMIC COUNCIL

S NO.	NAME	CATEGORY
1.	Dr. P. V. S. Srinivas Professor of CSE and Principal, VBIT	Chairman
2.	Dr. A. Jaya Shree Professor, Chemistry, CCST, IST JNTUH, Hyderabad.	JNTUH Nominee
3.	Dr. A. Jaya Lakshmi Professor and Head, EEE JNTUH College of Engineering, JNTUH, Hyderabad	JNTUH Nominee
4.	Dr. A. Prabhu Kumar Professor, ME, JNTUH College of Engineering, JNTUH, Hyderabad.	JNTUH Nominee
5.	Dr. Srinivas Prakash Professor, Mechanical Engineering, BITS Hyderabad.	Expert invitee from Academics
6.	Dr. C. Raghavendra Rao Senior Professor, School of Computer & Information sciences University of Hyderabad(HCU), Gachibowli, Hyderabad	Expert invitee from Academics
7.	Mr. Phani Patamata , Executive Director, The IndUS Entrepreneurs, Hyderabad.	Expert invitee from Industry
8.	Mr. Shreeram Iyer , CEO, Qubit AI Technologies	Expert invitee from Industry
9.	Dr. A. Shailaja , Head-Talent Development, Ramky Enviro Engineers Ltd.	Expert invitee from Industry
10.	Dr. P. Kishore Kumar , HoD, Dept. of ME	Member
11.	Dr. K.Neelima , HoD, Dept. of EEE	Member
12.	Dr. S. Krishna Rao , HoD, Dept. of CE and Director, Academic Planning	Member
13.	Dr. U.Poorna Lakshmi , HoD, Dept. of ECE	Member
14.	Dr. G. Sreeram , HoD, Dept. of CSE	Member
15.	Mr. M. Venkateshwara Rao , HoD, Dept. of IT	Member
16.	Dr. K. Shirisha Reddy , Professor & Associate Head, CSE (Artificial Intelligence and Machine Learning)	Member
17.	Dr. Y. Raju , Assoc. Professor & Associate Head, CSE (Data Science)	Member
18.	Dr. V.Sowmya Devi , Professor & Associate Head, CSE (Cyber Security)	Member
19.	Dr. G. Swamy , Professor & Associate Head, CSE (Computer Science and Business System)	Member
20.	Dr. Ch. S. L. N. Sridhar , HoD, Dept. of H&S & Vice Principal	Member
21.	Dr. K. Sharath Babu , HoD, Dept. of MBA	Member
22.	Dr. G. Amarendar Rao , Professor of ME, Director of PG Studies, VBIT	Member
23.	Dr. V. Sridhar Reddy , Associate Professor, IT & Controller of Examinations	Member
24.	Dr. Y. Srinivas , Professor, ECE	Senior Faculty
25.	Mr. G. Anil Kumar , Director, IIIC, VBIT	Senior Faculty
26.	Dr. S. Sundeeep , Associate Professor, EEE and Coordinator, R&C Cell	Senior Faculty
27.	Dr. S. Pothalaiah , Professor, ECE	Member Secretary



LIST OF IMPORTANT PHONE NUMBERS

S NO.	NAME OF THE OFFICIAL	DESIGNATION	PHONE NO.
1.	Dr. P.V.S.Srinivas	Principal	7993453633
2.	Dr. Ch.S.L.N.Sridhar	Vice-Principal, Director, Student Affairs, HOD, Dept. of H&S	7993453634
3.	Dr. Jayant Kulkarni	Director, IQAC	9989395570
4.	Dr. N.Satyanarayana	Registrar	8297489322
5.	Dr. S.Krishna Rao	Director, Academic Planning, HOD, CED	9948035265
6.	Dr. V.Sridhar Reddy	Controller of Examinations	9966237981
7.	Dr. S.Sundeeep	Coordinator, R&C Cell	9000422333
8.	Mr. G.Anil Kumar	Director, IIC	9966098765
9.	Dr. K.Neelima	HOD, EEE	8374024567
10.	Dr. G.Sreeram	HOD, CSE	9884433666
11.	Mr. M.Venkateswara Rao	HOD, IT	9912868581
12.	Dr. U.Poolnalakshmi	HOD, ECE	9908034124
13.	Dr. P.Kishore Kumar	HOD, ME	9948441033
14.	Dr. K.Sharath Babu	HOD, MBA	9959771054
15.	Dr. S.Hari Krishna	Finance Officer	9849427591
16.	Dr. M. Srinivasa Reddy	Physical Director	9640135916
17.	Mr. D.K.M.Sharma	Coordinator, Digital Media & Public Relations	8885278037
18.	Dr. T.Swarupa Rani	Coordinator, Student Affairs	9908264477
19.	Mr. P.Praveen Kumar	Coordinator, Academic Planning	9912326987
20.	Mr. D.Sreenivas	Officer I/C Exam Branch	9440828489
21.	Mr. Palem Praveen	I/C Common Facilities	9849239588
22.	Mr. G.Srinivasa Rao	Senior Librarian	9666656116
23.	Mr. M.Dhruva Kumar Reddy	I/C Admissions	9989353766
24.	Mr. K.Thukaram	I/C Scholarships	7702724498
25.	Mr. G.Ramesh	I/C Transport	7993453635
26.	Mr. Rajamouli	I/C Boys' Hostel	7993453631
27.	Ms. N. Pushpa	I/C Girls' Hostel	6304213812



GENERAL INFORMATION

A. Location:

Established in 2004-05, by Swamy Vivekananda Educational Trust, this Institute is located on a sprawling campus situated in Aushapur (V), Ghatkesar (M), Medchal (D), Hyderabad - 501 301. It is 18 kilometers from Uppal Bus Depot, Hyderabad.

B. Growth of the Institution:

It has been an exhilarating journey for this Institution which has unfolded itself into an era of all-round development over a period of 18 years, crossing milestones year after year. Started in the year 2004 with two academic programmes in ECE and CSE each with an intake of 60, it has gradually expanded its academic programmes. In highly encouraging response from the aspiring youth of the society, it now runs Engineering courses besides PG. programmes in ECE, CSE, EEE, CE and Professional courses of MBA. The institution has come a long way since its inception in 2004. In the last two years all the B.Tech programmes have been accredited by the National Board of Accreditation, the college received accreditation by the National Assessment and Accreditation Council (NAAC) with 'A' Grade and Autonomous status by UGC.

Commensurate with the gradually enhancing academic programmes, there has been spectacular improvement in infrastructural facilities in terms of total space (academic, administrative and amenity space), laboratories, adequately equipped with the state-of-the-art equipment, advanced software of latest version, well stacked Library and Information Centre and computing facilities. In addition we have qualified and competent faculty at all levels. The Institute has been making sincere endeavors to impart holistic and quality engineering and professional education and training.

C. Future Plans:

This Institute, true to its progressive views and vision, has plans for continuous and sustained growth, as detailed below and gain the Numero uno status in all aspects.

1. To achieve University Status in the near future.
2. To establish more no. of centers of excellence in applied engineering areas such as space science, solar engg., artificial intelligence etc.
3. To further strengthen and augment the infrastructural facilities to meet the expanded academic activities.
4. To strive vigorously to consolidate the industry-institute symbiosis through internship and other programmes.
5. To make unceasing efforts to take up external project consultancy and R&D activities by way of strengthening core competency in emergent and thrust areas and establishing Technology Development and Testing Centre.
6. To have a very pragmatically designed roadmap for transforming this institute as a centre and vital citadel of quality engineering and professional education and a happening and performing platform of activity to make a difference for our students and all other stake holders.



D. Admissions

Under the overall control and supervision of Chairman, Telangana State Council for Higher Education (TSCHE), the Convener (EAMCET) conducts the qualifying Entrance Test (EAMCET) for entry/ admission into various Engineering Degree programmes. Candidates with Intermediate qualification or its equivalent are eligible to appear for the above entrance test. It is under overall control and supervision of the Chairman, TSCHE.

The Convener is responsible for conduct of counseling and allotment of the qualified candidates to various universities and private engineering colleges against the 70% of the sanctioned intake. The remaining 30% seats are to be filled by the management, scrupulously adhering to the rules and procedures, stipulated by Government of Telangana.

Entrance Test is conducted for diploma holders (ECET). ECET qualified candidates are admitted directly at the 2nd year level of engineering degree programmes, under Lateral Entry Scheme. The seats for ECET qualified diploma holders are limited to 10% of the sanctioned intake, over and above the sanctioned intake. After the final counseling round by Convener (Admissions) and the cut-off date, thereto, the left over seats shall be filled up during spot admissions by the managements strictly in accordance with the procedures, practices and norms fixed by the Convener (Admissions).

Category	Admission Procedure	
Category A	EAMCET	70%
Category B	Management quota	30%
II year entry	Under Lateral Entry Scheme	10%

M.B.A.

Admissions for 70% of the seats into M.B.A. are through ICET. For more information ICET prospectus may be referred. Admissions for the balance 30% seats are under Management Quota.



Fully equipped State-of-the-art Laboratories





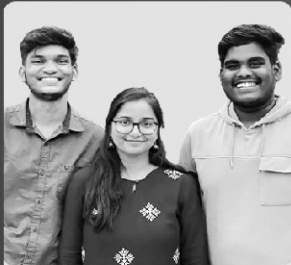
RULES AND REGULATIONS

1. IDENTITY CARDS


- ❖ An Identity card is issued to every student on admission. It should be produced for getting access to
 1. Class Rooms
 2. Library
 3. Sports Room
 4. College Laboratories
 5. Examination Hall
 6. College or University Programmes
- ❖ Identity card is for student protection in a situation where his/her identity is challenged and should be produced on demand
- ❖ If the ID Card is lost, the loss should immediately be reported to the Principal's office. Store I/C will issue duplicate ID card after completing formal procedure.

Note: No student is allowed into the College Campus without wearing ID card.

NATIONAL WISE  **for**  **NASSCOM**[®]



Kaushik Apoori
G. Varsha Reddy
V. Adarsh Mahendra



D. Harihar
N. Nitya
V. Mahitadivya

Congratulations to the 2 teams representing VBIT that stood in **Top 5 National wise** for **ICANN-NASSCOM** Research Paper Initiative with 6 months of research support along with stipend



2. ATTENDANCE

- Period wise attendance will be sent to parents mobile everyday.
- Monthly attendance report will be displayed on the Departmental notice board in the first week of every month. Students can also see their attendance through E-cap portal. Parents will be informed through SMS if attendance of their ward is less than 75%
- A student has to put in a minimum of 75% of attendance in aggregate of all the subjects for acquiring credits in each semester.
- Shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each Semester to be condoned by the Institute / Principal on the recommendations of the sub Committee of the Academic Senate on valid and genuine grounds.
- A student will not be promoted to the next semester unless he satisfies the attendance requirement of the present semester.
- Shortage of Attendance below 65% in aggregate shall in no case be condoned.
- Students whose shortage of attendance is not condoned in any semester / I year are not eligible to take their end examination of that class and their registration shall stand cancelled. They may seek re-admission for that semester / I year when offered next.
- Condonation of shortage of attendance as stipulated in 6 (ii) above shall be granted on genuine and valid grounds with supporting evidence.
- A stipulated fee shall be payable towards condonation of shortage of attendance.

PROUD MOMENT !

Kudos to Team **Z.A.R.C** for securing **3RD POSITION** in
International hackathon in the education sector
organised by **HIGHTECHHACKS**,
United States of America,



KAUSHIK APOORI

SAI PREETHAM

ASHISH GOSKULA

VELLANKI MAHITADIVYA

PURUMANDLA ABHISHEK REDDY



3. DISCIPLINE / PUNCTUALITY

- ▲ Students are expected to abide by the rules of the College and refrain from any activity that harms the dignity of the individual or casts a slur on the image of the institution. Any violation of the College norms shall be dealt with stringently and penal action shall be invoked accordingly. The cooperation of parents and guardians is essential in this regard.
- ▲ All the students shall strictly observe the College time. If any student comes late, he / she shall not be sent to the class and attendance will not be marked for that hour.
- ▲ If any one is found regularly late, administrative action shall be initiated, including suspension from classes.
- ▲ If any student wants to leave the campus before the schedule time then he / she has to fill up a gate pass mentioning genuine reasons and should obtain the signature of the H.O.D concerned.
- ▲ All the students should strictly adhere to the schedules specified for the submission of assignments, Laboratory reports, Seminar reports, Project reports etc. failing which students will be awarded academic punishments.
- ▲ Schedule for payment of college fees should be strictly adhered to.

The following acts of indiscipline are seriously viewed and call for disciplinary action.

- i) Disorderly and obnoxious behaviour with fellow students and the staff of the College.
- ii) Resorting to unfair means in Examinations / Tests
- iii) Inviting outside persons to the College without appropriate permission.
- iv) Default in payment of tuition fee, transportation charges.
- v) Irregular attendance in class and internal exams.
- vi) Boycotting Classes / Tests / Examinations or demanding postponement of Classes / Examinations / Tests.
- vii) Damaging or tampering with properties and fittings or other installations in the College.
- viii) Mutilating / Stealing Library materials
- ix) Indulging in the activities which are termed as ragging.



4. CODE OF CONDUCT

I. BEHAVIOUR

- A. Behave always in a dignified way so as to uphold the prestige and fair name of our college. Remember that your behaviour both within and outside the campus reflects on the Prestige of the College.
- B. Maintain decency and decorum in your dealings with others.
- C. Greet your teachers the first time you meet them in a day. Observe the same with your classmates and seniors.

II. CLASSROOM

- A. After the five-minute recess between periods is over, wait for your teacher inside the class room and maintain silence; otherwise you may disturb adjacent classes.
- B. Avoid standing or loitering in the corridors since they are essential passages.
- C. While standing in the verandahs/corridors for any reason, leave space for others to walk freely and give way to teachers without their having to ask for it.
- D. Do not write on the black board without the permission of the teacher.
- E. Do not allow your friends to disturb you in the classroom except in emergency, unavoidable circumstances.

III. DRESS

- A. Tuck in your shirt or slack into your trousers in the college premises.
- B. Wear shoes while attending College.
- C. Wear the prescribed dress in the workshop / laboratory classes.
- D. Do not wear fancy or gaudy dress while attending college. Bear in mind the Shakespearean maxim that the apparel (dress) oft proclaims the man.

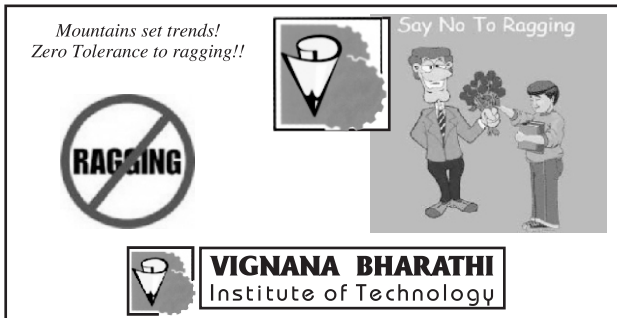


5. RAGGING

Ragging is a cognizable and punishable offence. Any student found indulging in ragging will be dealt with severely as per the existing orders. It is to be noted that ragging in professional Colleges has been banned with in (or) outside the College Campus by the Govt. of T.S. Vide prohibition act, 1997. An extract of the ragging act is given below.

Ragging Act includes words either spoken / written (or) Sign / sounds gestures / Visible representation. Ragging means doing an act which causes or likely to cause insult, annoyance or fear apprehension / threat / intimidation/outrage of modesty or injury to a student.

A student against whom there is a prima facie evidence of ragging in any form will be suspended from the College immediately.



Prohibition of Ragging in Educational Institutions Act 26 of 1997

Nature of Ragging

1. Teasing, embarrassing and humiliating
2. Assaulting or using criminal force or criminal intimidation
3. Wrongfully restraining or confining or causing hurt
4. Causing grievous hurt, kidnapping or rape or committing unnatural offence
5. Causing death or abetting Suicide

Punishment

1. Imprisonment upto 6 months or fine upto Rs.1,000/- or Both
2. Imprisonment upto 1 year or fine upto Rs.2,000/- or Both
3. Imprisonment upto 2 years or fine upto Rs.5,000/- or Both
4. Imprisonment upto 5 years or fine upto Rs.10,000/- or Both
5. Imprisonment upto 10 years or fine upto Rs.50,000/- or Both



GUIDELINES - FACILITIES & OTHER FUNCTIONAL UNITS

I. Examinations

Internal evaluation tests Guidelines

- A. Students should carry their identity cards to the examination hall and produce the same when asked.
- B. Students should be seated in the examination hall five minutes before the commencement of the internal evaluation test.
- C. No student shall be allowed to leave the examination hall in the first ten minutes of the examination.
- D. They should ensure that they are answering the authorized question paper cum answer script by checking for the signature of the invigilator on the same.
- E. Students should personally hand over the answer scripts to the invigilator before leaving the examination hall.
- F. Students should not indulge in any malpractice in the examination.
- G. Students may note that one objective and one descriptive quiz examination of the same subject will be conducted in one day.
- H. Students are advised to verify their valued internal evaluation answer scripts for any discrepancies after their valuation, on or before the date announced by the teacher.
- I. Students should also check up the internal evaluation marks statements displayed on the notice board or on E-CAP portal regarding the correctness of the entries.
- J. Internal evaluation marks to be sent to the University are entered in a single statement in the same order as given in the registration forms and a copy of it will be displayed on the notice board and students should verify it and point out any discrepancies immediately through the head of the department for incorporation in the internal evaluation marks statement to be sent to the University.



II. Computer Centre

- a. Internet facility will be available for all the students during & beyond college hours in computer centre. They can utilize this facility during free periods.
- b. Students should leave their footwear outside before entering the computer centre.
- c. Students should not enter the computer center with the personal belongings, like bags.
- d. They should maintain strict silence and cleanliness in the computer centre.



III. Laboratories

1. Students are expected to be punctual and regular to lab classes.
2. Students are expected to carry out all the experiments prescribed by the University.
3. They will not be permitted to attend the end practical examinations unless they carry out the minimum number of experiments prescribed by the University.
4. They should attend the lab fully prepared, with clear concept of the theory underlying the experiment and other experimental details with a pre-plan on how to carry out the experiment, after consulting the lab manual.
5. Observation notebooks should be neatly maintained.
6. Experiments must be recorded only in the books approved by the departments / college.



7. Observation notebook should be compulsorily shown to the teacher incharge of the lab and got signed by the teacher at the end of the experiment.
8. Records must be submitted as per the schedule prescribed by the teacher incharge of the lab.
9. Records must be got certified before appearing for the end examinations.
10. Student should not move from one table to another.
11. Student should handover the equipment to the technical staff in good condition before leaving the lab.
12. Students should maintain utmost cleanliness in the lab.
13. Breakages / damages to equipment should be reported immediately to the lab incharge.
14. Students are advised to clear all dues to the lab before taking end practical examinations and avoid complications at a later date.
15. Laboratory sessional marks will be awarded on the basis of continuous evaluation.
16. They should clear the work bench soon after the experiment is over.
17. Waste material, if any, should not be strewn on the floor of the laboratory. Students should use the waste material baskets kept for the purpose.
18. Experiments should be carried out following all the instructions meticulously and observing all the precautions to avoid personal injuries and damage to equipment.



IV. Tuition Fee

1. Students shall pay their tuition fee before the commencement of the class work for the corresponding academic year.
2. Fine shall be levied on students who have not paid the fee before the due date.
3. Student's name shall be removed from the rolls if he/she fails to pay the fee along with fine before the last date fixed for the same.
4. Fee once paid shall not be refunded.



V. College Timings

College works for six days in a week with seven periods a day each of 50minutes duration. Every Second Saturday is a holiday.

For I B.Tech & MBA	Forenoon Session	Afternoon Session
	9.50am to 12.20pm	1.00pm to 4.20pm
For II, III, IV B.Tech and M.Tech	9.50am to 1.10pm	1.50pm to 4.20pm

VI. Communication with Parents

Parents will be communicated of the performance of their son / daughter / ward in attendance and examinations through SMS. Parents are advised to take follow up action and approach the college for any information / suggestions regarding their ward's conduct and performance in the college. In case of poor academic performance and / or attendance, the student and the parent / guardian should promptly respond to and comply with the reports and suggestions for improvement as and when informed.

VII. Counseling & Mentoring to the students

The counseling cell consistently keeps track of three parameters (attendance, behaviour and performance) to identify the weak candidates for whom certain kind of counseling is needed. Mentoring is done (A teacher mentor for 20 students) based on percentage of attendance, performance in internal examinations and overall behaviour. Students are counseled and if necessary parents are also called for interaction.

VIII. Mode of Transport to reach the institute

Ever since the inception of the Institution, the Management has been providing transport facilities to the staff and students of this college. Commensurating with the growth and development of this institution, the transport facilities have been strengthened and expanded. At present a fleet of 27 buses have been engaged to commute staff and students of this Institution in 27 routes starting from the Institute to various locations in and around the twin cities.

IX. Library

VBIT library is truly a learning center built with 2018.50 Sq.m. of carpet area spreading over two floors to accommodate more than 500 students at a time. The library stocks textbooks, reference books, journals, audio video lectures and project reports. The library subscribes to more than 125 national and international journals and has a very large collection of reference books on advanced disciplines that are aimed at developing students beyond their normal curriculum. In all, the college library has more than 50000 volumes and around 8050 titles and 145 print journals covering various advanced disciplines pertaining to all the branches of engineering and management courses.

Digital Library is well equipped with 60 multimedia systems and server and uninterrupted power backup to access e-journals and e-books like IEEE digital library, DELNET and Cengage Learning InfoTrat Databases latest developments in the respective subjects.



The Library is equipped with four multimedia classrooms for conducting video lectures from eminent professors through NPTEL program. In accordance with the objectives of the Vignana Bharathi Institute of Technology, the library aims to develop a comprehensive collection of documents useful for the students, faculty and Research Community of the institution.

X. Value Added Programmes

Apart from delivering high quality academics, VBIT believes in training its students in the technologies currently in demand in the industry in various branches of engineering. Intensive and hands-on training is provided to the interested students to make them industry-ready. Following are the various value-added Training Programmes currently offered to the students.

1. VBIT signed a Memorandum of Understanding (MOU) with SAP Education Partners to provide intensive hands-on training on SAP ABAP & MM modules for final B.Tech. students. VBIT is among the 10 organisations selected by Telangana Academy for Skill and Knowledge (TASK), Govt., of Telangana.
2. VBIT has partnered with CISCO to form NETACAD to provide certified training to the interested III & final B.Tech. students in various emerging technologies like Big Data, Cyber Security, Networks etc.
3. Intensive training is provided to all the interested III B. Tech. Civil Engineering students in StadPro software to facilitate a better understanding of analysis and design of structures. A good knowledge of this software will provide better career opportunities for the students.
4. As part of Makerspace programme, interested III B.Tech. students are trained in emerging IoT Technologies. As part of the training students are provided intensive hands-on training enabling them to participate in Hackathon competitions where they are provided opportunities to prepare and exhibit prototypes/working models prepared based on their original ideas.
5. Interested III B.Tech. Mechanical Engineering students are intensively trained providing the required hands-on experience in the Solid Works software to facilitate a comprehensive understanding of the digital manufacturing process. Knowledge of this software will not only be very useful for the students in carrying out their mini and major projects but also enhances their career opportunities.
6. All the IV B.Tech students of Dept. of EEE were provided intensive training on Embedded System Design in association with C-DAC, Hyderabad as part of the workshop conducted from 08-01-2017 to 23-02-2017.
7. Campus Recruitment Training classes are conducted for the students of III B.Tech. II Sem. & IV B.Tech. I Sem. Followed by assessment tests by Co-Cubes.



IEEE VBIT Student Branch

About IEEE

The IEEE (Institute of Electrical and Electronics Engineers, Inc.), a non-profit organization, is the world's leading professional association for the advancement of technology.

Who the IEEE Serves

Through its global membership, the IEEE is a leading authority on areas of engineering and emerging technologies. Members rely on the IEEE as a source of technical and professional information, resources and services. To foster an interest in the engineering profession, the IEEE also serves student members in colleges and universities around the world.

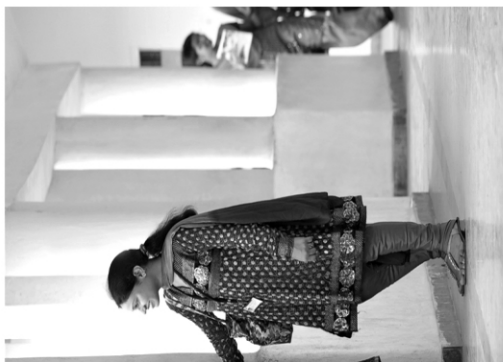
Other important constituencies include prospective members and organizations that purchase IEEE products and participate in conferences or other IEEE programs. The IEEE student branch at VBIT, under IEEE Hyderabad section was inaugurated in December 2006 with a membership of 67 students, two faculty advisors and branch counselor. The branch has been assigned a branch code STB 65451 and school code 45893584.

Exemplary Student Branch Prize

IEEE – VBIT SB has been awarded the Exemplary Student Branch Prize in the entire Region 10 of the Asia-Pacific. This was announced during the IEEE Region 10 Congress held in Sri Lanka during 10-15 July 2015. It was a well deserved honour for the VBIT Student Branch, as it has finally bagged the prestigious prize the fifth time it has been nominated for it since its inception in December 2006. From the alumni to the present volunteers, everyone has played a part in this coveted achievement as it is apparent that team work has played a crucial role in this success story. The constant support by the college management and the direction given by the Branch Counselors Dr. P.S. Subramanyam, C.R.N. Sarma and Mrs. Ch. Sunita have proved to be detrimental in this success. It certainly is a proud moment for the Vignana Bharathi Institute of Technology (VBIT), as it went global in its achievements. Dr. N. Goutham Rao, Chairman, Dr G. Manohar Reddy, Secretary and Principal Dr. G. Amarender Rao have lauded the efforts of the IEEE-Student Branch and wished the team many more successes in the time to come.

Previous Achievements of IEEE – VBIT SB at International Level

- Exemplary Student Branch Award in Asia Pacific Region
- Richard E. Merwin International Scholarship Award from IEEE Computer Society (2009-11), (2012-13)
- Darrel Chong Student Activity International Award (Gold Prize) (2012)
- Larry K. Wilson International Award in Asia Pacific Region (2013)
- Outstanding Branch Counselor Award (2012-13) in Asia-Pacific Region (R-10) to Dr. C.R.N. Sarma
- Special feature on VBIT-SB in IEEE-International Publication "IEEE-Potential" (Volume-32, Issue-4, August 2013)
- WIE VBIT Student Branch Affinity Group has been declared as the recipient of an "Honorable Mention for the 2015 WIE Student Branch Affinity Group of the Year Award".



College Campus buzzing with Student Activity



XI. Tutorials, Seminars and Audio-Visual Classes

The prescribed syllabus of the University is taught in the regular scheduled classes. In order to provide wider scope and the application of a given module / topic, the students are taught in a separate open forum generally described as tutorial. The tutorial classes are expected to deal with the analytical and material strengths for a given module / topic and essentially the thorough understanding in the form of applications should be the output. This requires the appropriate subject strengths, planning and the deep concentration from both student and faculty. The student should also be able to work for various approaches to verify the outputs from a given unit / module. Conceptually tutorials were introduced to promote and cultivate the research approaches in student as well as faculty. Therefore, each faculty is required to work precisely with advance preparation to enforce the above concepts in an effective manner.

- Each class will have 1 tutorial hour per week (per subject).
- Separate tutorial sheets will be provided to the students.
- Students should solve the tutorial problems only on these sheets.
- Each tutorial will be assessed and graded by faculty based on performance. Proportionally the weightage will be added in internal marks.
- At least one Assignment will be given based on 4 units which has to be submitted on the separate sheets provided to the students. Maximum of 5 marks will be given for these assignments.
- Audio-Visual classes are conducted (2 classes per a week) regularly in well equipped AV rooms. This approach enhances the students knowledge of the subject in a more practical manner.

XII. Industry Interaction and Innovation Cell (IIIC)

IIIC of VBIT, with its state-of-the-art infrastructure and dynamic and innovative team, takes care of all the training and placement needs of ambitious student community. The Cell is also responsible for interacting with the industry experts in order to cater to the mutual needs of the industry and the institute leading to 'Industry Collaborated Academics'. To enable this, industry experts are invited to the institute to interact with the faculty and the students and very often the students are also taken to various industries to provide them with a glimpse the latest industry practices.

The IIIC has a four-fold objective:

- Providing quality placements
- Catering to the skills development of the students
- Establishing Innovation Cells
- Facilitating higher education opportunities



Major Developments in the Recent Years

- Signed MoUs with AmazonWeb Services (AWS), UiPath & Servicenow and established global certification programmes in AWS Fundamentals and Architecture, Robotics Process Automation, Business Application Development respectively
- Established Centers of Excellence (CoE) with DellEMC, Bentley, AutoDesk Fusion 360 & AutoDesk REVIT Architecture as Industry Partners
- Established Industry Sponsored Academies such as SAP-ABAP StudentAcademy Program, Cisco NetAcad, Salesforce Academy, Microchip Academic Program (in Embedded and IoT technologies) etc.
- Established incubation Centers and Start-up Ecosystem in Collaboration with MHRD, Government of India, Indian School of Business – Technology Entrepreneurship Program (ISB-TEP), TiE Hyderabad – EDUCATION & STARTUP LEARNING, JNTUH Innovation Hub (J-HUB)



Cost analysis and time plan Hearty congratulations to team VOLT TACKLE, VBIT for securing 3rd prize Special Award in “Cost analysis and time plan”.



XIII. Student Activities:

Professional Societies / Student Chapters

- The IEEE student branch at VBIT, under IEEE Hyderabad section was inaugurated in December 2006 with a membership of 67 students, two faculty advisors and a branch counselor. Through its global membership, the IEEE is a leading authority on areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics among others. Members rely on the IEEE as a source of technical and professional information, resources and services. To foster an interest in the engineering profession, the IEEE also serves student members in colleges and universities around the world. About 150 students enrolled as members for the academic year 2014-15.

IEEE Student Branch has established following forums and chapters in the institute:
A) Computer society B) Communication society
C) WIE (Women in Engineering) D) Power Electronics Chapter
- IETE STUDENT FORUM was established in 2007-08.
- A student chapter of AUTOMAAC for the Professional Society of Mech Engg was established in 2012-13.
- SAE - Society for Automotive Engineers was established in the year 2010.
- Ganith Exclusive Mathematics Forum.

Student Activity Centre (SAC)

College has established an active and efficient student activity centre, which is undertaking

S.No.	Activity	Details
1.	<i>Stutalk</i>	Campus news letter
2.	<i>Dyuthi (NSS), Street Cause</i>	Social activity forums
3.	<i>Branch Associations</i>	8 active branch associations
4.	<i>Virinchi</i>	Forum for performing arts
5.	<i>Harith</i>	An Eco club
6.	<i>Sports Club</i>	Excellent Indoor & Outdoor games facilities
7.	<i>VBIT MUN</i>	<i>Model United Nations</i>
8.	<i>Chitrika</i>	<i>The Photographic Club</i>
9.	<i>Aashay</i>	Film club
10.	<i>Srishti</i>	Literary club
11.	<i>Robotics club</i>	Forum of creative Technocrats
12.	<i>Alumini Association</i>	Network of Alumni
13.	<i>Swayam</i>	Forum for residential VBITians
14.	<i>ISE</i>	Institute of Student Engineers
15.	Coding Studio	Forum for Coding Freaks
16.	Epston pi	AI&ML Club



Sports and Games

Physical Education Department is manned by a well qualified and experienced Physical Director. The Institute has excellent Games and Sports facilities including well laid play grounds for out-door games of cricket, volleyball, badminton, basketball etc. Students participated in various sports events and won many medals and prizes at University, State, National and International level in the recent years.

Games and Sports policy

The Institute makes prompt efforts:

- To identify talents of the students at the very first year level.
- To provide opportunity to develop their talent
- To encourage and support the students to participate at state, national and international level.

National Service Scheme (NSS)-DHYUTHI

DHYUTHI NSS Unit: NSS Unit has been introduced in 2007-08 academic year under the approval of JNTU.

Following Programmes are conducted under this unit:

- Blood Donation Camps
- Aids Awareness Camps
- Village Survey
- Free Medical camps
- Hygeine & Cleanliness Awareness programme in nearby villages.

Student Welfare Activities

- Student Welfare Fund is earmarked and set apart to meet the following student friendly objectives.
- To help the needy students in pursuit of their Education and career development through an SC/ST Book Bank
- Concession and transport facility for poor and deserving students.
- DA/TA for students participating in inter University and interstate sports and games, paper presentations and technical conferences.

Awards

- Awards for Toppers in Attendance & Academics.
- Best outgoing student from each final year branch.
- Best student organizer
- Toppers in GATE, GRE, TOEFL, CAT etc.
- Sports and Games
- Cultural events



XV. Academic Certificates

The following academic certificates will be issued by the college at the time of the student leaving the institution.

1. Course completion/Study certificate (as applicable)
2. Transfer cum Conduct Certificate
3. Provisional Certificate and Consolidated Marks Memo
4. Degree Certificate

University issues consolidated marks memo and provisional certificate to students through the college. After completion of the course, students should apply for Provisional Certificate through the college. Soon after their receipt from the University, they will be given to the candidates. Degree certificate(original) will be issued by University of receiving the application from students.

XVI. Auditorium and Seminar Halls

The College is well facilitated with six state of the art Seminar Halls with advanced audio systems and LCD Projectors. Each has a different capacity.

- ❖ Chethana Auditorium-200
- ❖ Sadhana Seminar Hall-60
- ❖ Drishti-Board Room-50
- ❖ Disha Seminar Hall -120
- ❖ Sumedha Seminar Hall-60
- ❖ SAC Seminar Hall-25
- ❖ Prerana Seminar Hall-250
- ❖ Nalanda Auditorium-1200

XVII. Canteen

The College is facilitated with a separate building for canteen with 6000 Sq.ft. Fresh snacks, beverages, and baked goodies are always available. While using the Canteen the students are expected to handle the furniture and other equipment with utmost care. Students, found idling away their time in the canteen during class hours, are liable to be punished.

XVIII. Website

Our website, www.vbithyd.ac.in is designed and maintained in the most interactive manner, it helps in establishing a virtual family of students, faculty, and parents.



EXPECTATIONS FROM PARENTS

Parents should :

1. Be in regular contact with the Institute / Department regarding the progress of their wards and attend parents meetings without fail.
2. Please update the information regarding change in the phone number, residential address etc. by communicating it to the office / student counsellor.
3. At the end of every month attendance is updated. SMS is sent to the parents of the students falling short of 75% attendance. Instructions given in the report must be followed strictly.
4. **Students are prohibited from using cell phones in the class rooms. Strict disciplinary action is initiated against the students who misuse cell phones.**
5. Parents are advised to opt for college transport facility to avoid their ward coming late to the college.
6. Advise their ward not to indulge in any sort of mis-behaviour / ragging within or outside the college campus.

FUSION D3 A BIG HIT



Photos: Ch Prabhu Das



HANS NEWS SERVICE

As a part of Navratri celebrations, Street Cause-VBIT, a student-run NGO, organised a fundraiser event FUSION D3 (DJ, Dandiya and Dhol), a musical night, on Saturday.

Crisna Chaitanya Reddy, CEO of CREATE U, Shyamala, an anchor, Amit Tiwari, an actor, and Sama Ram Mohan Reddy, a spokesperson of TPOC, graced the event. Street Cause - VBIT made use of reusable banners and ID cards and minimal plastic was used.

People danced the night away in their best outfits and indulged in beats of dandiya. The Octaves and The Invictibles rocked the stage with their music to loud cheers.





EVENTS CONDUCTED DURING 2020-2021

- 30 Aug 2021** Project RITVAM by Street Cause
 On 30th August, 2021, Street Cause – VBIT organised Project RITVAM at Asha Kuteer foundation, Swaroop Nagar, Uppal and Agape foundation, Uppal.
 Street Cause – VBIT contributed the girls in Agape foundation with cotton sanitary napkins which provide comfort, prevent skin irritations. We have also donated covid-19 essential commodities like hand sanitizers and face masks to the children in Asha Kuteer foundation which acts as an indispensable role in this fight to check the spread of corona virus.
- 26 Aug 2021** “A Two Day National Conference on Emerging Engineering and Technology NCEET-2021” by Department of Electrical and Electronics Engineering
 Department of Electrical and Electronics Engineering organised an online “AICTE Sponsored National Conference on Emerging Engineering & Technology – NCEET’21” on 26th & 27th August 2021. The event was addressed by Prof. Satya P. Gupta, Vice Chancellor, University of Engg & Tech,
- 15 Jul 2021** Guest lecture on “Design of Experiments – Taguchi Methodology” by Department of Mechanical Engineering
 Department of Mechanical Engineering organised a guest lecture and hands on experience session on ‘Design of Experiments – Taguchi Methodology’. The event was addressed by Dr.K.Srinivasulu Reddy, Professor, SNIST, Hyderabad.
- 12 Jul 2021** Guest lecture on “Augmenting core research with Multi-criteria decision making” by Department of Mechanical Engineering
 Department of Mechanical Engineering organised a guest lecture on “Augmenting core research with Multi-criteria decision making”. The event was addressed by Dr. Kanak Kalita on 12th July 2021 through zoom platform.
- 11 Jul 2021** Webinar on National Education Policy (NEP-2020) towards holistic education by IQAC
 Internal Quality Assurance Cell, VBIT organised a webinar on National Education Policy, NEP-2020-Towards Holistic Education on July 11th 2021. The event was addressed by Prof. NV Ramana Rao, Director, NIT Warangal.
- 09 Jul 2021** Induction Program for the Executive Board 2021-2022
 The Induction program for the newly recruited executive board members of Street Cause – VBIT, conducted on 9th July, 2021.
 The new executive board members were then made aware of how the Street Cause Board works, and their role was explained. Contributions of the alumni member, a brief on the past events was given and plans for the present tenure were discussed. The session ended with briefing them with the basic rules and regulations of the Organisation. Welcoming the Coordinators into the STREET CAUSE Family!
- 28 Jun 2021** Webinar on Data Analytics using R by Department of CSE & IT
 Department of IT and CSE organised a webinar on “Data Analytics using R” on 28th June 2021 for 3rd year students. The event was addressed by Dr.A.V. Krishna Prasad, Professor, CSE Department, MVSR Engineering College.
- 19 Jun 2021** Webinar on Python Programming by Department of CSE & IT
 Department of Information Technology and Computer Science and Engineering organised a webinar on Python Programming on 19th June 2021. The event was addressed by Mr. S Naresh Kumar, SAN TECHNOLOGIES.



- 24 Jun 2021** Webinar on Implementation of Data Science Applications using Machine learning algorithms” by Department of CSE & IT
Department of Computer Science and Engineering & Information Technology organised a webinar on “Implementation of data science applications using machine learning algorithms” on 24th June 2021. The event was addressed by Dr. Asadi Srinivasulu, Professor, R and D, Director, Blue Crest University, LIBERIA through zoom platform.
- 26 Jun 2021** Webinar on “How to Start your career in Salesforce” by IICC, VBIT
Industry Interaction and Innovation Cell organised a webinar on “How to start your career in Salesforce” on 26th June 2021. The event was addressed by Sushant, Senior Software Engineer, NCR Corporation.
- 19 Jun 2021** Virtual Power Seminar on “Industry Expectation Post Pandemic”
VBIT organised a virtual power seminar on “Industry Expectation Post Pandemic” in association with Skycampus, Power Seminar and ICT Academy on 19th June 2021. The event will be addressed by G Anil Kumar, Director, VBIT; Lakshmi Narayanan KV, Vice President – Human Resource, Infosys Compaz Pte Ltd; & Mike Muralidharan, CEO Bahwan Cybertek Pvt. Ltd.
- 23 May 2021** Covid-19 Relief Project by Street Cause VBIT
Without equity, we cannot end COVID-19 or any other pandemic. Perceived social isolation during the COVID-19 pandemic significantly has had an extraordinary global impact, with significant psychological consequences. Many poor people who cannot afford the medication are losing their lives. The people living in Ghattuppal area are covid affected who cannot afford basic commodities at the time of self isolation.
The street cause VBIT have provided them with sanitizers and oximeters which could help them during the isolation period.
- 19 Jun 2021** Webinar on “Securities Market & Wealth Creation” by Department of MBA
Department of Business Management in association with BSE organised a webinar on “Securities Market & Wealth Creation” on 19th June 2021. The event was addressed by Mr.Suhas Rajput, Empanelled Trainer, BSE.
- 19 Jun 2021** “Industry Power Distribution – Electrical Machines” by Department of EEE
Electrical and Electronics Engineering Department organised a Virtual site visit in collaboration with HIEE on “Industry Power Distribution- Electrical Machines” on 19th June 2021. It was addressed by Mr.S.Madanmohan, CEO of HIEE through zoom platform. with 200 participants.
- 18 Jun 2021** A webinar on “Career Guidance after Graduation” by Department of EEE
Electrical and Electronics Engineering Department organised a webinar on “Career Guidance after Graduation” on 18th June 2021. The event was addressed by Mr.A.Anjaneyulu, Motivational Speaker, Adda247 Educator & Mr. M.Venkatash, Career Counselor, Adda247 Educator, Hyderabad through zoom platform.
- 16 Jun 2021** Webinar on “Disaster Management – An Overview” by Department of Civil Engineering
Department of Civil Engineering, VBIT conducted a Webinar on “Disaster Management – An Overview”. Dr.G.K.Viswanth, Professor of Civil Engineering on 16th June 2021. Dr.G. K Vishwanadh, Director UGC- HRDC JNTUH, Hyderabad was the guest speaker. The Webinar insighted the students with the causes and strategies of disasters. Around 340+ students from various branches of VBIT attended the event.



- 15 Jun 2021** Guest Lecture on “An overview of Design of Steel structures” by department of Civil Engineering
 Department of Civil Engineering organised a Guest Lecture on “An overview of Design of Steel structures” on 15th June 2021. The event was addressed by Mr. Kandula Sudheer, Project Manager, Griggs Engineering, Hyderabad through zoom platform. It was coordinated by Dr. C. V. Siva Rama Prasad and C.Mounika.
- Jun 2021** Webinar on “Careers post COVID” by Department of Business Management
 Department of Business management organised a webinar on “Careers Post Covid” on 14th June 2021. The event was addressed by Mrudula Kapila, Lead Academics CQ, Career Coach, NLP Practitioner.
- 13 Jun 2021** Ttribe Launchpad Program
 Ttribe starting again with the Launchpad Program for everyone wherein this delivers best outcomes to every students, young entrepreneurs, startups.
- 12 Jun 2021** Webinar on “Design Challenges and Opportunities in Electrical Vehicles” by EEE department
 Department of Electrical and Electronics Engineering organised a Webinar on “Design challenges and opportunities in Electrical vehicles” on 12th June 2021. The event was addressed by Mr. P. Rajesh, Embedded Software Developer – Robert BOSCH, VBIT Alumni.
- 30 May 2021** A special session on “How to cope up with COVID situation” by Department of H&S
 Department of H&S organised a special session on “How to cope up with COVID situation” on 30th May 2021. The event was addressed by Prof. Rajendra Tapadia, KMIT and Mental Health Counsellor at SEVA.
- 31 May 2021** Four-day Webinar on Research Indexing Tools by Research and Consultancy Cell, VBIT
 Research and Consultancy Cell, VBIT organised a Four-day Webinar on Research Indexing Tools. The Four sessions were conducted separately on 31/05/2021, 01/06/2021, 07/06/2021 and 08/06/2021. The event was addressed by Dr. Sri Kalyana Rama J, Coordinator, R&C Cell, VBIT.
- 09 Jun 2021** A webinar on “Recent Trends in Power system & Protection” by Department of EEE
 Electrical and Electronics Engineering Department Organised a webinar on “Recent Trends in Power system & Protection” on 9th June 2021. The event was addressed by Dr. M.Kavitha, Assistant Professor, Department of EEE, Sathyabama Institute of Science and Technology through zoom platform with 120 participants.
- 06 Jun 2021** Literary festival of VBIT organised by odyssey club on 6th June 2021
- 18 May 2021** Activity week by Department of Business Management
 As a part of UMANG A SPECTRUM OF POSITIVITY, Department of Business Management conducted Activity Week for students from 18th May 2021 to 29th May 2021. During this tenure the students participated in various skill enhancement activities.
- 05 Jun 2021** E-workshop on “Environmental Health and sustainability” by Department of Civil Engineering & team IGBC VBIT
 On the occasion of World Environment Day IGBC-VBIT SC and Department of civil engineering organised an “E-Workshop on Environment Health and Sustainability” on 5th June 2021. The event was addressed by Dr. Brajesh K Dubey & Mr. Atun Roy Chaudhary through zoom platform.



- 04 Jun 2021** Webinar on “Electrical Machines- Alternators” by Department of Electrical and Electronics Engineering.
Department of Electrical and Electronics Engineering organised a webinar on “Electrical Machines- Alternators” on 4th June 2021. The event was addressed by Mr.B.Surendra Reddy, M.Tech from IIT Bombay, Subject Expert at Ohm Institute, Hyderabad through zoom meeting and attended by 120 students.
- 03 Jun 2021** STAAD PRO Training Program by Department of Civil Engineering – Day 3
Department of Civil Engineering in association with Bentley Education and Indian Green Building Council-Hyderabad Chapter us organising a three day Industry Oriented E-Training program on analysis, design and detailing of structures using STAAD PRO (ADDS-2021) from 3rd June to 5th June 2021. The event was attended by 230 participants, here are glimpses from Day 3.
- 03 Jun 2021** STAAD PRO Training Program by Department of Civil Engineering – Day 2
Department of Civil Engineering in association with Bentley Education and Indian Green Building Council-Hyderabad Chapter us organising a three day Industry Oriented E-Training program on analysis, design and detailing of structures using STAAD PRO (ADDS-2021) from 3rd June to 5th June 2021. The event was attended by 250 participants, here are glimpses from Day 2.
- 03 Jun 2021** STAAD PRO Training Program by Department of Civil Engineering – Day 1
Department of Civil Engineering in association with Bentley Education and Indian Green Building Council-Hyderabad Chapter us organising a three day Industry Oriented E-Training program on analysis, design and detailing of structures using STAAD PRO (ADDS-2021) from 3rd June to 5th June 2021. The event was attended by 330 participants, here are glimpses from Day 1.
- 19 May 2021** Appreciation from the Collector and Sarpanch of Nirmal District
RFC 7.0 project has indeed impacted the lives of many farmers living in Mamada(V&M) of Nirmal district. A moment where the whole family of Street Cause – VBIT felt proud to receive a appreciation from the Collector of Nirmal district and the Sarpanch of Mamada (V&M) of Nirmal district.
- 19 May 2021** RFC 7.0 project by Street Cause – VBIT
“The world is plentiful with honey, but only the humble bee can collect it”. The people of this village depend on farming and other daily works. And through this occupation, they earn a very little amount which makes their living hard. Apart from this, the farmers are aware of apiculture through which they will be able to earn income for their livelihood but don't have proper equipment for bee keeping and are unable to afford those resources. The team of Street Cause – VBIT have provided 12 honey harvesting boxes to the farmers of Mamada Village & Mandal, Nirmal district. This project provides an extra source of income to the farmers and also honey bees play a part in maintaining a balanced and successful ecosystem.
- 22 May 2021** Microchip Value-added program on “Basic Simulation of Arduino using Proteus Software” by Department of Electrical and Electronics Engineering
Department of Electrical and Electronics Engineering organised a Microchip Value-added program on “Basic Simulation of Arduino using Proteus Software” from 22nd to 29th May 2021 for II'nd year students. The event was addressed by Mr.V.Sainath Chary, Assistant Professor, Department of EEE, VBIT.
- 17 May 2021** Value added Program on CCNA by Department of Information Technology
Department of Information Technology organised a value added program on CCNA for II'nd year students from 17th to 28th May 2021. The event was addressed by Ms. Manjulatha & Ms.Ambica



- 17 May 2021 Value added program on CCNA by Department of Computer Science and Engineering
 Department of Computer Science and Engineering organised a value added program on CCNA for IInd year students from 17th to 28th May 2021. The event was addressed by Ms. Yamini & Ms. Chaitanya Sri.
- 17 May 2021 Value added program on AUTOCAD by Department of Mechanical Engineering
 Department of Mechanical Engineering organised a value added program on AUTOCAD for IInd year students from 17th to 28th May 2021. The event was addressed by Ms. Madhavi, Ms. Priyanka & Ms. Padma.
- 29 May 2021 VBIT COVID HELPLINE with help of Street Cause provided 15 frontline workers of Nemergomula village with basic COVID kits.
 "The country doesn't work without them".
 It is the Frontline workers putting their lives on line to help others in this pandemic.
 VBIT COVID HELPLINE having received the information regarding 15 frontline workers of Nemergomula village about lacking of basic covid kit like sanitizers and masks.
 VBIT COVID HELPLINE with help of Street Cause came forward to provide 15 frontline workers of nemergomula village with
- 24 sanitizers bottles (100ml)
 - 100 surgical masks and
 - 24pc – N95 masks.
- May 2021 Activity week for first year students by Department of H&S
 As a part of UMANG A SPECTRUM OF POSITIVITY, Department of H&S conducted activity week for students from 17th May 2021 to 22nd May 2021. During this tenure the students participated in various activities in areas of English, Physics, Chemistry & Mathematics.
- 17 May 2021 Value Added Programme on Advanced Auto CAD software by Department of Civil Engineering
 Department of Civil Engineering organised a Value Added Programme on Advanced Auto CAD software for IInd year students from 17th May 2021 to 29th May 2021. The event was coordinated by Dr .C.V. Siva Rama Prasad and A. Saitheja.
- 17 May 2021 Value Added Programme on CCNA v7 Introduction to networks by Department of Electronics and Communications Engineering Department
 Department of Electronics and communication Engineering organised a value added programme on CCNA v7 Introduction to networks for IInd year ECE students from 17th May 2021 to 29th May 2021. The event was coordinated by P. Naveen Kumar, K. Sandeep Rao, G. Madhavi & Y. Roji
- 28 May 2021 Webinar on "Learning Attitude for Success" by Department of Business Management
 Department of Business Management organised a webinar, "Learning Attitude for Success" on 28th may 2021 from 10.30 AM – 12.30 PM. The event was addressed by Muralidhar Dasyapu, Counselling Psychologist, Coach & Trainer.
- 19 May 2021 Inauguration of SHODH Innovation Batch 2021
 The inauguration of SHODH Innovation Batch 2021, VBIT was organised on 19th May 2021. The event was graced by the honourable chief guest, Mr. Varla Bhanu Prakash, Chairman of TiE Grad.



- 19 May 2021** Webinar on “Goal Setting Techniques” by IIC
Industry Interaction and Innovation Cell organised a webinar on “Goal Setting Techniques (The art and science of goal setting)” on 19th May 2021. The event was addressed by Mr. Rajesh Pershad, Assoc. Prof & HOD MBA, JBIET.
- 12 May 2021** A Webinar on “Achieving Academic Excellence through NIRF” organised by IQAC
Internal Quality Assurance Cell, VBIT organised a webinar on “Achieving academic excellence through NIRF” on 12th May 2021. The event was addressed by Prof. Gopala Krishna Pasumarty through zoom platform.
- 10 May 2021** IGBC-VBIT SC Logo Launch
Team IGBC-VBIT SC had successfully launched the logo. IGBC-VBIT SC is coming to train the students with quality insights to pilot a relation with the industry. Await the experience that what IGBC-VBIT SC will bring in this tenure
- 08 May 2021** Webinar on INTELLECTUAL PROPERTY RIGHTS AND PATENTING by Research and Consultancy Cell
Team IETE ISF VBIT organised a virtual workshop on “Industrial revolution 4.0 – Blockchain Technology” on 8th & 9th May 2021. The event was addressed by Mr. Kartikey Kashyap, ead software engineer, Blockchain, MSR Cosmos & Community lead Hyperledger Hyderabad.
- 08 May 2021** “Industrial Revolution 4.0 – Blockchain Technology” by IETE ISF VBIT.
Team IETE ISF VBIT organised a virtual workshop on “Industrial revolution 4.0 – Blockchain Technology” on 8th & 9th May 2021. The event was addressed by Mr. Kartikey Kashyap, ead software engineer, Blockchain, MSR Cosmos & Community lead Hyperledger Hyderabad.
- 03 May 2021** A two day online national conference on “Latest Trends in Mechanical Engineering” by department of Mechanical Engineering
Department of Mechanical Engineering organized a two day online national conference on “ Latest trends in mechanical engineering” on 3rd & 4th May 2021. The event was addressed by Dr. Venkata N Nori, SRM University.
- 07 May 2021** Webinar on “Applications of Control Systems in Industries” by Department of EEE
Department of Electrical and Electronics Engineering organized a webinar on “ Applications of Control Systems in Industries” on 7th May 2021. The event was addressed by Mr. Sri Hari Kurra, Speaker, Pantech e- Learning, Hyderabad through google meet with 120 participants.
- 25 Apr 2021** CODE HUSTLE 2.0
CODE HUSTLE 2.0, with a unique concept of bidding organised a coding competition initiated by the Computer Society Chapter of IEEE – VBIT SB on 25th April 2021.
- 03 May 2021** Webinar on “Gateway to the Corporate World ” by Department of Business Management
Department of Business Management organised a webinar on “Gateway to the Corporate World” on 3rd May 2021. The event was addressed by Subhash Reddy Singireddy, Operations Manager, Pillay R Group, Dubai.
- 24 Apr 2021** TEDxVBIT Season 3
TEDxVBIT conducted its season 3, “Think big | Start small” on 24th April 2021 through zoom platform with 130 participants.
- 10 Apr 2021** Webinar on “ROLE OF ELECTRONICS IN DRDO” by IETE ISF VBIT
IETE ISF VBIT organised a webinar on “ROLE OF ELECTRONICS IN DRDO” on 10 April 2021. The event was addressed by A.V. Maruthi SAIRAM, scientist DRDO.



- 10 Apr 2021** EpsilonPi a Machine Learning Forum
EpsilonPi, is the first forum in VBIT that majorly focuses on Machine Learning, Data Science, and Deep Learning. To not stay merely ordinary or just stick to the basics, we want to encourage the idea of problem-solving and using the fundamentals to build projects. epsilonpi.club is our official website.
- 02 Mar 2021** Guest Lecture on "Take charge of your careers" by department of MBA
Department of MBA organised a guest lecture on "Take charge of your careers" on 2nd March 2021. The event was addressed by Dr. S.V. Ramana, Principal, Hindu College of Management.
- 01 Mar 2021** Expert lecture on "Scope and Applications of Spectroscopy" on the occasion of National Science Day
On the occasion of National Science Day, an expert lecture was delivered by Prof. M. Ananda Rao garu, Professor of Chemistry, VBIT (Retd. Professor, OU) on the topic "Scope and Applications of Spectroscopy" at 2.30 pm on 1st March 2021 .
- 13 Feb 2021** A Webinar on "FETs and MOSFET" by the department of ECE and IETE-ISF VBIT
Department of ECE and IETE-ISF VBIT organized a webinar on FETs and MOSFETs on 13th February 2021. The event was addressed by Dr. N. Alivelu Manga, Associate Professor, Department of ECE through zoom platform with 123 participants.
- 13 Feb 2021** Avishkar 2K21
Avishkar an event exclusively for B.Tech first year students organised a unique technical paper presentation competition on 13th February 2021.
- 10 Feb 2021** A webinar on "Introduction overview on signals and systems by Department of ECE and IETE-ISF VBIT"
Department of ECE and IETE-ISF VBIT organized a webinar on Introduction overview on signals and systems on 10th February 2021. The event was addressed by Dr.C.B.Ramarao, Prof., NIT Warangal through zoom platform with 150 participants.
- 05 Feb 2021** Two Day National Virtual Conference on Sustainable Innovative Trends in Civil Engineering
Department of Civil Engineering in association with Indian Concrete Institute-Hyderabad Centre is organizing a Two Day National Virtual Conference on Sustainable Innovative Trends in Civil Engineering in the month of February on 5th and 6th February, 2021 (SITCE-2021).NBM&CW is the official media partner for the conference.
- 03 Feb 2021** Webinar on "Control of Induction Motor Drives" by Department of Electrical and Electronics Engineering
Department of Electrical and Electronics Engineering organised a Webinar on "Control of Induction Motor Drives" on 3rd February, 2021. The event was addressed by Mr.P. Ramesh, Faculty, ACE Engineering Academy through zoom platform with 120 participants.
- 02 Feb 2021** Webinar on "Understanding IEC 60599 : Guide to Interpretation of Dissolved Gas Analysis (DGA)" by Department of EEE
Department of Electrical and Electronics Engineering organised a Webinar on " Understanding IEC 60599 : Guide to Interpretation of Dissolved Gas Analysis (DGA)" on 2nd February, 2021. The event was addressed by Dr. D. Devendranath, Professor, Director of Academics, VBIT through zoom platform with 120 participants.



- Jan 2021** Webinar on Artificial Neural Networks by Communications society
 Communications Society organized a Webinar on Artificial Neural Networks on 31st January, 2021. The event was addressed by Y. David Solomon Raju Associate Professor and Head of the Department, Holy Mary Institute of Technology through zoom platform with 66 participants.
- 30 Jan 2021** Webinar on “Design of counters and logic gates” by Department of Electronics and Communication Engineering and IETE-ISF VBIT
 Department of Electronics and Communication Engineering and IETE-ISF VBIT organised a webinar on “Design of counters and logic gates” on January 30th, 2021. The event was addressed by Dr. V. Rama, Assistant Professor (Grade-I), Department of ECE, NIT Warangal through zoom platform.
- 29 Jan 2021** Webinar on “Microstrip Antenna” by Department of Electronics and Communication Engineering and IETE-ISF VBIT
 Department of Electronics and Communication Engineering and IETE-ISF VBIT organised a webinar on microstrip antenna on January 29th 2021. The event was addressed by Dr. Nanda Kumar M, Associative Professor, Department of Electronics and Computer Engineering, Sreenidhi Institute of Science and Technology through zoom platform.
- 28 Jan 2020** Guest Lecture on “Data Science with R” by Department of IT and CSE
 Departments of IT and CSE organized a Guest Lecture on “Data Science with R” for 3rd year students of IT & CSE on 28th January 2021 from 02:00 to 04:30 PM. The event was addressed by Dr.D.Lakshmi, Educational Research Officer, VEDIC, HYD.
- 27 Jan 2021** Webinar on EHVAC/ HVDC Transmission Systems by Department of Electrical and Electronics Engineering
 Department of Electrical and Electronics Engineering organised a webinar on EHVAC/ HVDC Transmission Systems on 27th January, 2021. The event was addressed by Dr.Godwin Immanuel, Associate Professor, Sathyabama Institute of Science and Technology through Zoom Platform with 120
- 26 Jan 2021** 72nd Republic Day Celebrations
 The 72nd Republic Day of India was celebrated with gaiety and patriotic fervour at Vignana Bharathi Institute of Technology.
- 26 Jan 2021** Campus Magazine – Releasing REPUBLIC EDITION!
 StuTalk is back with a BANG! The patriotic edition is here to daze you all with its pristine amalgamations of illuminating and extravagant content. The campus magazine edition will perch on your reckoning expectations. The magazine is available at: <https://www.stutalk.in/>
- 26 Jan 2021** Plan of action Avishkar 2021
 The Plan of Action to be followed for Avishkar 2K21 was briefed to the Dignitaries. Avishkar 2k21 is an anomaly as the entire work process will be carried out online.
- 23 Jan 2021** Webinar on MICROWAVE TUBES by Department of Electronics and communication Engineering
 Department of Electronics and communication Engineering organised a webinar on MICROWAVE TUBES on 23rd January 2021. The event was addressed by Dr. D.M.K.Chaitanya through zoom platform and was attended by 100 participants.
- 11 Jan 2021** Workshop on Substation Equipment Familiarization by Department of Electrical and Electronics Engineering
 Department of Electrical and Electronics Engineering organised a workshop on Substation Equipment Familiarization on 11th January, 2021. The event was addressed by Mr.Sourav Mitra through zoom platform with 200 participants.



- 11 Jan 2021** MBA Induction Program 2021
Department of Business Management conducted MBA Induction Program 2021 for the first year batch of MBA on 11th January 2021.
- 10 Jan 2021** Blanket Donation Drive by Street Cause- VBIT
The team of Street Cause VBIT, have donated blankets to homeless at Mahatma Gandhi bus station , Hyderabad on 10th January 2021.
- 07 Jan 2021** Virtual Site visit to IJM Concrete Pvt. Ltd RMC plant by Civil Engineering Department
Department of Civil Engineering had organized a Virtual Site visit to IJM Concrete Pvt. Ltd RMC plant. All the Students of 3rd year attended the virtual visit through zoom.
- 06 Jan 2021** Power Electronics & Drives with CASPOC Software by Department of Electrical and Electronics Engineering
Department of Electrical and Electronics Engineering organised a Power Electronics & Drives with CASPOC Software on 6th January, 2021. The event was addressed by Mr.Kuldeep Kaul, Managing Director, Sun Seas Tech through Zoom Platform with 120 participants.
- 29 Dec 2020** Webinar on Financial Planning for Younger Generation by MBA Department
Department of Business Management in association with National Centre for Financial Education organised a webinar on "Financial Planning for younger generation" on 29th December 2020. The event was addressed by Dr. Karthika. P. NCFE Trainer & SEBI Resource Person.
- 21 Dec 2020** Talk on Advances in Engineering Materials organised by Department of Mechanical Engineering
Department of Mechanical Engineering organised a Technical Talk on Advances in Engineering Materials by Dr.Raghu Echempati, Kettering University,USA on 21st December 2020 through zoom platform.
- 19 Dec 2020** Project Aqua by Street Cause- VBIT
Pure water is the world's first and foremost medicine and who can imagine a life without water. But people at Precilla old age home didn't have proper facilities and are consuming the impure water. On 19th December, 2020 the team of Street Cause VBIT provided them with a water filter.
- 15 Dec 2020** Street Cause – VBIT receive an appreciation from the Sarpanch and the Mandal Parishad President of Dasthurabad (V&M) Nirmal district.
RFC project has indeed impacted the lives of many families living in Khanapur village in Mamada Mandal of Nirmal district. A moment where the whole family of Street Cause – VBIT felt proud to receive a appreciation from the Sarpanch and the Mandal Parishad President of Dasthurabad(V&M) of Nirmal district.
- 12 Dec 2020** Street Cause – VBIT performed RFC project at Dasturabad (V&M) of Nirmal district
According to a recent survey, about 75% of the population in Dasturabad village depend on Paper plate Making as the principle source of income. But this is a time consuming process as they didn't have proper equipment
The idea was to provide them with equipment which makes their work much easier and faster.
The team of Street Cause – VBIT, have provided them with the Leaf Plate Moulding machine which gives opportunity to women in that village to earn their livelihood.



- 03 Dec 2020** Release of Proceedings of Second National Conference on Emerging Engineering & Technology NCEET-2020 by Department of EEE
 Department of Electrical and Electronics Engineering is pleased to announce the release of Proceedings of Second National Conference on Emerging Engineering & Technology NCEET-2020 on 3rd December 2020 by Dr.N.Goutham Rao, Chairman – VBIT and Dr.G.Manohar Reddy, Secretary –VBIT
- 03 Dec 2020** Induction Program 2020-21
 An Induction Program 2020-21 was organized for the parents and students of B.Tech first year students on 3rd December 2020. The aim was to lay the foundation for new batch of students and adapt them with the systems, structures and manners of the Institution. The event was addressed by our honourable Chief Guest Krishna Sastry Pendyala, management members and the heads.
- 02 Nov 2021** MBA orientation program
 The Department of MBA organized Orientation Programme for its students from 10th to 13th August 2020. The event was addressed by Dr.K.Sharath Babu HOD and faculty of MBA through the zoom platform.
- 02 Nov 2021** An interactive session on Career opportunities for Mechanical Engineering Students in INDUSTRY 4.0
 Department of Mechanical Engineering organised an interactive session on 'Career Opportunities for Mechanical Engineering students in Industry 4.0 on 3rd October. The event was addressed by Mr. Pradeep Annadanam through zoom platform.
- 17 Oct 2020** Webinar on Electrical Integration through OrCAD by Department of Electrical and Electronics Engineering
 Department of Electrical and Electronics Engineering organised a Webinar on Electrical Integration through OrCAD on 17th October, 2020. The webinar was addressed by Ms. Sowmya Ankathi through zoom platform with 152 participants.
- 17 Oct 2020** Webinar on “Transformers Real Time Scenario in Power stations” by Department of Electrical and Electronics Engineering
 Department of Electrical and Electronics Engineering organised Webinar on “Transformers Real Time Scenario in Power stations” on 17th October, 2020. The event was addressed by Mr.K.Suresh Babu, Deputy Executive Engineer ,Transformers , APTransco, Nellore, AP through zoom platform with 250 participants.
- 10 Oct 2020** Virtual Visit to Substation by PES chapter of IEEE – VBIT SB
 The PES chapter of IEEE – VBIT SB, organized an event called “Virtual Visit to Substation” on 10th October, 2020 through zoom platform.
- 03 Oct 2020** Webinar on Career Guidance by Department of Mechanical Engineering
 Department of Mechanical Engineering organised a webinar on Career Guidance on 3rd October 2020. The event was addressed by Dr. K.Kishore through zoom platform.
- 03 Oct 2020** An interactive session on Career opportunities for Mechanical Engineering Students in INDUSTRY 4.0
 Department of Mechanical Engineering organised an interactive session on 'Career Opportunities for Mechanical Engineering students in Industry 4.0 on 3rd October. The event was addressed by Mr. Pradeep Annadanam through zoom platform.
- 29 Sep 2020** Webinar on “Business Analytics” by Department of MBA
 Department of MBA organized a Webinar on “Business Analytics” by Dr. Rahul



Thangeda, Assistant Professor, School of Management, National Institute of Technology, Warangal on 29th September, 2020 through Zoom Online App with 75 participants.

27-29th Sep 2020 An interactive session on Blockchain and Bitcoin Fundamentals for II, III & IV B.Tech students of IT & CSE

Department of Information Technology organised Blockchain and Bitcoin Fundamentals for II, III & IV B.Tech. students of IT & CSE from 27th to 29th September. The event was addressed by various speakers from Skilltohire company through YouTube live streaming.

19 Sep 2020 Awareness Programme on GATE Entrance – “Changes, Challenges & Opportunities through GATE”

Department of EEE conducted an Awareness Programme on GATE Entrance – “Changes, Challenges & Opportunities through GATE” (Live Session) on 19th September 2020. The event was addressed by Mr.Sandeep Bhandari, DGM GATE Faculty Head and Mr.Sai Prasad, DGM GATE Marketing Head – T.I.M.E Institute through GoToWebinar Platform with 150 participants

18 Sep 2019 ASHTAVADHANA, a career development workshop

The Department of Business Management has successfully conducted ASHTAVADHANA, a career development workshop for eight days with various career and skill development activities.

13 Sep 2020 Alumni Meet 2020- Department of Mechanical Engineering

Department of Mechanical Engineering organised Virtual Alumni Meet on 13th September 2020 through zoom platform. The event was addressed by HOD of Mechanical Department, Managing Committee and Alumni of Mechanical Department.

06 Sep 2020 Alumni Meet 2020 – Department of Civil Engineering

Department of Civil Engineering organised a grand Virtual Reunion Meet on 6th September 2020 from 10.00 A.M to 1.00 P.M. The event was organised by Dr.S.Krishna Rao HOD, Civil Department and coordinated by G.Mounika Reddy & Faculty of Civil Engineering Department. It was attended and interacted by Alumni students and Faculty of Civil Department through zoom platform.

06 Sep 2020 Street Cause VBIT at Votavagu village of Kamepalli mandal, Khammam district

The tribes in Votavagu village of Kamepalli mandal, Khammam district are living in that village for more than 17 years without proper facilities .They don't have proper food to eat and they don't even have proper sanitisation or electricity which makes their area hard to stay at night and more risky due to wild animals.

So the team of Street Cause VBIT installed 2 solar lights and provided them with 5 kgs of Rice and 1 kg of Dal per family. They also provided them with 2 masks per person and 2 sanitizers per family.

30 Aug 2020 Alumni Meet – Department of Information Technology

Department of Information Technology organised a Virtual Reunion Meet on 30th August 2020. The event was organised by Mr.M.Venkateswara Rao, HOD, IT Department and coordinated by Mr. V Sridhar Reddy, Mrs.K. Soumya and Mrs.S.Bhagyarekha. It was attended and interacted by Alumni students and Faculty of IT Department through zoom platform.

29 Aug 2020 One Day Workshop on Electrical Circuit Simulation using the application – Electric Circuit Studio(ECStudio) by Department of EEE

The Department of EEE organized a One Day Workshop on Electrical Circuit Simulation using the application – Electric Circuit Studio (ECStudio) on 29th



August 2020. The event was addressed by Dr.S.Rajasekaran, Professor, VBIT and Mr.V.Jeethender, Assistant Professor, VBIT through zoom platform with 70 participants.

- 27 Aug 2020** Webinar on Artificial Intelligence in Bio Technology
Department of Electronics and Communication Engineering organised International Webinar on Artificial Intelligence in Bio Technology on 27th August 2020. The event was addressed by Dr. Steve Ling Senior lecturer of school of biomedical engineering, Core member of CHT- center for health technologies,UST Sydney,Australia through zoom platform.
- 23 Aug 2020** MBA alumni meet
Department of MBA organized Alumni meet 2020 on 23rd August. The event was attended and interacted by Alumni students and Faculty of MBA through zoom platform
- 17 Aug 2020** STTP – organized by Department of Civil Engineering
Department of Civil Engineering organized an STTP from 17th to 22nd August. The 6 days Session focused on various topics addressed by eminent speakers from the industry. The event was conducted through Zoom platform.
- 12 Aug 2020** Orientation program for II, III and IV BTech students
Department of Computer Science and Engineering conducted orientation program for IInd, IIIrd and IVth year students on 12th and 13th August 2020. The event was addressed by N.Srinivas, HOD, CSE through zoom platform.
- 10-12 Aug 2020** Orientation Program for II B.Tech students by department of Civil Engineering
Department of Civil Engineering organised a 3 days orientation program for II B.Tech students from 10th to 12th August 2020. The event was addressed by Manjeeth Kolli (Deputy Project Manager in New York Metro area) and Dr.S.Krishna Rao HOD & Faculty of Civil Engineering Department through zoom platform.
- 10 Aug 2020** Orientation Programme for II B.Tech (2020-21) batch
Department of Electrical and Electronics Engineering organised Orientation Programme for II Year B.Tech (2020-21) students from 10th August to 12th August. The event was addressed by Dr.K.Neelima, HOD and Faculties of EEE through ZOOM platform.
- 10 Aug 2020** Orientation Program for IInd, IIIrd & IVth year students by department of IT
The Department of Information Technology organized an online Orientation Program for II, III and IV BTech students from 10th to 14th August 2020. The event was addressed by Principal -Dr.G.Amarendar Rao, Vice principal – Dr.Ch.L.N.Sridhar , Director Academics – Dr.D.Devendranath, HOD IT – Mr.M.Venkateswara Rao Coordinator Academics -Mr.V.Sridhar Reddy and Faculties of the department. The event was also enlightened by Mr. Karthikeya CEO, k3 Consultants and Alumni students Mr.kunal, Ms.Chandana, Ms.Padmini & Mr.Pranod.
- 10 Aug 2020** Orientation program for II, III and IV BTech students by Dept. of Mechanical Engg.
Department of Mechanical Engineering conducted orientation program for IInd, IIIrd and IVth year students from 10th and 14th August 2020. The event was addressed by Vice Principal and HOD, Mechanical Department through zoom platform.
- 10 Aug 2020** Orientation Program for IInd, IIIrd and IV BTech year students by Dept. of ECE
Department of Electronics and Communication Engineering conducted orientation program for II, III and IV BTech students on 10th and 11th August 2020 in the presence of HOD-ECE Dr Y.Srinivas, Dr B. Brahma Reddy, Chief Guest Dr. Hari Prasad, Dr. MH Kori, Dr P. Vekateshwar Rao and Mr P. Vidyasagar.



SPORTING EXCELLENCE IN VBIT





RESEARCH AND CONSULTANCY CELL

Conceptual teaching along with Research and Development makes the Institute unique and provides an opportunity to produce competent and employable engineers with broader a outlook. VBIT has been following this novel model and exposing the students to the current technological and industrial trends. The faculty members are also trained in the current technological and research trends. R&C Cell is forging ahead with several projects funded by agencies like DST, DBT and MOES. Dr. S. Sundeep, Assoc. Professor, EEE is the Coordinator.

Completed Projects

1. A Campaign to investigate atmospheric dynamics including exchange processes over Indian tropical region (8.50 N, 8.70 N, 13.50 N, 17.40N), using high altitude balloon data, radar and lidar observations. The project was funded by ISRO under CAWSES Program. 2. Long term trends of atmospheric oscillations and their relationships with solar variability

ISRO (under CAWSES-II Program) 16 lakhs

Ongoing Projects

1. Stratosphere-Troposphere coupling through observations of ozone and water vapor: transport effects on the vertical distribution of ozone Dept. of Science & Technology, Govt. of India

2. ISRO has evolved a programme through which financial support is provided for conducting research and development activities related to Space Science, Space Technology and Space Application to academia in India. This programme of Research Sponsored by ISRO is called RESPOND. The aim of RESPOND is to encourage quality research in areas of relevance to the Indian space programme. RESPOND (Sponsored Research) programme started in the 1970s aims at encouraging academia to participate and contribute in various space related activities. Under RESPOND; projects are taken up by universities/academic institutions in the areas of relevance to Space Programme..

3. The Research & Development (R&C) Cell of Vignana Bharathi Institute of Technology (VBIT), Hyderabad has been sanctioned a grant of Rs. 30 lakhs under the FIST (Funds for Improvement of Science & Technology infrastructure) program of DST (Department of Science and Technology), Govt. of India. Faculty members and M. Tech. students are using this center for their research and project work. VBIT is one among only three colleges within Telangana and AP which received the grant under "FIST-2014" program of DST.

Collaborative Studies

A Mini Boundary Layer Mast (MAST) has been erected in association with (Indian Space Research Organisation (ISRO) on the VBIT Campus to collect the atmospheric data which is sent to a receiving station at ISRO at regular intervals.

VBIT has collaborated with the National Atmospheric Research Laboratory (NARL), Gadanki, to carry out a joint study on ionospheric delay of satellite signals measured by GPS Receiver System.



ACADEMIC CALANDAR (2021-22)

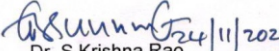
Autonomous Batch - IB.Tech I&II Semesters

I Semester

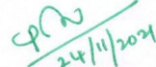
Description	Period	Duration
Orientation and Induction Program	29.11.2021 to 04.12.2021	1 week
Commencement of First Semester Class Work	06.12.2021	
I Spell of Instructions	06.12.2021 to 28.01.2022	8 Weeks
First Parent –Teacher Meeting	08.01.2022	
I Mid-Term Examinations	29.01.2022 to 01.02.2022	3 Days
Display of First Mid Marks	09.02.2022	
II Spell of Instructions	02.02.2022 to 27.03.2022	8 Weeks
Second Parent –Teacher meeting	19.02.2022	
Last day of Instruction	27.03.2022	
II Mid-Term Examinations	29.03.2022 to 31.03.2022	3 Days
Display of Second Mid Marks	09.04.2022	
Preparation Holidays and Practical Examinations	01.04.2022 to 07.04.2022	1 Week
Pre Final Examinations	08.04.2022 to 12.04.2022	5 Days
Semester End Examinations (Theory)	13.04.2022 to 25.04.2022	13 Days

II Semester

Description	Period	Duration
Commencement of Second Semester Class Work	26.04.2022	
I Spell of Instructions- Phase I	26.04.2022 to 14.05.2022	3 Weeks
Summer Vacation (Tentative)	15.05.2022 to 31.05.2022	2 weeks
I Spell of Instructions- Phase II	01.06.2022 to 05.07.2022	5 Weeks
First Parent –Teacher Meeting	11.06.2022	
I Mid-Term Examinations	06.07.2022 to 08.07.2022	3 Days
Display of First Mid Marks	16.07.2022	
II Spell of Instructions	09.07.2022 to 31.08.2022	8 Weeks
Second Parent –Teacher meeting	16.07.2022	
Last day of Instruction	31.08.2022	
II Mid-Term Examinations	01.09.2022 to 03.09.2022	3 Days
Display of Second Mid Marks	10.09.2022	
Preparation Holidays and Practical Examinations	05.09.2022 to 10.09.2022	1 Week
Pre Final Examinations	12.09.2022 to 15.09.2022	4 Days
Semester End Examinations (Theory)	19.09.2022 to 28.09.2022	10 Days
Commencement of Class Work for the next Academic Year 2022-23	03.10.2022	


 Dr. S. Krishna Rao
 Director, Academic & Planning




 Dr. Pvs Srinivas
 Principal
PRINCIPAL
 Vignana Bharathi Institute of Technology
 Aushapur (V), Ghatkesar (M), Medchal Dist.



Co-curricular Activities in VBIT





Academic Regulations



1. **AICTE:**
All India Council for Technical Education, New Delhi.
2. **Autonomous Institute:**
An institute designated as Autonomous by University Grants Commission (UGC), New Delhi in concurrence with affiliating University (Jawaharlal Nehru Technological University, Hyderabad)
3. **Academic Autonomy:**
Freedom given to an institute in all aspects of conducting its academic programs, granted by UGC for Promoting Excellence.
4. **Academic Council:**
The Academic Council is the highest academic body of the institute and is responsible for the maintenance of standards of instruction, education and examination within the institute. Academic Council is an authority as per UGC regulations and it has the right to take decisions on all academic matters including academic research.
5. **Academic Plan:**
A document defining the course contents and complete details of plan of delivery of the course viz. Course title, Course code, Pre-requisite, Credit structure, Team of instructors, Course objectives, Course outcomes, Mapping of course outcomes and programmes outcomes, relevant syllabus, textbook(s) and reference books, Course session plan and delivery plan, evaluation method, course notices and other course related aspects.
6. **Academic Year:**
It is the period necessary to complete an actual course of study within a year. It comprises two main semesters i.e., (one odd + one even) and one supplementary semester.
7. **Admission Procedure:**
As prescribed by the Government of Telangana.
8. **Autonomous Institute:**
An Institute designated as 'Autonomous' by University Grants Commission (UGC), New Delhi in concurrence with the affiliating University i.e., Jawaharlal Nehru Technological University, Hyderabad and Telangana State Government.
9. **Backlog Course:**
A course is considered to be a backlog course, if the student has obtained a failure grade (F) in that course.
10. **Basic Sciences:**
The courses offered in the areas of Mathematics, Physics, Chemistry etc., are considered to be foundational in nature.
11. **Branch:**
Means specialization in a program like B.Tech degree program in Electronics & Communication Engineering, B.Tech degree program in Computer Science and Engineering etc.
12. **Board of Studies (BOS):**
BOS is an authority as defined in UGC regulations, constituted by Head of the



Institution for each of the departments separately. They are responsible for curriculum design and updation in respect of all the programs offered by a department.

13. Commission:

Means University Grants Commission (UGC), New Delhi.

14. Choice Based Credit System (CBCS):

The credit based semester system is one which provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching along with provision of choice for the student in the course selection.

15. Compulsory course:

Course required to be undertaken for the award of the degree as per the program.

16. Continuous Internal Examination (CIE):

It is an examination conducted towards internal assessment.

17. Core Courses:

The courses that are essential constituents of each engineering discipline are categorized as professional core courses for that discipline.

18. Course:

A course is a subject offered by a department for learning in a particular semester.

19. Course Outcomes (CO):

Statements describing essential skills that each and every student need to acquire at the end of a course. They can be from 3 to 5 for all the courses.

20. Course Registration:

Process of enrolling into a set of courses in a semester of the programme.

21. Credit:

A credit is a unit that gives weight to the value, level or time requirements of an academic course. The number of 'Contact Hours' in a week of a particular course determines its credit value. One credit is equivalent to one lecture/tutorial hour per week.

22. Credit Based Semester System (CBSS):

A system which prescribes the number of credits to be secured by the student for the requirement of award of degree.

23. Credit point:

It is the product of grade point and number of credits for a course.

24. Cumulative Grade Point Average (CGPA):

It is a measure of cumulative performance of a student over all the completed semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

25. Curriculum:

Curriculum incorporates the planned interaction of students with instructional content, materials, resources, and processes for evaluating the attainment of Program Educational Objectives.

26. Degree:

A student who fulfills all the programme requirements is eligible to receive a degree.



27. **Department:**
An academic entity that conducts relevant curricular and co- curricular activities, involving both teaching and non-teaching staff, and other resources in the process of study for a degree.
28. **Detention in a Course:**
Student who does not obtain minimum prescribed attendance in a course shall be detained in that particular course.
29. **Elective Course:**
A course that can be chosen from a set of courses. An elective can be Professional Elective and / or Open Elective.
30. **Engineering Science Courses:**
Courses belonging to the basic evolutionary aspects of engineering from Mechanical Engineering, Electrical Engineering, Computer Science etc. like Workshop Practices, Engineering Graphics, Engineering Drawing, Programming through C, Basics of Electrical Energy for Engineers, Engineering Mechanics, etc.
31. **Evaluation:**
Evaluation is the process of judging the academic performance of the student in her/his courses. It is done through a combination of continuous internal assessment and semester end examinations.
32. **Grade:**
It is an index of the performance of the students in a said course. Grades are indicated by alphabets.
33. **Grade Point:**
It is a numerical weight allotted to each letter grade on a 10 - point scale.
34. **Grade Sheet:**
Based on the grades earned, a grade sheet shall be issued to all the registered students after every semester. The grade sheet shall display the course details (Course code, Course title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.
35. **Humanities & Social Sciences Courses:**
Courses offered in the area of humanities and liberal arts.
36. **Industrial Visit:**
Visit to a company / firm as per the academic requirement.
37. **Internship:**
A period of training / work experience offered by an industry / research organization / academic institution for a limited period of time as specified in these regulations.
38. **Institute:**
Vignana Bharathi Institute of Technology, Hyderabad unless indicated otherwise by the context.
39. **Mandatory Courses:**
Compulsory non-credit courses that a student need to study as prescribed in the programme.
40. **Massive Open Online Courses (MOOC):**



Open access online courses aimed at providing ways to learn new skills.

41. Mini Project:
A credit-based course that a student has to undergo during a specified semester involving exploration in a discipline belonging to their research interest within their programme of study.
42. NEP-2020:
National Educational Policy- 2020
43. Open Elective Courses:
Courses of interdisciplinary nature offered to all the students of various programmes across the Institute.
44. Outcome Based Education:
An educational theory wherein each part of an educational system is based around goals (outcomes). Each student should have achieved the goal by the end of the educational experience.
45. Pre-requisite:
A specific course or subject, the knowledge of which is required to complete before student register another course at the next grade level.
46. Professional Core Courses:
Courses that are fundamental constituents of the respective engineering discipline.
47. Professional Elective:
It indicates a course that is discipline centric. An appropriate choice of minimum number of such electives as specified in the program will lead to a degree with specialization.
48. Program:
Means, UG degree program: Bachelor of Technology (B.Tech); PG degree program: Master of Technology (M.Tech) / Master of Business Administration (MBA).
49. Programme:
A set of courses offered by the department leading to the award of degree in that programme.
50. Programme Outcomes (PO):
Statements describing the essential skill sets that each and every student need to possess at the time of graduation. These skill sets based on the graduate attributes as defined by the National Board of Accreditation (NBA) are in the areas of employability, entrepreneurial, social and behavioral aspects. They are 12 in number for a specific programme and are subjected to modification from time to time as defined by the NBA.
51. Programme Specific Outcomes (PSO):
Statements that describe what the graduates of a specific programme should be able to do. They can be 3 to 5 in number for a specific programme.
52. Project work:
It is a design or research based work to be taken up by a student during his/her final year to achieve a particular aim. It is a credit based course and is to be planned carefully by the student.



53. Registration:
Process of enrolling into a set of courses in a semester of a program.
54. Regulations:
The regulations, common to all B.Tech programs offered by Institute, are designated as “VBIT Regulations – R21” and are binding on all the stakeholders.
55. Semester:
It is a period of study consisting of 15 to 18 weeks of academic work equivalent to normally 90 working days. Odd semester commences usually in July and even semester in December of every year.
56. Semester End Examinations:
It is an examination conducted for all courses offered in a semester at the end of the semester.
57. Semester Grade Point Average:
A measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
58. Substitute Courses:
A course that is offered in place of another course that is already studied by the student and is repeated in the semester of study.
59. UBA:
Unnat Bharat Abhiyaan
60. UHV:
Universal Human Values
61. University:
Means Jawaharlal Nehru Technological University Hyderabad (JNTUH), Hyderabad, is an affiliating University.

Academic Regulations for B.Tech. Regular Students with effect from Academic Year 2021-22 (R21)

For pursuing four year under graduate Bachelor of Technology degree program of study in Engineering (B.Tech) offered by Vignana Bharathi Institute of Technology under Autonomous status and herein after referred to as VBIT.



1. Under-Graduate Degree Program in Engineering & Technology (UGP in E&T)

VBIT offers a 4-year (8 semesters) Bachelor of Technology (B.Tech.) degree program, under Choice Based Credit System (CBCS) with effect from the academic year 2021- 2022. Presently, the institute is offering Bachelor of Technology (B.Tech) degree programs in the following disciplines as shown in Table 1.

Table 1 B.Tech. Programmes of study

S.No	Name of the Program	Program Code
1	Civil Engineering-CE	01
2	Electrical and Electronics Engineering-EEE	02
3	Mechanical Engineering-ME	03
4	Electronics and Communication Engineering-ECE	04
5	Computer Science & Engineering-CSE	05
6	Information Technology-IT	12
7	Computer Science and Business System-CSB	32
8	Computer Science & Engineering(Cyber Security)-CSC	62
9	Computer Science & Engineering(AI&ML)-CSM	66
10	Computer Science & Engineering(Data Science)-CSD	67

2. Eligibility for admission

- Admission to the under graduate (UG) program shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (TS EAMCET) subject to reservations as prescribed by the government from time to time.
- The medium of instructions for the entire under graduate program in Engineering & Technology will be in English only.

3. B.Tech. Program structure

- A student after securing admission shall complete the B.Tech. program in a minimum period of four academic years (8 semesters), and a maximum period of eight academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course. Each student shall secure 160 credits (with CGPA \geq 5) required for the completion of the under graduate program and award of the B.Tech. degree.
- Every B.Tech. programme of study shall be designed to have theory and laboratory courses. In addition, a student shall carry out internship, industry oriented mini-project, project and other courses as prescribed in the curriculum of the programmes.



- Every course offered under a B.Tech. programme shall be placed in one of the course categories with minimum credits as listed in the Table 2.
- The course group / category along with their broad classification and description are listed in the Table 3.
- UGC/ AICTE specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.
- Semester scheme
- Each under graduate program is of 4 academic years (8 semesters) with the academic year divided into two semesters of 16-18 weeks (90 instructional days) each, each semester having- Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) under Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) indicated by UGC, and curriculum/course structure as suggested by AICTE are followed.
- **Credit courses**
All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.
- One credit for one hour/ week/ semester for theory/ lecture (L) courses or Tutorials.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses. Courses like UHV-I, NSS, Environmental Science, Constitution of India and Gender Sensitization are mandatory courses. These courses will not carry any credits.

Table 2 Category of Courses, their Codes and Distribution of Credits

S.No	Course Category	Course Description	Percentage Credits		Typical Credits as per AICTE
			Min	Max	
1	HS- Humanities and Social Sciences including Management	Includes subjects related to humanities, social sciences and management	5	10	12
2	BS- Basic Sciences	Includes mathematics, physics and chemistry subjects	10	20	25
3	ES- Engineering Sciences	Includes fundamental engineering subjects	10	20	24
4	PC- Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.	30	40	48
5	PW- Project Work and Internship	B.Tech. project or UG project or UG major project. Summer Internship/Mini-project	7	20	18
6	PE- Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.	10	15	18
7	OE- Open Electives	Elective subjects which include inter- disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.	5	10	15
8	MC- Mandatory Courses (Non -Credit)	Mandatory courses (non-credit)	-	-	(Non-Credit)



Table 3 Description of Courses

Broad Course category	Course Group/ Category	Course Description
Foundation	Humanities and Social Sciences including Management	Includes subjects related to humanities, social sciences and management
	Basic Sciences	Includes mathematics, physics and chemistry subjects
	Engineering Sciences	Includes fundamental engineering subjects
Core	Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
	Project Work and Internship	B.Tech. project or UG project or UG major project. Summer Internship/Mini-project
Elective	Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
	Open Electives	Elective subjects which include inter- disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
Mandatory	-	Mandatory non-credit courses

Subject Course Classification

All subjects/ courses offered for the under graduate program in E&T (B.Tech. degree programs) are broadly classified as follows.

- i. Core foundation (CF) - Mandatory courses comprising of
 - a. Humanities courses;
 - b. Basic Sciences (BS) including Physics, Chemistry and Mathematics;
 - c. Engineering Sciences (ES), including Basic Engineering courses such as Material Science, Basic Workshop, Engineering Drawing, Engineering Graphics, Digital systems, etc.
- ii. Compulsory Courses (CC) (Mandatory) consist of the following.
 - a) Professional Core (PC) courses: These courses expose the students to the foundation of Engineering topics related to the chosen programme of study comprising of theory and Practical/ field work/ Design project/ Project.
 - b) Professional Elective (PE): These courses enable the students to take up a group of courses of their interest in the area of specialization offered by the parent Department.
 - c) Open Electives (OE): These courses are offered by Engineering and Non-Engineering departments (across the disciplines) other than their parent Department.
 - d) Non-CGPA courses: These courses are offered in certain semesters are compulsory, but are not used for calculation of GPA and CGPA. However, the credits will be mentioned in the grade sheet.

Non-CGPA courses:

- The student shall select any course /activity listed in Table 4 during the course



of study. The student has to make his / her own efforts for earning the credits. The grades given will be Pass / Fail (P/F). The respective class teachers have to encourage, monitor and record the relevant activities of the students, based on the rules issued from time to time by the Institute and submit the End semester report to the Head of the Department.

Table 4. Non – CGPA Courses

S.No	Course /Activity	Credits
1	Leadership and Team Building Skills – (Consistent and active participation in organizing various events through professional bodies or any other clubs)	2
2	Innovative and Entrepreneurial Skills- i) Active participation in various programs like SHODH initiated by Institute ii) Achievement in Innovative activities like hackathons, establishing Startups, etc.	2
3	Research, Publication and Paper writing Skills- (Active participation in designing innovative projects and publication of papers in standard journals)	2

The Institute has followed almost all the guidelines prescribed by AICTE.

4 Course registration

- A faculty mentor shall be assigned to a group of 20 students, who will advise the students about the under graduate program, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.
- The academic section of the college invites registration forms from students before the beginning of the semester through on line registration, ensuring date and time stamping. The on-line registration requests for any current semester shall be completed before the commencement of SEEs (Semester End Examinations) of the 'preceding semester'.
- A student can apply for on-line registration, only after obtaining the written approval from faculty advisor/counselor, which should be submitted to the DAP office/Academic Section through the Head of the Department. A copy of it shall be retained with Head of the Department, faculty advisor/ counselor and the student.
- A student may be permitted to register for all the subjects/ courses in a semester as specified in the course structure with maximum additional subject(s)/course(s) limited to 4 credits, based on progress and SGPA/ CGPA, and completion of the pre-requisites as indicated for various subjects/ courses, in the department course structure and syllabus contents.
- Choice for additional subjects/courses must be clearly indicated, which needs the specific approval and signature of the faculty advisor/counselor.
- If the student submits ambiguous choices or multiple options or erroneous entries during on-line registration for the subject(s) / course(s) under a given/ specified course group/category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.
- Subject/ course options exercised through on-line registration are final and cannot be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for



registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head of the department, with due notification and time-framed schedule, within the first week after the commencement of class-work for that semester.

- Dropping of subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor within a period of 15 days from the beginning of the current semester.
- Open electives: The students have to choose three open electives (OE-I, II & III) from the list of open electives given. However, the student cannot opt for an open elective subject offered by his own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.
- Professional electives: The students have to choose six professional electives (PE-I to VI) from the list of professional electives given.

5.0 Subjects/ courses to be offered

- A typical section (or class) strength for each semester shall be 60.
- A subject/ course may be offered to the students, only if a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).
- More than one faculty member may offer the same subject (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - first come first serve basis and CGPA criterion (i.e. the first focus shall be on early on-line entry from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).
- If more entries for registration of a subject come into picture, then the Head of the Department concerned shall decide, whether or not to offer such a subject/ course for two (or multiple) sections.
- In case of options coming from students of other departments/ branches/ disciplines (not considering open electives), first priority shall be given to the student of the parent department.

6.0 Attendance requirements:

- A student shall be eligible to appear for the semester end examinations, if the student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (excluding attendance in mandatory courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab) for that semester. Two periods of attendance for each theory subject shall be considered, if the student appears for the mid-term examination of that subject.
- Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the students representation with supporting evidence.
- A stipulated fee shall be payable for condoning of shortage of attendance.



- Shortage of attendance below 65% in aggregate shall in no case be condoned.
- Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester. They may seek re-registration for all those subjects registered in that semester, in which the student is detained, by seeking re-admission into that semester as and when offered; if there are any professional electives and/ or open electives, the same may also be re-registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the same set of elective subjects offered under that category.
- A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

7.0 Academic requirements

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in item no.6.

- A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% (25 marks out of 70 marks) in the semester end examination, and a minimum of 40%(40 marks out of 100 marks) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing 'C' grade or above in that subject/course.
- A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Mini Project/Summer Internship, if the student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student is deemed to have failed, if he (i) does not submit a report on Mini Project/Summer Internship, or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the IV year I Semester, or (iii) secures less than 40% marks in Mini Project/Summer Internship evaluations.
- A student may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such one re appearance evaluation also, the student has to reappear for the same in the next subsequent semester, as and when it is scheduled.
- **Promotion Rules**

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Second year first semester to second year second semester	Regular course of study of second year first semester.
4	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.



5	Third year first semester to third year second semester	Regular course of study of third year first semester.
6	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 60% Credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

- A student (i) shall register for all courses/subjects covering 160 credits as specified and listed in the course structure, (ii) fulfills all the attendance and academic requirements for 160 credits, (iii) earn all 160 credits by securing SGPA ≥ 5.0 (in each semester), and CGPA (at the end of each successive semester) ≥ 5.0 , (iv) passes all the mandatory courses, to successfully complete the under graduate program. The performance of the student in these 160 credits shall be taken into account for the calculation of the final CGPA (at the end of under graduate program), and shall be indicated in the grade card of IV year II semester.
- If a student registers for extra subjects (in the parent department or other departments/branches of Engg.) other than those listed subjects totaling to 160 credits as specified in the course structure of his department, the performances in those extra subjects (although evaluated and graded using the same procedure as that of the required 160 credits) will not be taken into account while calculating the SGPA and CGPA. For such extra subjects registered, percentage of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1 – 7.4 above.
- A student is eligible to appear in the semester end examination for any subject/course, but absent from it or failed (thereby failing to secure 'C' grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- A student detained in a semester due to shortage of attendance may be re-admitted in the same semester in the next academic year for fulfillment of academic requirements. The academic regulations under which a student has been readmitted shall be applicable. However, no grade allotments or SGPA/CGPA calculations will be done for the entire semester in which the student has been detained.
- A student detained due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits. The academic regulations under which the student has been readmitted shall be applicable to him.

8.0 Evaluation - Distribution and Weightage of marks

- The performance of a student in every subject/course (including practicals and Project) will be evaluated for 100 marks each, with 30 marks allotted for CIE (Continuous Internal Evaluation) and 70 marks for SEE (Semester End-



Examination).

For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of one objective paper, one descriptive paper & Participatory Reporting Assessment (PRA). The objective paper and the descriptive paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for descriptive paper) & 10 marks for Participatory Reporting Assessment (PRA). The objective paper is set with 20 multiple choice, fill-in the blanks and matching type of questions for a total of 10 marks. The descriptive paper shall contain 4 full questions out of which, the student has to answer 2 questions, each carrying 5 marks.

Participatory Reporting Assessment (PRA):

- PRA contributes to 10% of the final evaluation of the course. The student is evaluated based on the selected topic of the course and the observations made on the report.
- PRATIBHA - Participatory Report Assessment of Theme and Innovation Based Harmonic Activities.
- Based on the type of the course offered, PRA activity can be of two types:
 - i. The students are mandated to participate in any of the relevant activities and prepare a Report by the end of the semester for which 10% of the total evaluation component is assessed.
 - ii. Activities like field visits, questionnaires/case studies collected by the students from an industry expert, real-world observations, recent trends on the relevant course, Interview of the experts, review of related reference books, documentary, video preparation, presentation, prototype design etc.
- The students are mandated to participate in a prescribed short-term Value-Added Program (VAP) designed by the faculty and need to submit the certificate on completion of the course.
- The evaluation of the student should be based on the report prepared as part of the PRA requirements or by the submission of VAP certificate.
- A committee constituted by the Principal comprises of Head of the department, Academic Coordinator, Senior faculty of the department and subject teachers of the semester shall evaluate the PRA in two phases. In first phase, during first two weeks of commencement of class work the committee scrutinize the proposals submitted by the students and in the second phase at the end of the semester the submitted reports will be evaluated and award marks. These marks will be considered in the Continuous Internal Evaluation (CIE).
- While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus.
- The total marks secured by the student in each mid-term examination are evaluated for 30 marks, and the average of the two mid-term examinations shall be taken as the final marks secured by each student in Continuous Internal Evaluation.
- If any student is absent from any subject of a mid-term examination, re-examination will be conducted for the students with genuine reasons after approval by Head of the respective department and Head of the institution.



- The semester end examinations (SEE) will be conducted for 70 marks consisting of two parts viz. i) Part-A for 20 marks, ii) Part - B for 50marks.
- Part-A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit and carry 2 marks each.
- Part-B consists of five questions carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.
- For subjects like Engineering Graphics/Engineering Drawing, the SEE shall consist of five questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions. There shall be no Part – A, and Part – B system.
- For subjects like Machine Drawing Practice/Machine Drawing, the SEE shall be conducted for 70 marks consisting of two parts viz. (i) Part – A for 30 marks. 3 out of 4 questions must be answered, (ii) Part – B for 40 marks. Part – B is compulsory.
- For subjects Structural Engineering – I & II (RCC & STEEL), the SEE will be conducted for 70 marks consisting of 2 parts viz. (i) Part – A for 10 marks and, (ii) Part – B for 60 marks. Part – A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit relating to design theory and codal provisions and carry 2 marks each. The next five sub-questions are from each unit and carry 1 mark each. Part – B consists of 5 questions (numbered 2 to 6) carrying 12 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there is either or choice, which means that there will be two questions from each unit and the student should answer either of the two questions.
- For practical subjects there shall be a continuous internal evaluation during the semester for 30 marks and 70 marks for semester end examination. Out of the 30 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 15 marks conducted by the laboratory teacher concerned. The semester end examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges with autonomous status.
- For the subject having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing, machine drawing practice and estimation), the distribution shall be 30 marks for continuous internal evaluation (15 marks for day-to-day work and 15 marks for internal tests) and 70marks for semester end examination. There shall be two internal tests in a semester and the average of the two shall be considered for the award of marks for internal tests.
- There shall be Summer Internship, in collaboration with an industry of their specialization. Students will register for this immediately after II year II semester examinations and pursue it during summer vacation. Summer Internship shall be submitted in a report form and presented before the committee in III year I semester. Students will register for Mini Project



- immediately after III year II semester examinations and pursue it during summer vacation. Mini Project shall be submitted in a report form and presented before the committee in IV year I semester. It shall be evaluated for 100 external marks. The committee consists of an external examiner; Head of the Department, supervisor of the mini project/Summer Internship and a senior faculty member of the department. There shall be no internal marks for Mini Project/Summer Internship.
- Major project shall be carried out in IV Year Second Semester and it will be evaluated for 100 marks. Student has to submit project work report at the end of semester. SEE for project shall be completed before the commencement of SEE Theory examinations.
 - Out of a total of 100 marks for the UG major Project, 30 marks shall be allotted for internal evaluation and 70 marks for the end semester examination (viva voce). In addition, the UG major Project supervisor shall also be included in the committee. The topics for UG Internship, mini project and UG major Project shall be different from one another. The evaluation of UG major Project shall be made at the end of IV year II semester through external examiner. The internal evaluation shall be on the basis of three reviews given by each student on the topic of UG major Project. A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he fails in such one re-appearance evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.
 - The external examiner shall evaluate the project work for 70marks and the project supervisor shall evaluate it for 30 marks. The student is deemed to have failed, if he (i) does not submit a report on Project, or does not make a presentation of the same before the external examiner as per schedule, or (ii) secures less than 40% marks in the sum total of the CIE and SEE taken together.
 - For conducting viva-voce of project, there will be a committee consisting of Head of the department, Project coordinator and external examiner to be nominated by the Principal.
 - The laboratory marks and the internal marks awarded by the college are subject to scrutiny and scaling by the Academic and Planning section of the college, wherever necessary the laboratory records and internal & external test papers shall be preserved in the institute.
 - For mandatory courses only internal assessment shall be done where in , a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the Continuous Internal Evaluation for passing the subject/course[No external evaluation].
 - He shall be given a choice to choose Self Reporting of Unique and Jointly Acquired Natural Activities [SRUJANA]. These marks should also be uploaded along with the internal marks of other subjects in the college examination portal.

Self-Reporting of Unique and Jointly Acquired Natural Activities [SRUJANA]

- The students can choose any one of these group activities based on their own interest or shall complete their Non- Credit course within the same semester as prescribed by the department.



During the First year of the program:

- i. Sem – 1: Universal Human Values (UHV – 1) as a part of Induction program
- ii. Sem – 2: NSS / Street Cause / Avishkar / Unnat Bharat Abhiyan /Harith (Eco club)

During the Second and the Third year of the program, an option between the Non-Credit Courses and the five categories of SRUJANA activities are to be chosen as under:

Mandatory Non- Credit Course in Second and Third Year

- i. Gender Sensitization
 - ii. Environmental Science
 - iii. Indian Constitution
- The students may select the following SRUJANA activities as a part of Mandatory course.
 - a) Literary Activities like - Stutalk-News bulletin / Akshara- Literature Festival
 - b) Arts Activities like -Virinchi- Performing Arts club, Vibha- Annual cultural festival, Aashay- Film club, Chitrika- Photography club and Theater club
 - c) Public Speaking Activities like -TEDx VBIT, MUN
 - d) Professional Bodies Association like -IEEE, IETE,
 - e) Sports contribution
 - No marks or letter grades shall be allotted for mandatory/non-credit courses. Only Pass/Fail shall be indicated in Grade Card.

9.0 Grading procedure

- Grades will be awarded to indicate the performance of students in each theory subject, laboratory / practicals, Internship, Mini Project, and Major project. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.
- As a measure of the performance of a student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

% of Marks Secured in a Subject / Course (Class Intervals)	Letter Grade (UGC Guidelines)	Grade Points
Greater than or equal to 90%	O (Outstanding)	10
80 and less than 90%	A ⁺ (Excellent)	9
70 and less than 80%	A (Very Good)	8
60 and less than 70%	B ⁺ (Good)	7
50 and less than 60%	B (Average)	6
40 and less than 50%	C (Pass)	5
Below 40%	F (FAIL)	0
Absent	Ab	0



- A student who has obtained an 'F' grade in any subject shall be deemed to have 'failed' and is required to reappear as a supplementary student in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.
- To a student who has not appeared for an examination in any subject, 'Ab' grade will be allocated in that subject, and he is deemed to have 'failed'. A student will be required to reappear as a supplementary student in the semester end examination, as and when offered next. In this case also, the internal marks in those subjects will remain the same as those obtained earlier.
- A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding credit points (CP) are computed by multiplying the grade point with credits for that particular subject/course.

Credit points (CP) = grade point (GP) x credits For a course

- A student passes the subject/ course only when $GP \geq 5$ ('C' grade or above)
- The semester grade point average (SGPA) is calculated by dividing the sum of credit CP) secured from all subjects/ courses registered in a semester, by the total points (number of credits registered during that semester. SGPA is rounded off to two decimal places. SGPA is thus computed as =

$$SGPA = \left\{ \sum_{i=1}^N C_i G_i \right\} / \left\{ \sum_{i=1}^N C_i \right\} \dots \text{For each semester,}$$

where 'i' is the subject indicator index (takes into account all subjects in a semester), 'N' is the no. of subjects 'registered' for the semester (as specifically required and listed under the course structure of the parent department), C_j is the no. of credits allotted to the i th subject, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that i th subject.

The cumulative grade point average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in all registered courses in all semesters, and the total number of credits registered in all the semesters. CGPA is rounded off to two decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$CGPA = \left\{ \sum_{j=1}^M C_j G_j \right\} / \left\{ \sum_{j=1}^M C_j \right\} \dots \text{for all S semesters registered}$$

(i.e., up to and inclusive of S semesters, $S \geq 2$).

where 'M' is the total no. of subjects (as specifically required and listed under the course structure of the parent department) the student has 'registered' i.e., from the 1st semester onwards up to and inclusive of the 8th semester, "j" is the subject indicator index (takes into account all subjects from 1 to 8 semesters), C_j is the no. of credits allotted to the j th subject, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that j th subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.



Illustration of calculation of SGPA:

Course/Subject	Credits	Letter Grade	Grade Points	Credit Points
Course 1	4	A	8	4 x 8 = 32
Course 2	4	O	10	4 x 10 = 40
Course 3	4	C	5	4 x 5 = 20
Course 4	3	B	6	3 x 6 = 18
Course 5	3	A+	9	3 x 9 = 27
Course 6	3	C	5	3 x 5 = 15
	21			152

$$\text{SGPA} = 152/21 = 7.24$$

Illustration of calculation of CGPA up to 3rd semester:

Semester	Course/Subject Title	Credits Allotted	Letter Grade Secured	Corresponding Grade Point (GP)	Credit Points(CP)
I	Course 1	3	A	8	24
I	Course 2	3	O	10	30
I	Course 3	3	B	6	18
I	Course 4	4	A	8	32
I	Course 5	3	A+	9	27
I	Course 6	4	C	5	20
II	Course 7	4	B	6	24
II	Course 8	4	A	8	32
II	Course 9	3	C	5	15
II	Course 10	3	O	10	30
II	Course 11	3	B+	7	21
II	Course 12	4	B	6	24
II	Course 13	4	A	8	32
II	Course 14	3	O	10	30
III	Course 15	2	A	8	16
III	Course 16	1	C	5	5
III	Course 17	4	O	10	40
III	Course 18	3	B+	7	21
III	Course 19	4	B	6	24
III	Course 20	4	A	8	32
III	Course 21	3	B+	7	21
	Total Credits	69		Total Credit Points	518

$$\text{CGPA} = 518/69 = 7.51$$

The above illustrated calculation process of CGPA will be followed for each subsequent semester until 8th semester. The CGPA obtained at the end of 8th semester will become the final CGPA secured for entire B.Tech. Program.

- For merit ranking or comparison purposes or any other listing, only the rounded off values of the CGPAs will be used.
- SGPA and CGPA of a semester will be mentioned in the semester Memorandum of Grades if all subjects of that semester are passed in first attempt. Otherwise the SGPA and CGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester. However, mandatory courses will not be taken into consideration.



10 Passing standards

- A student shall be declared successful or 'passed' in a semester, if student secures a GP ≥ 5 ('C' grade or above) in every subject/course in that semester (i.e. when student gets an 5.00 at the end of that particular semester); and a student shall be declared SGPA successful or 'passed' in the entire under graduate programme, only when gets a CGPA 5.00 for the award of the degree as required.
- After the completion of each semester, a grade card or grade sheet shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, grade earned, etc.), credits earned.

11 Declaration of results

- Computation of SGPA and CGPA are done using the procedure listed in 9.
- For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

12 Award of degree

12.1 A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 160 credits (with CGPA 5.0), within 8 academic years from the date of commencement of the first academic year, shall be declared to have „qualified' for the award of B.Tech. degree in the chosen branch of Engineering selected at the time of admission.

12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.

12.3 A student with final CGPA (at the end of the under graduate program) 8.00, and fulfilling the following conditions – shall be placed in first class with distinction'.

However, he

- Should have passed all the subjects/courses in first appearance within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.
- Should have secured a CGPA 8.00, at the end of each of the 8 sequential semesters, starting from I year I semester onwards.
- Should not have been detained or prevented from writing the semester end examinations in any semester due to shortage of attendance or any other reason.

A student fulfilling any of the above conditions with final CGPA > 8 shall be placed in first class with distinction.

12.4 Students with final CGPA (at the end of the under graduate program) 6.50 but < 8.00 shall be placed in 'first class'.

12.5 Students with final CGPA (at the end of the under graduate program) 5.50 but < 6.50 , shall be placed in „second class'.

12.6 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the undergraduate program) 5.00 but < 5.50 , shall be placed in "pass class".

12.7 A student with final CGPA (at the end of the under graduate program) < 5.00 will not be eligible for the award of the degree.



12.8 Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of “Gold Medal”.

13 Withholding of results

- If the student has not paid the fees to the institute at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and the student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.

14 Student transfers

- There shall be no branch transfers after the completion of admission process.

15 Scope

- The academic regulations should be read as a whole, for the purpose of any interpretation.
- In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Controller of Examinations and Principal is final.
- Institute may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the College Academic Council.
- Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.

Academic Regulations for B.Tech. (lateral entry scheme) from the academic year 2022-23

1. Eligibility for award of B. Tech. Degree(LES)
The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.
2. The student shall register for 120 credits and secure 120 credits with CGPA ≥ 5+ from II year to IV year B.Tech. program (LES) for the award of B.Tech. degree.
3. The students, who fail to fulfill the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B. Tech.
4. The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech.(LES).
5. **Promotion rule**

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 50% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).



MALPRACTICES RULES DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

S.No	Nature of Malpractices / Improper conduct If the student:	Punishment
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the student is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The hall ticket of the student is to be cancelled.
3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.



6.	Refuses to obey the orders of the chief superintendent/assistant superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The students also are debarred
	in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears off the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
8.	Possesses any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.
9.	If a student of the college, who is not a student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Expulsion from the examination hall & cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to the police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared for including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared for including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the institute for further action to award a suitable punishment.	



Course Structure & Detailed Syllabus



B.Tech 1st Year Course Structure R21

Department of ME & CE

I Year – I Semester

Sl. No	Course Code	Course Title	Category	L	T	P	C
1	21BS1111	Mathematics-I	BS	3	1	-	4
2	21BS1115	Engineering Physics	BS	3	-	-	4
3	21CS1111	Programming for Problem Solving	ES	3	-	-	3
4	21ME1111	Engineering Mechanics	ES	3	1	-	4
5	21BS1155	Engineering Physics Lab	BS	-	-	3	1.5
6	21CS1152	Programming for Problem Solving Lab	ES	-	-	3	1.5
7	21ME1153	Engineering Graphics	ES	1	-	4	3
8	21MC0001	Universal Human Values – I (Induction Program)	MC	3	-	-	-
Total				16	2	10	21

I year – II Semester

Sl. No	Course Code	Course Title	Category	L	T	P	C
1	21BS1211	Mathematics - II	BS	3	1	-	4
2	21BS1214	Applied Chemistry	BS	3	-	-	3
3	21HS1211	English	HS	2	-	-	2
4	21CS1211	Python Programming	ES	3-	-	-	3
5	21BS1253	Chemistry Lab	BS	-	-	3	1.5
6	21HS1252	English Language Communication Skills Lab	HS	-	-	2	1
7	21CS1253	Python Programming Lab	ES	-	-	3	1.5
8	21ME1254	Engineering Workshop	BS	1	-	4	3
9	21MC0002	NSS/UBA/Street Cause/Aavishkar	MC	-	-	-	-
Total				12	1	12	19

**B.Tech 1st Year Course Structure R21****Department of ECE, IT, CSD****I-Year I Semester**

Sl. No	Course Code	Course Title	Category	L	T	P	C
1	21BS1111	Mathematics-I	BS	3	1	-	4
2	21BS1112	Applied Physics	BS	3	1	-	4
3	21HS1111	English	HS	2	-	-	2
4	21CS1111	Programming for Problem Solving	ES	3	-	-	3
5	21BS1152	Applied Physics Lab	BS	-	-	3	1.5
6	21HS1152	English Language Communication Skills Lab	HS	-	-	2	1
7	21CS1153	Programming for Problem Solving Lab	ES	-	-	3	1.5
8	21ME1154	Engineering Graphics	ES	1	-	4	3
9	21MC0001	Universal Human Values – I (Induction Program)	MC	-	-	-	-
Total				12	1	12	20

I-Year II Semester

Sl.No	Course Code	Course Title	Category	L	T	P	C
1	21BS1211	Mathematics - II	BS	3	1	-	4
2	21BS1213	Engineering Chemistry	BS	3	-	-	3
3	21EE1211	Basic Electrical Engineering	ES	3	-	-	3
4	21CS1211	Python Programming	ES	3	-	-	3
5	21BS1253	Chemistry Lab	BS	-	-	3	1.5
6	21EE1252	Basic Electrical Engineering Lab	ES	-	-	3	1.5
7	21CS1253	Python Programming Lab	ES	-	-	3	1.5
8	21ME1255	Engineering Workshop Practice	ES	1	-	3	2.5
9	21MC0002	NSS/UBA/Street Cause/Aavishkar	MC	3	-	-	-
Total				16	1	12	20

**B.Tech 1st Year Course Structure R21****Department of CSE, CS, CSM, CSB, EEE****I YEAR I-SEMESTER**

Sl. No	Course Code	Course Title	Category	L	T	P	C
1	21BS1111	Mathematics-I	BS	3	1	-	4
2	21BS1113	Engineering Chemistry	BS	3	-	-	3
3	21EE1111	Basic Electrical Engineering	ES	3	-	-	3
4	21CS1111	Programming for Problem Solving	ES	3	-	-	3
5	21BS1153	Chemistry Lab	BS	-	-	3	1.5
6	21EE1152	Basic Electrical Engineering Lab	ES	-	-	3	1.5
7	21CS1153	Programming for Problem Solving Lab	ES	-	-	3	1.5
8	21ME1155	Engineering Workshop Practice	ES	1	-	3	2.5
9	21MC0001	Universal Human Values-I (Induction Program)	MC	-	-	-	0
Total Credits				13	1	12	20

I YEAR II-SEMESTER

Sl. No	Course Code	Course Title	Category	L	T	P	C
1	21BS1211	Mathematics - II	BS	3	1	-	4
2	21BS1212	Applied Physics	BS	3	1	-	4
3	21HS1211	English	HS	2	-	-	2
4	21CS1211	Python Programming	ES	3	-	-	3
5	21ME1254	Engineering Graphics	ES	1	-	4	3
6	21BS1252	Applied Physics Lab	BS	-	-	3	1.5
7	21CS1253	Python Programming Lab	ES	-	-	3	1.5
8	21HS1252	English Language Communication Skills Lab	HS	-	-	2	1
9	21MC0002	NSS/UBA/Street Cause/Avishkar	MC	-	-	-	0
Total Credits				12	2	12	20



B. Tech I Year Syllabus

VBIT

21BS1111: MATHEMATICS-I

(Linear Algebra and Differential Calculus)

(Common to all branches)

L	T	P	C
3	1	-	4

Course Objectives:

To learn

1. Types of matrices and their properties.
2. Concept of a rank of the matrix and applying this concept to know the consistency and solving the system of linear equations.
3. Concept of Eigen values and eigenvectors and to reduce the quadratic form to canonical form
4. To estimate the value for the given data using interpolation
5. Geometrical approach to the mean value theorems and their application to the mathematical problems
6. Partial differentiation, concept of total derivative
7. Finding maxima and minima of function of two and three variables.

Course Outcomes:

After learning the contents of this paper the student must be able to

1. Write the matrix representation of a set of linear equations and to analyze the solution of the system of equations
2. Find the Eigen values and Eigenvectors
3. Reduce the quadratic form to canonical form using orthogonal transformations.
4. Estimate the value for the given data using interpolation.
5. Solve the applications on the mean value theorems.
6. Find the extreme values of functions of two variables with/ without constraints.

UNIT-I: Matrices

Matrices: Types of Matrices, Symmetric; Hermitian; Skew-symmetric; Skew-Hermitian; orthogonal matrices; Unitary Matrices; rank of a matrix by Echelon form and Normal form, Inverse of Non-singular matrices by Gauss-Jordan method; System of linear equations; solving system of Homogeneous and Non-Homogeneous equations. Gauss elimination method; Gauss Seidel Iteration Method.

UNIT-II: Eigen values and Eigen vectors

Linear Transformation and Orthogonal Transformation: Eigen values and Eigenvectors and their properties: Diagonalization of a matrix; Cayley-Hamilton Theorem (without proof); finding inverse and power of a matrix by Cayley-Hamilton Theorem; Quadratic forms and Nature of the Quadratic Forms; Reduction of Quadratic form to canonical forms by Orthogonal Transformation

**UNIT-III: Numerical Techniques**

Solution of Algebraic and Transcendental Equations:

Bisection method; Regular-False method; Iteration Method; Newton-Raphson method.

Interpolation: Finite differences, other operators, Newton's forward and backward difference interpolation formulae. Lagrange's method of interpolation formulae.

UNIT-IV: Differential Calculus & Special functions

Mean value theorems: Rolle's Theorem, Lagrange's Mean value theorem with their Geometrical Interpretation and applications, Cauchy's mean value Theorem. Taylor's Series for one variable (without proof). Applications of definite integrals to evaluate surface areas and volumes of revolutions of curves (Only in Cartesian coordinates) for known curves.

Special Functions: Definition of Improper Integral; Beta and Gamma functions and their applications.

UNIT-V: Multivariable calculus (Partial Differentiation and applications)

Definitions of Limit and continuity. Partial Differentiation; Euler's Theorem; Total derivative; Jacobian; Functional dependence and independence, Maxima and minima of functions of two variables and three variables using method of Lagrange multipliers.

TEXTBOOKS:

- [1] B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 40th Edition, 2014
- [2] N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2008.
- [3] Ramana B.V., Higher Engineering Mathematics, Tata McGraw Hill New Delhi, 11th Reprint, 2010.

REFERENCES:

- [1] Erwin kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006.
- [2] G.B. Thomas and R.L. Finney, Calculus and Analytic geometry, 9th Edition, Pearson, Reprint, 2002.
- [3] Paras Ram, Engineering Mathematics, 2nd Edition, CBS Publishers
- [4] Rajinder Kumar Jain, S. R. K. Iyengar, Advanced Engineering Mathematics, Narosa Publications, New edition



B. Tech I Year Syllabus

21BS1112/1212 - APPLIED PHYSICS

(Common to CSE, CSM, CSC, CSD,
CSB, ECE, EEE & IT)

L	T	P	C
3	1	-	4

Course Objectives:

1. To enlighten the necessity of Quantum Mechanics and to provide fundamentals of de Broglie waves, quantum mechanical wave equation and its applications.
2. To explain the basic concepts and transport phenomenon of charge carriers in semiconductors and applications of diodes.
3. To understand the basic concepts of Electromagnetic theory.
4. To explain the significant concepts of dielectric and magnetic materials that leads to potential applications in the emerging micro devices.
5. To understand the mechanisms of emission of light, the use of lasers as light sources for technical applications, study of propagation of light wave through optical fibers along with applications in communications.

Course Outcomes:

After completion of this course the student is able to

1. Explain the concept of dual nature of matter and understand the significance of wave function.
2. Estimate the concentration of charge carriers in semiconductors and will be able
3. To determine the type of semiconductors.
4. Learn the basic laws of Electro magnetism.
5. Learn various dielectric properties and their usage in various engineering applications.
6. Learn principle, working of various laser systems and light propagation through optical fibers.

UNIT –I:

INTRODUCTION TO QUANTUM PHYSICS:

Introduction to quantum physics, Black body radiation, Planck's law (Qualitative treatment only), Photoelectric effect, Compton effect, de-Broglie's hypothesis, Wave-particle duality, Davisson and Germer experiment, Heisenberg's Uncertainty principle, Physical significance of the wave function ψ , Schrodinger's time independent wave equation, Particle in one dimensional box.

UNIT –II:

SEMICONDUCTOR PHYSICS:

Intrinsic and Extrinsic semiconductors, Position of fermi energy level in intrinsic and extrinsic semiconductors, calculation of carrier concentration of Intrinsic semiconductor, Hall Effect, formation of PN junction, forward and reverse bias (V-I Characteristics), energy diagram of PN junction, Direct and indirect band gap semiconductors, LED: Device structure, Materials and Characteristics, Solar cell working principle and Characteristics, PIN and Avalanche photodiode.

**UNIT – III:****ELECTROMAGNETISM:**

Scalar and Vector fields, Significance of Gradient, divergence and Curl, Gauss Divergence Theorem and Stokes Theorem (Qualitative treatment), Coulomb's law, Gauss law of electrostatics, Electric current and continuity equation, Amperes law, Modified Ampere's law and Faraday's laws, Maxwell's Equations in Integral and Differential form, Derivation of Maxwell's Equations from Integral form to Differential form.

UNIT – IV:**ENGINEERING MATERIALS:**

DIELECTRICS: Electric dipole, dipole moment, dielectric constant, polarizability, electric susceptibility, displacement vector, types of polarizations: electronic and ionic polarizations (quantitative treatment), internal field, Clausius-Mossotti relation, ferroelectricity, Piezo and Pyro electricity.

MAGNETIC MATERIALS: Magnetization, Permeability, magnetic field intensity, magnetic field induction, magnetic susceptibility, Bohr magneton, classification of magnetic materials, domain theory, and hysteresis curve, soft and hard magnetic materials, Introduction to Superconductivity.

UNIT – V**LASERS AND OPTICAL FIBERS:**

Lasers: Characteristics of lasers, absorption, spontaneous and stimulated emission of radiation, population inversion, Einstein coefficients, Basic components of laser, pumping mechanisms, Types of lasers: Ruby laser, Helium – Neon laser, semiconductor laser, applications of lasers.

Fiber Optics: Principle of optical fiber (TIR), construction of fiber, acceptance angle and acceptance cone, numerical aperture, types of optical fibers: single mode, multimode, step index and graded index fibers, attenuation in optical fibers, applications of optical fibers with special focus on communications.

TEXT BOOKS:

1. Solid State Physics, A. J. Dekker, Macmillan publishers Ind. Ltd.,
2. Solid State Physics, Charles Kittel, Wiley student edition.
3. Engineering Physics, B.K. Pandey, S. Chaturvedi – Cengage Learning.
4. Halliday and Resnick, Physics – Wiley.
5. A textbook of Engineering Physics, Dr. M. N. Avadhanulu, Dr. P.G. Kshirsagar – S. Chand Publications.
6. Introduction to Electrodynamics - David Griffiths, 4th edition, Pearson Education of India.

REFERENCES:

1. Engineering Physics S.O.Pillai, New Age International publications.
2. Engineering Physics P.K. Palanisamy, SciTech Publications.
3. Modern Engineering Physics A.S. Vasudeva S.Chand publications
4. Engineering Physics H.K.Malik and A.K.Singh, McGraw Hill Publications.
5. Engineering Physics R.K.Gaur and S.L.Gupta, Dhanpat Ray Publications.
6. Electro Magnetic Theory and Electrodynamics – Satya Prakash- Edition-2019, Kedar Nath Ram Nath Publications.



B. Tech I Year Syllabus

L	T	P	C
3	0	0	3

21BS1113/21BS1213: Engineering Chemistry

(Common to CSE, CSC, CSD, IT, EEE, ECE,
CSB & CSM)

Course Objectives:

1. To impart the basic knowledge of atomic, molecular and electronic modifications which makes the students to understand the technology based on them.
2. To acquire knowledge of Nanomaterials and their engineering applications.
3. To acquire knowledge of Electrochemistry and Corrosion, which are essential for the engineers in their respective fields.
4. To acquire required knowledge of polymers.
5. To acquire the skills pertaining to spectroscopy and apply them for various material studies.

Course Outcomes:

1. They gain the knowledge of atomic, molecular and electronic changes, Band theory related to conductivity of materials.
2. They can prepare the Nanomaterials and apply their properties for engineering use.
3. They can be able to construct the batteries and also the methods for controlling corrosion.
4. They can prepare and apply the various polymeric materials.
5. They gain the required skills of spectroscopic methods and their application for engineering materials.

UNIT-I

Molecular structure and Theories of Bonding: Atomic and Molecular orbitals. Linear Combination of Atomic Orbitals (LCAO), molecular orbitals of diatomic molecules, molecular orbital energy level diagrams of N₂, O₂ and F₂ molecules. π molecular orbitals of Butadiene and Benzene. Crystal Field Theory (CFT): Salient Features of CFT – Crystal Field Splitting of transition metal ion d- orbitals in Tetrahedral, Octahedral and Square Planar geometries. Band structure of solids and effect of doping on conductance.

UNIT-II

Nanomaterials: Definition of Nanomaterials, Classification of Nanomaterials based upon Dimension and Chemical composition. Preparation-High energy ball milling, Chemical Vapour Deposition, Wet Chemical Synthesis, Gas condensation Processing, Chemical Vapour Condensation, laser ablation. Carbon Nanomaterials: Graphene, Nano Graphite, Fullerenes, carbon Nanotubes,



Nanowires, Nanocones. Properties of Nanomaterials. Applications in Medicine, Catalysis, Environment and Textiles, Biomimicry-Water proofing paints (Lotus leaf) and Gecko tapes.

UNIT-III

Electrochemistry and Corrosion: Electro chemical cells – electrode potential, standard electrode potential, types of electrodes – calomel, Quinhydrone and glass electrode. Nernst equation, Determination of pH of a solution by using quinhydrone and glass electrode. Electrochemical series and its applications. Numerical problems. Batteries – Primary (Lithium cell) and secondary batteries (Lead – acid storage battery and Lithium-ion battery). Causes and effects of corrosion – theories of chemical and electrochemical corrosion – mechanism of electrochemical corrosion, Types of corrosion: Galvanic, water-line and pitting corrosion. Factors affecting rate of corrosion, Corrosion control methods- Cathodic protection – Sacrificial anode and impressed current cathodic methods. Surface coatings – metallic coatings – methods of application. Electroless plating of Nickel.

UNIT-IV

Polymers: Definition – Classification of polymers with examples – Types of polymerization – addition (free radical addition) and condensation polymerization with examples.

Plastics: Definition and characteristics- thermoplastic and thermosetting plastics, compounding, compression and injection molding. Preparation, Properties and engineering applications of PVC and Bakelite.

Fibers: Characteristics of fibers – preparation, properties and applications of Nylon-6, 6 and Dacron. Fiber reinforced plastics (FRP)–Applications.

Elastomers: Characteristics –preparation – properties and applications of Buna-S, Butyl and Thiokol rubber.

Conducting polymers: Characteristics and Classification with examples-mechanism of conduction in trans-polyacetylene and applications of conducting polymers.

Biodegradable polymers: Concept and advantages – Polylactic acid and poly vinyl alcohol and their applications.

UNIT-V

Spectroscopic techniques and applications: Electronic Spectroscopy-Principle, Beer-Lambert's law, Electronic transitions, Terms-Chromophore, Auxochrome, Bathochromic shift, Hypsochromic shift, Hyperchromic shift and Hypochromic shift, Selection rules and Applications. IR Spectroscopy- Principle, Vibrational modes, Selection rules and Applications. NMR Spectroscopy- Principle, chemical shift-Shielding effect, Deshielding effect with Ethanol as an example, Reference (TMS), Selection rules and Applications, Introduction to Magnetic resonance Imaging (MRI).

**TEXT BOOKS:**

1. Engineering Chemistry by Rama Devi, Venkata Ramana Reddy and Rath, Cengage learning; 1st edition (2019).
2. Engineering Chemistry by Jain & Jain, Dhanpat Rai & Co. (P) Limited; 16th edition (2017).
3. Fundamentals of Molecular Spectroscopy by C.N. Banwell, McGraw Hill Education; 4th edition (2017).
4. Engineering Chemistry by SS Dara and SS Umare, S Chand Publications; 12th edition (2004).

REFERENCES:

1. Engineering Chemistry by Shikha Agarwal, Cambridge University Press, 2nd edition (2015).
2. Engineering Chemistry by Shashi Chawla, Dhanpatrai and Company (P) Ltd. 2nd edition (2017).
3. Materials Science and Engineering: An Introduction by William D. Callister and David G. Rethwisch, Wiley Publication; 9th edition (2013).
4. Understanding Nanomaterials by Malkiat S. Johal, CRC Press; 1st Edition (2018).
5. Applications of Nanomaterials in Human Health by Firdos Alam Khan, Springer Publication; 1st edition (2021).
6. Organic Spectroscopy by William Kemp, Macmillan; 2nd edition (2019).



B. Tech I Year Syllabus

VBIT

21BS1115: ENGINEERING PHYSICS

(Common to CE & ME)

L	T	P	C
3	1	0	4

Course Objectives:

1. To understand periodic arrangement of atoms in crystal structures and correlate the properties of new materials using X-ray diffraction methods.
2. To understand the significance of optical phenomenon such as interference, diffraction related to its technical applications.
3. Familiarize the concepts of theoretical acoustics for their practical utility in engineering acoustics. Explanation for the significance of ultrasound and its application in NDT application.
4. The primary knowledge of waves and oscillations provides insights into a diverse complex phenomenon in engineering applications.
5. Exposure to nanomaterials is essential to learn multidisciplinary and interdisciplinary applications related to nano technology.

Course Outcomes:

After completion of this course the student is able to

1. Interpret various crystal systems, identify the crystal planes using miller indices, and analyses the structure of crystals by Laue and Powder diffraction methods.
2. Explain the need of coherent sources, identify the engineering applications of interference and diffraction.
3. Explain sound waves and its propagation/absorption of construction material used in design of buildings and identify the use of ultrasonics in diversified fields of engineering.
4. Recognize various types harmonic oscillations and their importance in resolving challenges in technical applications.
5. Identify different synthesis methods and explain the engineering applications of nano materials and CNT.

UNIT –I

CRYSTALLOGRAPHY:

Space lattice, unit cell and lattice parameters, basis, crystal systems, Bravais crystal systems, co-ordination number and packing factor of SC, BCC, FCC. Miller indices, crystal planes and directions, inter planar spacing, structure of NaCl.

X-RAY DIFFRACTION:

Introduction to X-rays, Bragg's law, XRD methods: Laue and powder methods

UNIT –II

WAVE OPTICS:

Huygens Principle, Superposition of waves and interference of light by wavefront splitting and Amplitude Splitting, Young's double slit Experiment, Newton's Rings,



Fraunhofer diffraction from a single slit and N-slits, diffraction Grating-Resolving Power.

UNIT –III

Acoustics and Ultrasonics:

Acoustics: Introduction – requirements of acoustically good hall– Reverberation – Reverberation time– Sabine's formula (Derivation using growth and decay method) - Absorption coefficient and its determination – Factors affecting acoustics of buildings and their remedial measures.

Ultrasonics: Introduction - Properties - Production by magnetostriction and piezoelectric methods – Detection - Acoustic grating - Non Destructive Testing – pulse echo system through transmission and reflection modes - Applications

UNIT –IV

WAVES AND OSCILLATIONS: Longitudinal, Transverse and standing waves, the simple oscillator, characteristics of SHM, energy of a Simple harmonic Oscillator, frequency of vibrating spring, damped harmonic oscillator, energy and power dissipation in damped harmonic oscillator, logarithmic decrement, relaxation time and quality factor, Forced Vibrations, resonance and electrical analogy for a simple oscillator.

UNIT –V

ADVANCED NANOMATERIALS: Introduction and properties – synthesis – chemical vapour deposition – ball milling – applications. Carbon nanotubes: structure and properties – synthesis– arc method – Pulsed laser deposition- applications.

TEXT BOOKS:

1. Engineering Mechanics, 2nd ed.- MK Harbola, Cengage Learning.
2. A textbook of Engineering Physics, Dr. M. N. Avadhanulu, Dr. P.G. Kshirsagar – S. Chand Publications.
3. Solid State Physics, Charles Kittel, Wiley's student edition.
4. Introduction to Nano technology-by Charles P. Poole & F. J. Owens Wiley's inter science-2003 Edition.

REFERENCES:

1. Engineering Physics S.O.Pillai, New Age International publications.
2. Engineering Physics P.K. Palanisamy, SciTech Publications.
3. Modern Engineering Physics A.S. Vasudeva, S.Chand publications
4. Engineering Physics H.K.Malik and A.K.Singh, McGraw Hill Publications.
5. Engineering Physics R.K.Gaur and S.L.Gupta, Dhanpat Ray Publications.



B. Tech I Year Syllabus

VBIT

21HS1111/21HS1211: ENGLISH

(Common to ALL)

L	T	P	C
2	0	0	2

INTRODUCTION

In view of the growing importance of English as a tool for global communication and the consequent emphasis on training students to acquire language skills, the syllabus of English has been designed to develop linguistic, communicative and critical thinking competencies of Engineering students.

In English classes, the focus should be on the skills development in the areas of vocabulary, grammar, reading and writing. For this, the teachers should use the prescribed text for detailed study. The students should be encouraged to read the texts leading to reading comprehension and different passages may be given for practice in the class. The time should be utilized for working out the exercises given after each excerpt, and also for supplementing the exercises with authentic materials of a similar kind, for example, newspaper articles, advertisements, promotional material etc. The focus in this syllabus is on skill development, fostering ideas and practice of language skills in various contexts and cultures.

Course Objectives:

The course will help to

1. Improve the language proficiency of students in English with an emphasis on Vocabulary, Grammar, Reading and Writing skills.
2. Equip students to study academic subjects more effectively and critically using the theoretical and practical components of English syllabus.
3. Develop study skills and communication skills in formal and informal situations.

Course Outcomes:

Students should be able to

1. Use English Language effectively in spoken and written forms.
2. Comprehend the given texts and respond appropriately.
3. Communicate confidently in various contexts and different cultures.
4. Acquire basic proficiency in English including reading and listening comprehension, writing and speaking skills.

SYLLABUS: UNIT –I

- Text: 'Why the Indian Family is a Great Institution' by Mr.Venkaiah Naidu, the Vice-President of India, Published May 14 2018
- Source: <https://www.thehindubusinessline.com/opinion/why-the-indian-family-is-a-great-institution-ep/article23884420.ece>
- Poem: A Snowflake Falls by Ruth Adams, Published: Feb 2006
- Source: <https://www.familyfriendpoems.com/poem//a-snowflake-falls>
- Vocabulary Building: The Concept of Word Formation --The Use of Prefixes and Suffixes. Acquaintance with Prefixes and Suffixes from Foreign Languages in English to form Derivatives



- Grammar: Identifying Common Errors in Writing with Reference to Articles and Prepositions.
- Reading: Reading and Its Importance- Techniques for Effective Reading.
- Basic Writing Skills: Sentence Structures -Use of Phrases and Clauses in Sentences Importance of Proper Punctuation- Techniques for writing precisely – Paragraph writing – Types, Structures and Features of a Paragraph - Creating Coherence-Organizing Principles of Paragraphs in Documents.

UNIT –II

'Ancient Architecture in India' from the prescribed textbook 'English for Engineers' published by Cambridge University Press.

- Vocabulary: Synonyms and Antonyms- Words from Foreign Languages and their Use in English.
- Grammar: Identifying Common Errors in Writing with Reference to Noun-pronoun Agreement and Subject-verb Agreement.
- Reading: Improving Comprehension Skills – Techniques for Good Comprehension
- Writing: Techniques for writing precisely – Paragraph writing – Types, Structures and Features of a Paragraph - Creating Coherence-Organizing Principles of Paragraphs in Documents- Format of a Formal Letter-Writing Formal Letters eg., Letter of Complaint, Letter of Requisition, Job Application with Resume.

UNIT –III

The Man Who Carved a Road through the Mountain by Josceline Anne Mascarenhas. January 16, 2015 (Source: Internet)

- Vocabulary: - Collocations – One-word Substitutes
- Grammar: Identifying Common Errors in Writing with Reference to Misplaced Modifiers and Tenses.
- Reading: Sub Skills of reading - Skimming, Scanning
- Writing: Nature and Style of Sensible Writing- Defining- Describing Objects, Places and Events – Classifying- Providing Examples or Evidence

UNIT –IV

'What Should You Be Eating' from the prescribed textbook 'English for Engineers' published by Cambridge University Press.

- Vocabulary: Standard Abbreviations in English - Phrasal verbs
- Grammar: Redundancies and Clichés in Oral and Written Communication.
- Reading: Comprehension- Intensive Reading and Extensive Reading
- Writing: Writing Practices--Writing Introduction and Conclusion - Essay Writing-Précis Writing.

**UNIT –V**

Text-I: 'How a Chinese Billionaire Built Her Fortune' from the prescribed textbook 'English for Engineers' published by Cambridge University Press.

Text-II: The Myth of the Shy Gene

Source: Sayre, K. (2001). The Myth of the Shy Gene. In Unstoppable Confidence: Unleash your Natural Confidence Within. Essay, Unstoppable Books.

- Vocabulary: Technical Vocabulary and their usage – Idiomatic Expressions
- Grammar: Common Errors in English
- Reading: Reading Comprehension-Exercises for Practice
- Writing: Technical Reports- Introduction – Characteristics of a Report – Categories of Reports Formats- Structure of Reports (Manuscript Format) - Types of Reports - Writing a Report.

Prescribed Textbook:

1. Sudarshana, N.P. and Savitha, C. (2018). English for Engineers. Cambridge University Press.

References:

1. Swan, M. (2016). Practical English Usage. Oxford University Press.
2. Kumar, S and Lata, P.(2018). Communication Skills. Oxford University Press.
3. Wood, F.T. (2007). Remedial English Grammar. Macmillan.
4. Zinsser, William. (2001). On Writing Well. Harper Resource Book.
5. Hamp-Lyons, L. (2006). Study Writing. Cambridge University Press.
6. Exercises in Spoken English. Parts I –III. CIEFL, Hyderabad. Oxford University Press



B. Tech I Year Syllabus VBIT

VBIT

21CS1111: PROGRAMMING FOR PROBLEM SOLVING

(Common to ALL)

L	T	P	C
3	-	-	3

Course Objectives:

1. To learn the fundamentals of computers and understand the structure of a C Program.
2. To learn how to develop a program using control structures.
3. To learn how to use arrays and pointers to solve problems
4. To learn heterogeneous types i.e. Structures and unions.
5. To learn how to use files in various applications.

Course Outcomes:

1. Able to understand the basics components of computer and languages and able to apply Control structures in program development.
2. Able to apply modular programming concept to solve problems.
3. Able to apply arrays and pointers to solve various problems.
4. Able to develop programs using structures and unions.
5. Able to develop applications using files.

UNIT I

INTRODUCTION TO C PROGRAMING:

Computer Systems: Computer Languages, Creating and running programs, Program Development. Flow chart, Algorithm, Pseudo code.

Overview of C Language: Background, C Program structure, C Tokens(Identifiers, key words, constants, symbols), Data Types, Variables, Input/output functions.

Operators: Arithmetic, relational, logical, bitwise, conditional, increment/decrement, assignment operators etc., C program examples. Expressions, Operator Precedence and Associativity, Expression Evaluation, Type conversions.

UNIT II

Control statements: Selection Statements (decision making) – if and switch statements Repetitive/iterative statements (loops) - while, do-while, for with C Program examples.

break, continue, goto, return etc with C program examples

Arrays: Concept of array in C, one dimensional arrays, Accessing and manipulating elements of arrays, Two – dimensional arrays, multidimensional arrays, C program examples



UNIT III

Functions-Designing Structured Programs, user defined functions- categories, parameter passing mechanisms, inter function communication, Standard functions, Storage classes-auto, register, static, extern, scope rules,C program examples.

Recursion- recursive functions.

Pointers – Definition, Introduction (Basic Concepts), Pointers for inter function communication (call by value and call by reference), pointers to pointers, compatibility, passing an array to a function, Pointer Applications - Arrays and Pointers, Pointer Arithmetic , Pointer to functions.

UNIT IV

STRINGS – Concepts, C Strings, String Input / Output functions, array of strings, string manipulation functions, C program examples.

STRUCTURES AND UNIONS: Structures – Declaration, initialization, accessing structure members, C program examples. Structures and functions, unions, bit fields, C programming examples, the type definition (typedef), Enumerated types.

UNIT V

FILE HANDLING AND PREPROCESSOR COMMANDS: Concept of file- text files and binary files, Opening and Closing files, file opening modes, file input / output functions (standard library input / output functions for files), file status functions (error handling), Positioning functions.. fseek() , rewind() and ftell() . C program examples.

Preprocessor commands- Macro substitution, File inclusion, C program examples.

TEXT BOOKS:

1. A Structured Programming Approach Using C, B.A.Forouzan and R.F. Gilberg, Third Edition, Cengage Learning.
2. The C Programming Language, B.W. Kernighan and Dennis M. Ritchie, Second Edition, Pearson education.
3. Programming in C. P. Dey and M Ghosh , Oxford University Press.
4. Byron Gottfried, Schaum's Outline of Programming with C, McGraw-Hill

REFERENCE BOOKS:

1. C for All, S. ThamaraiSelvi, R.Murugesan, Anuradha Publications.
2. Problem Solving and Program Design in C, J.R. Hanly and E.B. Koffman, 7th Edition, Pearson education.
3. Programming in C, Ajay Mittal, Pearson.
4. Programming with C, B.Gottfried, 3rd edition, Schaum's outlines, TMH.
5. Problem solving with C, M.T.Somasekhara, PHI
6. Computer Programming & Data Structures, E.Balagurusamy, 4th edition, TMH.



L	T	P	C
3	1	-	4

21ME1111: ENGINEERING MECHANICS

(Common to ME & CE)

Course Objectives:

The objectives of this course are to

1. Explain the resolution of a system of forces, compute their resultant and solve problems using equations of equilibrium
2. Comprehend the effect of friction on general plane motion.
3. Locate the centroid and center of gravity of a body.
4. Compute the area moment of inertia and mass moment of inertia of standard and composite sections.
5. Explain kinematics and kinetics of particles, rectilinear, curvilinear motion of bodies. Also make clear the concepts of work-energy and Impulse momentum method and its applications.

Course Outcomes:

At the end of the course, students will be able to

1. Compute the resultant of system of forces in plane and space acting on bodies and analyze equilibrium of a body subjected to a system of forces.
2. Analyze and solve equilibrium problems with friction and bodies subjected to friction.
3. Calculate the location of centroid and center of gravity of various composite sections.
4. Solve area and mass moment of inertia of composite sections.
5. Analyze dynamics of a body undergoing different motions.

UNIT-I

INTRODUCTION TO MECHANICS: Introduction to Mechanics, Basic Concepts, Various System of Forces Coplanar Concurrent Collinear Forces – Resultant Force - Triangle and Parallelogram law of Forces, Components in Space Resultant - Moment of Force – Principle of Moments and its Application - Couples and Resultant of Force Systems.

EQUILIBRIUM OF SYSTEM OF FORCES: Concept Equilibrium, Free body diagrams, Equations of Equilibrium of Coplanar Systems, Lami' s theorem and its applications in force analysis and Spatial Systems.

UNIT-II

FRICTION: Introduction, Types of Friction -Limiting Friction -Laws of Friction – Coefficient of Friction - Static and Dynamic Frictions - Motion of Bodies by General Friction Analysis and Problem Solving.



CONCEPT OF INCLINED PLANES IN FRICTION: Wedge Friction - Ladder Friction and Screw jack – Applications.

UNIT-III

CENTROIDS: Introduction to Centroid, definition - Centroid of Simple Planes from Basic Principle – Centroid of different Composite Planes.

CENTER OF GRAVITY: Introduction, Centre of Gravity of various bodies – Center of gravity of composite bodies.

UNIT-IV

AREA MOMENTS OF INERTIA: Introduction – Definition of Moment of Inertia - Polar Moment of Inertia – Radius of gyration. Transfer Theorem for moment of inertia - Moments of Inertia of Composite Figures.

MASS MOMENT OF INERTIA: Introduction – Radius of gyration - Transfer Formula for Mass Moments of Inertia - Moment of Inertia of various mass bodies - Mass moment of inertia of composite bodies.

UNIT-V

INTRODUCTION TO DYNAMICS: Kinematics of Particles: Rectilinear motion, curvilinear motion. Kinetics of Particle: Motion of bodies in Rectilinear coordinates and motion of connected bodies, D'Alembert's principle, Other methods to solve kinetic problems: Work-Energy and Impulse momentum.

TEXT BOOKS:

1. Engineering Mechanics - A.K. Tayal/Umesh Publications.
2. Engineering Mechanics – N.H. Dubey/TMH
3. Singer's Engineering Mechanics Statics and Dynamics/ K. Vijaya Kumar Reddy, J. Suresh Kumar/ BSP
4. Engineering Mechanics/ Irving Shames, G. Krishna Mohan Rao / Prentice Hall

REFERENCES:

1. Engineering Mechanics -S.Timoshenko and D.H. Young/TMH.
2. Singer's Engineering Mechanics Statics and Dynamics/ K. Vijaya Kumar Reddy, J. Suresh Kumar/ BSP



21EE1111 / 21EE1211: Basic Electrical Engineering

(Common for CSE, CSM, CSC, CSBS,
ECE, EEE, IT, CSD)

L	T	P	C
3	0	0	3

Pre-Requisites: Mathematics, applied physics

Course Objectives:

1. To introduce the concepts of electrical circuits and its components
2. To understand DC circuits and AC single phase circuits
3. To study and understand the different types of DC/AC machines and Transformers.
4. To understand the basic concept of Measuring Instruments.

Course Outcomes

1. To analyze and solve electrical circuits using network laws and theorems.
2. To understand and analyze basic Electric circuits
3. To study the working principles of Electrical Machines
4. To introduce components measuring instruments

UNIT I: D.C. CIRCUITS

Ohm's law, Types of elements, sources, independent, dependent sources, source transformation, V-I Relation for Passive elements, KVL, KCL, Network reduction techniques-series-parallel-series parallel –star delta transformation, mesh and nodal analysis.

UNIT II: NETWORK THEOREMS & A.C. CIRCUITS

Network Theorems: Superposition-Thevenin's, and Norton's theorems for DC excitation

A.C. Circuits: Representation of sinusoidal waveforms, peak and RMS values, phasor representation, real power, reactive power, apparent power, power factor, Analysis of single-phase ac circuits consisting of R, L, C, RL, RC, RLC combinations (series and parallel), resonance in series and parallel R- L-C circuits, calculation of q-factor and band width.

UNIT III: D.C. MACHINES

D.C. Generators: Principle of operation of D.C Generator -types-E.m.f. Equation-Numerical problems.

D.C. Motors: Principle of operation of D.C. Motor-types -losses and efficiency - torque Equation.

Unit IV: A.C. Machines

Transformers: Principle of operation-constructural details, Ideal and practical transformer, equivalent circuit, losses in transformers, open circuit and short circuit



tests-numerical problems, regulation and efficiency.

Three-phase Induction motor: Principle of operation-Production of R.M.F -slip – rotor frequency -torque-slip & Torque characteristics. Synchronous Generators

Unit V: Measuring Instruments

Introduction-classification of instruments-operating principles-essential features of measuring instruments-permanent magnet moving coil (PMMC) instruments-moving iron type ammeters and voltmeters.

Textbooks :

1. Basic electrical engineering ,M.S Naidu &Kamakshaiah, Tata McGraw-Hill Education,
2. Basic Electrical Engineering , P.S.Subramanyam, BS publications ,second edition
3. Ghosh, Fundamentals of Electrical & Electronics S Engineering, 2nd Ed., PHI, 2010
4. V. K. Mehta and Rohit Mehta, Basic Electrical Engineering, S Chand and company Ltd, New Delhi, India, Revised Edition, 2012.
5. D. P. Kothari and I. J. Nagrath, Theory and Problems of Basic Electrical Engineering, 4th Ed., PHI Learning Private limited, 2013.
6. L.S. Bobrow, Fundamentals of Electrical Engineering”, Oxford University Press, 2011
7. Electrical and Electronics Technology, E. Hughes, 10th Edition, Pearson, 2010

References:

1. J. B. Gupta, Basic Electrical and Electronics Engineering, 3rd Ed., S. K. Kataria& Sons, 2009
2. B. L. Theraja, Fundamentals of Electrical Engineering and Electronics, 5th Ed., S. Chand & Company Ltd, 2013
3. Principles of Electrical machines, V.K Mehta&Rohith Mehta, S.ChandPubliactions.



21BS1152/21BS1252: APPLIED PHYSICS LAB

(Common to ECE, CSM, CSB, CSC, CSD, EEE CSE & IT)

L	T	P	C
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List of Experiments:

- Energy gap of P-N junction diode:
To determine the energy gap of a semiconductor diode.
- Solar Cell:
To study the V-I Characteristics of solar cell.
- Light Emitting Diode:
To study the V-I characteristics of light emitting diode
- Stewart – Gee's experiment:
Determination of magnetic field along the axis of a current carrying coil.
- Hall effect
To determine the Hall coefficient of a given semiconductor diode.
- Optical fibre:
To determine the Numerical aperture and bending losses of a given fibre.
- Laser Diode:
To determine V-I characteristics of laser diode
- Photoelectric Effect:
To determine stopping potential of different filters and Planck's constant
- LCR series:
To determine the resonant frequency and quality factor of LCR circuit.
- R-C circuit:
To determine the time constant of R-C circuit.

Note: Any 8 experiments are to be performed.



21BS1155: ENGINEERING PHYSICS LAB

(Common to Civil & Mechanical Engineering)

L	T	P	C
-	-	3	1.5

List of Experiments:

- MELDE'S EXPERIMENT:**
To determine the frequency of a vibrating bar or tuning fork using Melde's apparatus.
- TORSIONAL PENDULUM:**
To determine the rigidity modulus of the material of the given wire using Torsional pendulum.
- NEWTON'S RINGS:**
To determine the radius of curvature of the lens by forming Newton's rings.
- DIFFRACTION GRATING:**
To determine the wavelength of the given source using grating.
- DISPERSIVE POWER OF PRISM:**
To determine the dispersive power of prism by using spectrometer.
- LCR SERIES:**
To determine the resonant frequency and quality factor of LCR series circuit.
- RC CIRCUIT:**
To determine the time constant of R-C circuit.
- COUPLED OSCILLATOR:**
To determine the spring constant by single coupled oscillator.
- YOUNG'S MODULUS:**
Young's modulus of given material by Strain gauge method.
- SONOMETER:**
Sonometer: Verification of laws of string.

Note: Any 8 experiments are to be performed.



B. Tech I Year Syllabus

VBIT

21HS1152/21HS1252: English Language Communication Skills Lab

(Common to ALL)

L	T	P	C
-	-	2	1

The Language Lab focuses on the production and practice of sounds of language and familiarizes the students with the use of English in everyday situations both in formal and informal contexts.

Course Objectives:

1. To facilitate computer-assisted multi-media instruction enabling individualized and independent language learning
2. To sensitize students to the nuances of English speech sounds, word accent, intonation and rhythm
3. To bring about a consistent accent and intelligibility in students' pronunciation of English by providing an opportunity for practice in speaking
4. To improve the fluency of students in spoken English and neutralize their mother tongue influence
5. To train students to use language appropriately for public speaking and interviews

Learning Outcomes:

Students will be able to attain -

1. Better understanding of nuances of English language through audio- visual experience and group activities
2. Neutralization of accent for intelligibility
3. Speaking skills with clarity and confidence which in turn enhances their employability skills

Syllabus

English Language and Communication Skills Lab (ELCS) shall have two parts:

- a. Computer Assisted Language Learning (CALL) Lab
 - b. Interactive Communication Skills (ICS) Lab
- Listening Skills

Objectives

1. To enable students develop their listening skills so that they may appreciate its role in the LSRW skills approach to language and improve their pronunciation
2. To equip students with necessary training in listening so that they can comprehend the speech of people of different backgrounds and regions

Exercises: Students should be given practice in listening to the sounds of the language, to be able to recognize them and find the distinction between different sounds, to be able to mark stress and recognize and use the right intonation in sentences.



1. Listening for general content
2. Listening to fill up information
3. Intensive listening
4. Listening for specific information

Speaking Skills

Objectives

1. To involve students in speaking activities in various contexts
2. To enable students express themselves fluently and appropriately in social and professional contexts

Exercises:

- 1.Oral practice: Just A Minute (JAM) Sessions
- 2.Describing objects/situations/people
- 3.Role play – Individual/Group activities

The following course content is prescribed for the English Language and Communication Skills Lab based on Unit-6 of AICTE Model Curriculum 2018 for B.Tech First English.

As the syllabus is very limited, it is required to prepare teaching/learning materials by the teachers collectively in the form of handouts based on the needs of the students in their respective colleges for effective teaching/learning and timesaving in the Lab)

Exercise – I

CALL Lab:

Understand: Listening Skill- Its importance – Purpose- Process- Types- Barriers of Listening.

Practice: Introduction to Phonetics – Speech Sounds – Vowels and Consonants- Consonant clusters

ICS Lab:

Understand: Communication at Work Place- Spoken vs. Written language.

Practice: Ice-Breaking Activity and JAM Session- Situational Dialogues – Greetings –Taking Leave – Introducing Oneself and Others.

Exercise – II

CALL Lab:

Understand: Structure of Syllables – Word Stress and Rhythm– Weak Forms and Strong Forms in Context- Minimal pairs-

Practice: Basic Rules of Word Accent - Stress Shift - Weak Forms and Strong Forms in Context.

ICS Lab:

Understand: Features of Good Conversation – Non-verbal Communication.

Practice: Situational Dialogues – Role-Play- Expressions in Various Situations –Making

Requests and Seeking Permissions - Telephone Etiquette- Giving Directions

**Exercise - III****CALL Lab:**

Understand: Past tense and Plural markers - Intonation- Errors in Pronunciation- the Influence of Mother Tongue (MTI).

Practice: Common Indian Variants in Pronunciation – Differences in British and American

Pronunciation- Listening to foreign speakers

ICS Lab:

Understand: Descriptions and Narrations- Fictional Writing- Developing a Story through hints- Story telling through Translation

Practice: Describing Objects/Places/Persons/Situations- Story telling- Narrating incidents

Exercise – IV**CALL Lab:**

Understand: Listening for General Details.

Practice: Listening Comprehension Tests- Speech/Audio and Video Recording for Self-Analysis

ICS Lab:

Understand: Oral Presentation skills- Public speaking-

Practice: Making a Short Speech – Extempore

Exercise – V**CALL Lab:**

Understand: Listening for Specific Details.

Practice: Listening Comprehension Tests- Critical Analysis on Video and Audio Lessons/Speeches

ICS Lab:

Understand: Sensitization towards Interviews

Practice: Self-Introduction.

Minimum Requirement of infrastructural facilities for ELCS Lab:

1. Computer Assisted Language Learning (CALL) Lab:

The Computer Assisted Language Learning Lab has to accommodate 40 students with 40 systems, with one Master Console, LAN facility and English language learning software for self- study by students.

System Requirement (Hardware component):

Computer network with LAN facility (minimum 40 systems with multimedia) with the following specifications:

i) Computers with Suitable Configuration

ii) High Fidelity Headphones

2. Interactive Communication Skills (ICS) Lab:

The Interactive Communication Skills Lab: A Spacious room with movable chairs and audio-visual aids with a Public-Address System, a LCD and a projector etc.



B. Tech I Year Syllabus

VBIT

21CS1153: PROGRAMMING FOR PROBLEM SOLVING LAB

(Common to ALL)

L	T	P	C
-	-	3	1.5

Course Objectives:

1. To learn C-language Programs using the data types, input/ output statements and control statements.
2. Describe the importance of modular programming and arrays using C-Language Program.
3. Understand the concept and use of pointers for memory management techniques, structure, union, and enumerated types.
4. Understand the basic characteristics of text, binary files and C implementation of file I/O using streams.

Course Outcomes:

1. Ability to design and test programs to solve mathematical and scientific problems.
2. Ability to write structured programs using control structures and functions.
3. Able to Implement C programs using arrays & pointers.
4. Able to Use the type definition, enumerated types, define and use structures, unions in programs using C language.
5. Able to execute programs that read and write text, binary files using the formatting and character I/O functions.

EXPERIMENTS

1.
 - a) Write a C program to find area of rectangle.
 - b) Write a C program to find simple interest and compound interest.
 - c) Write a C program to evaluate the expression $y = 3x^2 + 4x + 5$.
2.
 - a) Write a C Program to swap two numbers.
 - b) Write a C program to convert Celsius to Fahrenheit.
 - c) Write a C program to perform all arithmetic operations (+, -, *, /, %).
 - d) Write a C program to check whether the given number is even or odd using Conditional Operator.
3.
 - a) Write a C program to find the Largest of two numbers.
 - b) Write a C program to Check the given year is leap year or not.
 - c) Write a C program to print ascending order of three given integers.
4.
 - a) Write a C program to Find the grade of a student using the following data. (use else if ladder and switch)



S.NO	MARKS	GRADE
I	Greater than or equal to 90 %	O grade
ii	80 and less than 90%	A+ grade
iii	70 and Less than 80%	A grade
iv	60 and less than 70%	B+ grade
V	50 and less than 60%	B grade
vi	40 and less than 50 %	C grade
vii	Below 40 %	Fail

- b) Write a C program to find the roots of quadratic equation.
- c) Write a C Program to implement arithmetic calculator using switch case.
5. a) Write a C program to find sum of individual digits of the given integer.
b) Write a C program to find factorial of a given number.
c) Write a C program to check whether the given number is palindrome or not.
6. a) Write a C program to display the prime numbers from 1 to n (where n value is Given by user)
b) Write a C program to print Fibonacci series.
c) Write a C program to find GCD and LCM of two given numbers using functions.
7. a) Write a C program find xy.
b) Write a C program find ncr.
c) Write a C program to construct a pyramid of following numbers.
1
1 2
1 2 3
d) Write a C program to construct the pascal triangle
8. a) Write a C program to find largest and smallest numbers in a list of array elements.
b) Write a C program to find mean, variance, standard deviation for a given list of elements.
9. a) Write a C program to transpose a matrix.
b) Write a C program to perform the Addition of Two Matrices.
c) Write a C program to perform the Multiplication of Two Matrices.
10. a) Write a C program to find GCD using functions.
b) Write a C program to find the factorial of a given number using recursive function.
c) Write a C program to generate the Fibonacci series using recursive function.
11. a) Write a C program to swap two integers using following methods.
i. call by value ii. call by reference
b) Write a program for reading elements using pointer into array and display the values using array.



12. a) Write a C program to perform the following operations on strings:
 - i. to insert a sub-string into a given main string from a given position.
 - ii. to delete n characters from a given position in a given string.b) Write a C program to arrange given strings n alphabetical order.
13. a) Write a C program to find total and average marks for five subjects of three students using structures.
b) Write a C program to demonstrate nested structures.
14. a) Write a C program to display the contents of a file to standard output device.
b) Write a C program which copies one file to another into another file.
c) Write a C program to merge two files into a third file (i.e., the contents of the first file followed by those of the second are put in the third file)
15. a) Write a C program to reverse the contents of a file.
b) Define a macro that finds the maximum of two numbers. Write a C program that uses the macro and prints the maximum of two numbers.

TEXT BOOKS:

1. C programming and Data Structures, P. Padmanabham, Third Edition, BS Publications
2. Computer Programming in C, V. Rajaraman, PHI Publishers.
3. C Programming, E. Balagurusamy, 3rd edition, TMH Publishers.
4. C Programming, M.V.S.S.N.Prasad, ACME Learning Pvt. Ltd.
5. C and Data Structures, N.B. Venkateswarlu and E.V.Prasad, S.Chand Publishers
6. Mastering C, K.R. Venugopal and S.R. Prasad, TMH Publishers.



21ME1153 / 21ME1214: ENGINEERING GRAPHICS

(Common to ME, CE, ECE, EEE, IT, CSD,
CSE, CSM, CSC, CSB)

L	T	P	C
1	0	4	3

Course objectives:

1. To provide basic concepts in engineering drawing.
2. To impart knowledge about standard principles of orthographic projection of objects.
3. To draw sectional views and pictorial views of solids.

Course Outcomes:

At the end of the course, the student will be able to:

1. Preparing working drawings to communicate the ideas and information.
2. Read, understand and interpret engineering drawings.

UNIT – I

INTRODUCTION TO ENGINEERING DRAWING: Principles of Engineering Graphics – Various Drawing instruments – conventions in Drawing, Lettering practice – BIS Conventions.

Curves: Conic Sections - Ellipse, parabola and Hyperbola – General method only. Cycloid, Epicycloid and Hypocycloid.

Scales: Plain and Diagonal scales.

UNIT – II

ORTHOGRAPHIC PROJECTIONS: Principles of Orthographic Projections – Conventions, Projection of Points and Lines, Projection of Planes: regular geometric figures.

UNIT – III

PROJECTION OF SOLIDS: Projection of regular solids, Sections and Sectional views of Right Regular Solids – Prism, Cylinder, Pyramid, Cone.

UNIT – IV

DEVELOPMENT OF SURFACES: Development of surfaces of Right Regular Solids – Prism, Cylinder, Pyramid and Cone.

Intersection of Solids: Intersection of Prism vs Prism, Cylinder vs Cylinder.

UNIT – V

ISOMETRIC PROJECTIONS: Principles of Isometric Projection – Isometric Scale – Isometric Views – Conventions – Plane Figures, Simple and Compound Solids – Isometric Projection of parts with Spherical.



Transformation of Projections: Conversion of Isometric Views to Orthographic Views and vice versa.

Introduction to CAD (For internal Evaluation weightage only): Introduction to CAD, coordinate system and reference planes, commands – 2D drawings.

TEXT BOOKS:

1. Engineering Drawing - N.D. Bhatt / Charotar.
2. Engineering Drawing - Basant Agrawal /TMH

REFERENCES:

1. Engineering Drawing – P.J. Shah/S.Chand Publishers.
2. Engineering Drawing - M.B. Shah AND B.C. Rana / Pearson.
3. Engineering Drawing - N.S. Parthasarathy and Vela Murali/ Oxford
4. Engineering Drawing – K.Venugopal and V.Prabu Raja/New age publications.
5. Engineering Graphics – P I Varghese/TMH.



21BS1153/21BS1253: CHEMISTRY LAB

(Common to all Branches)

L	T	P	C
-	-	3	1.5

Course Objectives:

The course consists of experiments related to the principles of chemistry required for engineering student. The student will learn:

1. Estimation of hardness and chloride content in water to check its suitability for drinking and Industrial purpose.
2. To determine the rate constant of reactions from concentration as a function of time.
3. To determine the physical properties like adsorption, viscosity and surface tension.
4. To prepare the drug molecules and check the purity of organic molecules by thin layer chro- matography (TLC).

Course Outcomes:

Students should be able to:

1. Determine the parameters like hardness and chloride content in water.
2. Estimate the rate constant of a reaction from concentration – time relationships.
3. Determine the physical properties like adsorption, surface tension and viscosity.
4. Calculate the R_f values of some organic molecules by thin layer chromatography (TLC).

(Any TEN experiments compulsory)

1. Determination of total hardness of water by complexometric method using EDTA.
2. Determination of chloride content in water by Argentometry.
3. Estimation of amount of HCl using standard NaOH by Conductometry.
4. Estimation of amount of Acetic acid using standard NaOH by Conductometry.
5. Estimation of amount of HCl using standard NaOH by Potentiometry.
6. Estimation of amount of Ferrous ion using KMnO₄ by Potentiometry.
7. Determination of rate constant of acid catalyzed hydrolysis of methyl acetate.
8. Thin layer chromatography: calculation of R_f values, ex: Mixture of ortho and para nitro phenols.
9. Determination of acid value of coconut oil.
10. Verification of Freundlich adsorption isotherm-adsorption of acetic acid on charcoal.
11. Determination of viscosity of given liquids using Ostwald's viscometer.
12. Determination of distribution coefficient of acetic acid between n-butanol and water.
13. Determination of surface tension of given liquids using stalagmometer.
14. Verification of Beer's law and estimation of given KMnO₄ solution.
15. Estimation of iron in cement by Colorimetry.



16. Preparation of Aspirin and Paracetamol.

REFERENCES:

1. Senior practical physical chemistry by B.D. Khosla, A. Gulati and V. Garg, R. Chand & Co; 18th edition (2018).
2. Vogel's text book of practical organic chemistry, Pearson Education; 5th edition (2003).
3. Text book on Experiments and calculations in Engineering Chemistry by S.S. Dara, S Chand & Company; 9th edition (2015).
4. Physical Chemistry-A molecular Approach by Donald A. McQuarrie and John D. Simon, Viva Books; Student edition (2019).
5. Engineering Chemistry Laboratory Manual by Shirish Kumar Kodadi, Kindle Publications; 1st edition (2020).



21EE1152 / 21EE1252: BASIC ELECTRICAL ENGINEERING LAB

(Common for CSE, CSM, CSC, CSBS, ECE,
EEE, IT and CSD)

L	T	P	C
0	0	3	1.5

Course Objectives:

1. To analyze a given network by applying various electrical laws and network theorems
2. To know the response of electrical circuits for different excitations
3. To calculate, measure and know the relation between basic electrical parameters.
4. To analyze the performance characteristics of DC and AC electrical machines

Course Outcomes:

1. Get an exposure to basic electrical laws.
2. Understand the response of different types of electrical circuits to different excitations.
3. Understand the measurement, calculation and relation between the basic electrical parameters
4. Understand the basic characteristics of transformers and electrical machines.

List of experiments/demonstrations:

1. Verification of Ohms Law
2. Verification of KVL and KCL
3. Verification of superposition theorem
4. Verification of Thevenin's and Norton's Theorem
5. Resonance in series RLC circuit
6. Calculations and Verification of Impedance and Current of RL, RC and RLC series circuits
7. Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)
8. Measurement of Active and Reactive Power in a balanced Three-phase circuit
9. Performance Characteristics of a Separately/Self Excited DC Shunt/Compound Motor
10. Performance Characteristics of a Three-phase Induction Motor
11. No-Load Characteristics of a Three-phase Alternator



B. Tech I Year Syllabus VBIT

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21ME1155 / 21ME1255: ENGINEERING WORKSHOP PRACTICE

(Common to CSE, CSM, CSC, CSB, ECE, EEE, IT, CSD)

L	T	P	C
1	-	3	2.5

Course objectives:

1. To Study of different hand operated power tools, uses and their demonstration.
2. To gain a good basic working knowledge required for the production of various engineering products.
3. To provide hands on experience about use of different engineering materials, tools, equipments and processes those are common in the engineering field.
4. To develop a right attitude, team working, precision and safety at work place.
5. It explains the construction, function, use and application of different working tools, equipment and machines.
6. To study commonly used carpentry joints.
7. To have exposure to various welding and joining processes.
8. Identify and use marking out tools, hand tools, measuring equipment and to work to prescribed tolerances.

Course Outcomes:

At the end of the course, the student will be able to:

1. Study and practice on machine tools and their operations
2. Practice on manufacturing of components using workshop trades including fitting, carpentry, foundry, house wiring and welding.

1. TRADES FOR EXERCISES:

At least two exercises from each trade:

1. Carpentry (T-Lap Joint, Dovetail Joint, Mortise and Tenon Joint)
2. Fitting (V-Fit, Square Fit) [Demonstration]
3. Tin-Smithy (Square Tin, Retangulat Tray and Conical Funnel)
4. Foundry (Preparation of green sand mould using single piece and split pattern) [Demonstration]
5. Welding Practice – (Arc welding and Gas welding) [Demonstration]
6. House-wiring (Parallel and series, Two-way switch and Tube light)
7. Black Smithy (Round to square, Fan hook and S-hook) [Demonstration]

Text Books:

1. Workshop Practice /B. L. Juneja / Cengage
2. Workshop Manual / K. Venugopal / Anuradha.

Reference Books:

1. Work shop Manual - P. Kannaiah/ K. L. Narayana/ Scitech
2. Workshop Manual / Venkat Reddy/ BSP



21BS1211: MATHEMATICS-II

(Ordinary Differential Equations and Vector Calculus)

(Common to ALL)

L	T	P	C
3	1	0	4

Course Objectives:

Develop ability to

1. Solve first order differential equations and its applications, namely, Newton's law of cooling, Natural growth and decay.
2. Solve higher order differential equations of various types.
3. Evaluate multiple integrals and apply the same to solve engineering problems.
4. Explain properties of vector operators. To determine solenoidal, irrotational vectors and directional derivatives of vectors.
5. Determine the length of a curve, area between the surfaces and volumes of solids using vector integration.

Course Outcomes:

After learning the contents of this paper the student would be able to

1. Identify whether the given differential equation of first order is exact or not.
2. Solve higher differential equation and apply the concept of differential equation to real world problems.
3. Evaluate the multiple integrals and apply the concept to find areas, volumes, cubes, sphere and rectangular parallelepiped.
4. Calculate scalar potential for a vector and directional derivative of a scalar point function.
5. Make use of vector integral theorems to evaluate area, surface area and volumes.

UNIT-I: First Order ODE

Exact, linear and Bernoulli's equations; Applications: Newton's law of cooling, Law of natural growth and decay; Equations not of first degree: equations solvable for p, equations solvable for y, equations solvable for x and Clairaut's type.

UNIT-II: Ordinary Differential Equations of Higher Order

Second order linear differential equations with constant coefficients: Non-Homogeneous terms of the type e^{ax} , $\sin ax / \cos ax$, x^k , $e^{ax}V(x)$, $x^kV(x)$;

Method of variation of parameters; Equations reducible to linear ODE with constant coefficients: Legendre's equation, Cauchy-Euler equation.

UNIT-III: Integral Calculus

Evaluation of Double Integrals (Cartesian and polar coordinates); change of order of integration (only Cartesian form); Evaluation of Triple Integrals: Change of variables-Cartesian to polar for double and Cartesian to Spherical and Cylindrical



polar coordinates for triple integrals. Applications: Areas by double integrals for known curves and volumes by double integrals and triple integrals for known curves.

UNIT-IV: Vector Differentiation

Vector point functions and scalar point functions. Gradient, Divergence and Curl. Directional derivatives, Tangent plane and normal line. Vector Identities. Scalar potential functions. Solenoidal and Irrotational vectors.

UNIT-V: Vector Integration

Line, Surface and Volume Integrals. Theorems of Green, Gauss and Stokes (without proofs) and their applications.

TEXTBOOKS:

- [1] B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 40th Edition, 2014
- [2] N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2008.
- [3] Ramana B.V., Higher Engineering Mathematics, Tata McGraw Hill New Delhi, 11th Reprint, 2010.

REFERENCES:

- [1] Erwin kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006.
- [2] Paras Ram, Engineering Mathematics, 2nd Edition, CBS Publishes
- [3] S. L. Ross, Differential Equations, 3rd Ed., Wiley India, 1984.
- [4] Rajinder Kumar Jain, S. R. K. Iyengar, Advanced Engineering Mathematics, Narosa Publications, New Edition.



21BS1214: Applied Chemistry

(Common to Mechanical & Civil Engineering)

L	T	P	C
3	0	0	3

Course Objectives:

1. To understand the various treatment methods and to use the treated water for industrial purposes.
2. To understand the phase equilibria in heterogeneous systems.
3. To acquire the knowledge of Thermodynamic laws.
4. To equip required knowledge about engineering materials like cement, refractories and composites.
5. To acquire the skills pertaining to spectroscopy and apply them for various material studies.

Course Outcomes:

1. They can be able to use treated water for industries.
2. They can apply the phase equilibria in heterogeneous systems.
3. They can comprehend the role of thermodynamic properties-internal energy, enthalpy, entropy, temperature, pressure and specific volume.
4. They can apply the properties of engineering materials in appropriate conditions.
5. They gain the required skills of spectroscopic methods and can apply for interpreting the engineering materials.

UNIT-I

Water and its treatment: Introduction – Hardness of water – Causes of hardness – Types of hardness: Temporary and Permanent – expression and units of hardness – Estimation of hardness of water by complexometric method. Numerical problems. Potable water and its specifications- Steps involved in the treatment of potable water – Disinfection of potable water by Chlorination and Ozonization. Defluoridation – Nalgonda technique – Determination of F- ion by ion- selective electrode method.

Boiler troubles: Sludges, Scales, Caustic Embrittlement and Boiler corrosion. Internal treatment of Boiler feed water – Calgon conditioning – Phosphate conditioning – Colloidal conditioning – Softening of water by Ion- Exchange process. Desalination of water – Reverse Osmosis. Numerical problems – Sewage water – Steps involved in treatment of sewage.

UNIT-II

Phase Rule and its Applications: Terms involved in Phase equilibria – Phase, Component, Degrees of Freedom- explanation with suitable examples, True/metastable equilibrium, Eutectic mixture/ point, Triple point, Thermodynamic derivation of phase rule, applications and limitations of Phase rule, Phase diagrams of one component system-Water system and two component system - Pb/Ag systems.



Eutectic mixtures – desilverisation. Heat treatment of steel. Iron allotropy, micro constituents of Iron and Steel, Iron-Carbon equilibrium diagram.

UNIT-III

Chemical thermodynamics:

I Law: First law of thermodynamics-Statement, System and surroundings, state and path variables, Extensive and Intensive properties, Concept of Thermodynamics, reversibility, Isothermal and Adiabatic process, Relation between work done, heat and internal energy. Enthalpy and molar heat capacities-Numerical problems, Kirchhoff's equation, Limitations of I law.

II Law: Second law of thermodynamics-Statements, Definition-reversible, irreversible process, cyclic processes, Carnot cycle, efficiency of reversible heat engine in terms of entropy. Entropy changes in the reversible and irreversible processes, physical significance of entropy and Numerical problems. Gibbs-Helmholtz equation, Concept of spontaneity, Functions and significance-Numerical problems.

UNIT-IV

Engineering materials:

Cements: Composition, Properties and Applications of Portland cement, White cement, Water proof cement, High alumina cement and Acid resistant cement.

Refractories: Classification, characteristics of good refractories, Refractoriness, refractoriness under load, porosity and chemical inertness – applications of refractories.

Lubricants: Classification of lubricants with examples-characteristics of a good lubricants – mechanism of lubrication (thick film, thin film and extreme pressure)-properties of

lubricants: viscosity, cloud point, pour point, flash point and fire point.

Composites: Introduction, Classification, Constituents and Applications of Composites.

Rubbers: Natural rubber –vulcanization, Compounding. Synthesis and uses of Buna S, Thiokol rubber.

UNIT-V

Spectroscopic techniques and applications: Electronic Spectroscopy-Principle, Beer-Lambert's law, Electronic transitions, Terms-Chromophore, Auxochrome, Bathochromic shift, Hypsochromic shift, Hyperchromic shift and Hypochromic shift, Selection rules and Applications. IR Spectroscopy- Principle, Vibrational modes, Selection rules and Applications. NMR Spectroscopy- Principle, chemical shift-Shielding effect, Deshielding effect with Ethanol as an example, Reference (TMS), Selection rules and Applications, Introduction to Magnetic resonance Imaging (MRI).

TEXT BOOKS:

1. Engineering Chemistry by Rama Devi, Venkata Ramana Reddy and Rath, Cengage learning; 1st edition (2019).
2. Engineering Chemistry by Jain & Jain, Dhanpat Rai & Co. (P) Limited; 16th edition (2017).
3. Fundamentals of Molecular Spectroscopy by C.N. Banwell, McGraw Hill



Education; 4th edition (2017).

4. Engineering Chemistry by SS Dara and SS Umare, S Chand Publications; 12th edition (2004).
5. Engineering Thermodynamics by PK Nag, McGraw Hill Education; 6th Edition (2017).
6. Unified Chemistry by Dr. O.P. Agarwal, Jai Prakash Nath Publications; vol-3 (2016).

REFERENCES:

1. Engineering Chemistry by Shikha Agarwal, Cambridge University Press; 2nd edition (2019).
2. Engineering Chemistry by Shashi Chawla, Dhanpatrai and Company (P) Ltd; 2nd edition (2017).
3. Materials Science and Engineering: An Introduction by William D. Callister and David G. Rethwisch, Wiley Publication; 9th edition (2013).
4. Modern Thermodynamics by by Arie ben-naim and Diego casadei, World Scientific Publishing Co Pvt Ltd; 2nd Edition (2016).
5. Organic Spectroscopy by William Kemp, Macmillan; 2nd edition (2019).



21CS1211: PYTHON PROGRAMMING

(Common to ALL)

L	T	P	C
3	0	0	3

Prerequisites: A course on “Programming for Problem Solving using C”.

Course Objectives:

1. Learn Syntax and Semantics and create Functions in Python.
2. Handle Strings and Files in Python.
3. Understand Lists, Dictionaries and Regular expressions in Python.
4. Implement Object Oriented Programming concepts in Python.

Course Outcomes:

1. Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.
2. Able to Apply Modular Programming.
3. Able to Develop Programmes using Collection of Items.
4. Able to Implement File Handling.
5. Able to deploy Small Projects using Predefined Libraries.

UNIT - I

BASICS OF PYTHON PROGRAMMING: Features of Python, variables and identifiers, Built in and Standard data types in Python, operators and expressions

CONTROL STATEMENTS: Selection/Conditional branching statements, basic loop, structures/ iterative statements, nested loops, break, continue, and pass statements.

UNIT – II

FUNCTIONS AND MODULES: function definition, function call, more on defining functions, recursive functions, modules, Python packages. Python Global keyword, Introduction to Arrays.

STRINGS: Introduction, built-in string methods and functions, slice operation, String Module. Regular Expressions

UNIT - III

PYTHON COLLECTIONS

LISTS: Introduction, Creating, nested list, cloning lists, basic list operations, list methods.

TUPLES: Introduction, Creating, basic tuple operations, tuple assignment, tuples for returning multiple values, nested tuples, Built-in Tuple functions.

SET: Introduction, Creating, Python Set methods.

DICTIONARIES: Introduction, Creating, Basic operations, sorting items, looping over dictionary, nested dictionaries, built-in dictionary functions.

**UNIT -IV**

FILES: Introduction, modes of opening file with creating, reading and writing files, other file methods in python.

EXCEPTIONS: Assertion, Exception, handling exceptions – try, except, finally. Built-in exception types and user-defined exceptions.

UNIT – V:

PYTHON LIBRARIES:

Numpy: Introduction to numpy and uses, Arrays in Numpy, Numpy Functions: Trigonometric functions, Exponential and Logarithmic functions, Arithmetic functions, Sample programs.

Pandas: Introduction to Pandas and uses, Pandas Series, Pandas DataFrames, sample programs.

TEXT BOOKS:

1. Kenneth A. Lambert, The Fundamentals of Python: First Programs, 2011, Cengage Learning.
2. Think Python First Edition, by Allen B. Downey, Orielly publishing
3. Fluent Python: Clear, Concise, and Effective Programming, Luciano Ramalho, Orielly publishing

REFERENCE BOOKS:

1. Introduction to Computation and Programming Using Python. John V. Guttag, The MIT Press.
2. James Payne, Beginning Python using Python 2.6 and Python 3, Wrox publishing
3. Paul Gries, Practical Programming: An Introduction to Computer Science using Python 3, The Pragmatic Bookshelf, 2nd edition (4 Oct. 2013)
4. Charles Dierach, Introduction to Computer Science using Python



21CS1253: PYTHON PROGRAMMING LAB

(Common to ALL)

L	T	P	C
-	-	3	1.5

Prerequisites:

Students should install Python on Linux platform.

Student should have basics of understanding a program

Course Objectives:

1. To be able to introduce core programming basics and program design with functions using Python programming language.
2. To understand a range of Object-Oriented Programming
3. To understand the programs designed to strengthen the practical expertise.

Course Outcomes:

1. Student should be able to code and debug the basic programming
2. Ability to explore the object oriented concepts, and the built in objects of Python.
1. Write a Python program to convert temperatures to and from Celsius, Fahrenheit. [Formula : $c/5 = f-32/9$]
2. Python Program for factorial of a number
3. Python Program for simple interest using def
4. Python Program to Check if a Number is Odd or Even
5. Write a python program to find largest of three numbers.
6. Python program to print all Prime numbers in an Interval
7. Python Program to Find Factorial of Number Using Recursion
8. Python program to copy all elements of one array into another array
9. Python Program to Add Two Matrices
10. Python Program to reverse a string
11. Write a program to create, append, and remove lists in python.
12. Write a program to demonstrate working with tuples in python.
13. Write a program to demonstrate working with dictionaries in python
14. Python Program to create and sort a dictionary
15. Write a script named copyfile.py. This script should prompt the user for the names of two text files. The contents of the first file should be input and written to the second file
16. Write a simple program using numpy
17. Write a simple program using pandas



21ME1254: ENGINEERING WORKSHOP

(Common to ME & CE)

L	T	P	C
1	-	4	3

Course objectives:

1. To Study of different hand operated power tools, uses and their demonstration.
2. To gain a good basic working knowledge required for the production of various engineering products.
3. To provide hands on experience about use of different engineering materials, tools, equipments and processes those are common in the engineering field.
4. To develop a right attitude, team working, precision and safety at work place.
5. It explains the construction, function, use and application of different working tools, equipment and machines.
6. To study commonly used carpentry joints.
7. To have practical exposure to various welding and joining processes.
8. Identify and use marking out tools, hand tools, measuring equipment and to work to prescribed tolerances.

Course Outcomes:

At the end of the course, the student will be able to:

1. Study and practice on machine tools and their operations
2. Practice on manufacturing of components using workshop trades including plumbing, fitting, carpentry, and foundry, house wiring and welding.
3. Identify and apply suitable tools for different trades of Engineering processes including drilling, material removing, measuring, chiseling.

1. TRADES FOR EXERCISES:

At least two exercises from each trade:

1. Carpentry (T-Lap Joint, Dovetail Joint, Mortise and Tenon Joint)
2. Fitting (V-Fit, Square Fit)
3. Tin-Smithy (Square Tin, Rectangular Tray and Conical Funnel)
4. Foundry (Preparation of green sand mould using single piece and split pattern)
5. Welding Practice – (Arc welding and Gas welding)
6. House-wiring (Parallel and series, Two-way switch and Tube light)
7. Black Smithy (Round to square, Fan hook and S-hook)

2. TRADES FOR DEMONSTRATION & EXPOSURE:

1. Plumbing
2. Machine Shop
3. Metal Cutting (Water Plasma)
4. Power tools in construction and wood working



Text Books:

1. Workshop Practice /B. L. Juneja / Cengage
2. Workshop Manual / K. Venugopal / Anuradha.

Reference Books:

1. Work shop Manual - P. Kannaiah/ K. L. Narayana/ Scitech
2. Workshop Manual / Venkat Reddy/ BSP



VBIT gets autonomous status for 10 years

UGC member Prof. G. Gopal Reddy has said that only 800 academic institutions out of the 46,000 in the country have secured autonomous status and in future only such institutions have the scope to attract the best minds.

Prof. Reddy was speaking after inaugurating the academic session at the Vignana Bharathi Institute of Technology (VBIT), Ghatkesar, which has been conferred autonomous status for a period of 10 years starting the academic year 2019-2020.

VBIT is one among the only 26 autonomous colleges under JNTU, Hyderabad. Prof. Reddy said that VBIT has all the facilities and academic structure to claim Deemed-to-be-University status within the next few years.

Former VC of JNTU Prof. D.N. Reddy suggested useful guidelines for effective functioning as a UGC au-



UGC member G. Gopal Reddy presenting the autonomy certificate to the management of Vignana Bharathi Institute of Technology. ARRANGED

tonomous institution and the scope such institutions offer to students. The academic freedom that VBIT now gets will be advantageous for students compared to other college-

es, he said. Dr. N. Goutham Rao, Chairman, and Dr. G. Manohar Reddy, Secretary of VBIT, revealed that the institution received accreditation for five

major engineering programmes – CSE, ECE, EEE, IT and Civil, by the National Board of Accreditation (NBA), in second cycle.

They said that it has also emerged as a hub of engineering excellence over the last two decades. The sprawling 17.75-acre campus has state-of-the-art teaching facilities to train students in emerging and cutting-edge technologies.

The institute has chalked out a specific roadmap to utilise academic freedom under autonomous status to execute more student-centric programmes.

The exclusive R&D Centre at VBIT has completed four independent projects sponsored by ISRO in the field of Atmospheric Physics. It has also established Mini Boundary Layer Mast (MBLM) Centre in association with ISRO that provides excellent research facility, said Dr. G. Amarendar Rao, Principal.

భవిష్యత్తు అంతా అటానమస్ కాలేజీలదే

యూజీసీ సభ్యుడు గోపాల్ రెడ్డి



సాక్షి హైదరాబాద్: భవిష్యత్తు అంతా అటానమస్ కాలేజీలదేనని యూనివర్సిటీ గ్రాంట్స్ కమిషన్ (యూజీసీ) సభ్యుడు జి.గోపాల్ రెడ్డి తెలిపారు. అందుకే నాణ్యత ప్రమాణాలు పెంచే దిశగా అటానమస్ కాలేజీలు చర్చలు చేపట్టాలని సూచించారు. విజ్ఞాన భారతి ఇన్స్టిట్యూట్ ఆఫ్ టెక్నాలజీకి అటానమస్ హోదా లభించింది.

డి. ఈ సందర్భంగా శనివారం హైదరాబాద్ లో విద్యాలు చేసే కార్యక్రమంలో అటానమస్ హోదా సర్టిఫికేషన్ కాలేజీ డైరెక్ట్ గౌరవాలకు అందజేశారు. అనంతరం గోపాల్ రెడ్డి మాట్లాడుతూ దేశంలో 46 వేల కాలేజీలు ఉంటే 800 కాలేజీలకు అటానమస్ హోదా దక్కేందుకు తెలిపారు. రాష్ట్రంలోని జిల్లాలవారూ 28 కాలేజీలకు అటానమస్ ఉండని, అందులో వీటిని జతచేస్తారు. అటానమస్ వైపు వెళ్లే సరిహద్దులకు ప్రాధాన్యం పెంచుతుండన్నారు. యువతను నైపుణ్యాలు కలిగి మేరీట్ లిచ్చేటట్లుగా మేరీట్ ప్రభుత్వం అనేక కార్యక్రమాలు చేపడుతోందన్నారు. ఈ విద్యా ఏడాదిలో 1,000 కాలేజీలకు అటానమస్ హోదా లభ్యంగా కేంద్రం చర్చలు చేపట్టిందన్నారు. శిష్యులూ మాత్రం వీటి సీట్స్ రెడ్డి మాట్లాడుతూ... విద్యార్థుల్లో సజ్జెక్ట్ నైపుణ్యాలు మాత్రమే కాకుండా కమ్యూనికేషన్ స్కిల్స్, వ్యవస్థలకు అనుగుణంగా స్పందించగలిగే సత్కామ్యం పెంచాలిందన్నారు. కార్యక్రమంలో వీటిని డైరెక్ట్ గౌరవాలకు, కార్యదర్శి మనోహర్ రెడ్డి తదితరులు పాల్గొన్నారు.

'వీటివల్లే'లో ఫ్యాకల్టీ డెవలప్ మెంట్ ప్రోగ్రామ్

మణిపల్: మండలంలోని అప్పపాపూర్ విజ్ఞాన భారతి ఇంజనీరింగ్ కళాశాల (వీటివల్లే)లో మెన్ టెల్లింగ్, డీపీ టెల్లింగ్ అలాంటి రెండు నాలుగు ఫ్యాకల్టీ డెవలప్ మెంట్ ఫోకస్ మం గ్రాంట్లను ప్రారంభించారు. ముఖ్య అతిథి డి.బి.ఎల్. ప్రొఫెసర్ డి.వి. ప్రకాష్ చంద్ర ప్రసంగించారు. మెన్ టెల్లింగ్, డీపీ టెల్లింగ్ వల్ల ఇంజనీరింగ్ కళాశాలలో బోధన నాణ్యతకు, సాంకేతిక విద్యా ప్రమాణాలు మెరుగుపడతాయని ఆయన అన్నారు. కార్యక్రమంలో కళాశాల డైరెక్ట్ గౌరవాలకు, కార్యదర్శి మనోహర్ రెడ్డి, ప్రొఫెసర్ అమరేంద్ర



ముఖ్య అతిథి మెన్ టెల్లింగ్, డి.బి.ఎల్. ప్రొఫెసర్ డి.వి. ప్రకాష్ చంద్ర ప్రసంగించారు. కళాశాల ప్రధానాధికారి



Helping students lead a better life



Stent Craze makes a significant impact on the lives of 2,000 people through its recent fundraiser

Stent Craze, an Indian organization, has recently held a fundraiser to support the lives of 2,000 people. The fundraiser was held in the form of a concert and a charity event. The proceeds from the event were used to support the lives of 2,000 people who are in need of medical attention. The fundraiser was a great success and it is hoped that it will help to improve the lives of many more people in the future.

IDEALABS



Vignana Bharathi Institute of Technology is a member of the T-TRIBE, an innovation platform by T-Hub with IDEALABS as implementation partner

Major Achievements

S.No.	ACHIEVEMENTS	
1.	Vignana Bharathi Institute of Technology (VBIT) has received Accreditation by NAAC (National Assessment and Accreditation Council) with 'A' grade and 3.23 CGPA which is the highest score among all the colleges nationwide participated in 1st window.	
2.	VBIT has been accredited by NBA and is permanently affiliated to JNTUH and is recognised under 2(f) & 12(B) of UGC Act, 1956.	  
3.	<p>IEEE International Awards</p> <ol style="list-style-type: none"> Exemplary Student Branch Award in Asia Pacific Region (2015) Richard E.Merwin International Scholarship Award from IEEE Computer Society (2009-11), (2012-13), (2015-16) Darrel Chong Student Activity International Award (Gold Prize)(2012) Larry K.Wilson International Award in Asia Pacific Region (2013) Outstanding Branch Counselor Award (2012-13) in Asia-Pacific Region (R-10) to Dr. C.R.N.Sarma Special feature on VBIT-SB in IEEE-International Publication "IEEE-Potential" (Volume-32, Issue-4, August 2013) WIE VBIT Student Branch Affinity Group has been declared as the recipient of an "Honorable Mention for the 2015 WIE Student Branch Affinity Group of the Year Award". IEEE-VBIT SB has bagged 2nd position in IEEE Region 10 (Asia-Pacific) website contest 2017 	  
4.	<p>IEEE Regional Awards</p> <ol style="list-style-type: none"> Vibrant Student Branch Award (2009-10) Outstanding Student Branch Award (2010-11) Section student representatives from VBIT for consecutive 6 years (2009-15) IEEE Day Brand Ambassador (2013 & 2014) 	
5.	Power & Energy society (PES) of IEEE-VBIT SB has been awarded as High Performing student Branch Chapter Program (HPSBCP) for the year 2016 under Asia-Pacific Region R10.	
6.	AICTE has approved the institute as a center for Pradhan Manthri Koushal Vikas Yojana (PMKVY) where unemployed youth from near by areas can be trained in 4 vocational disciplines.	