Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

FRESHMAN ENGINEERING (FME)

STUDENT HANDBOOK

2020-21

PLEDGE

India is my country; all Indians are my brothers and sisters. I love my country. I am proud of its rich and varied heritage. I shall always strive to be worthy of it. I shall give my parents, teachers and all elders respect and treat everyone with courtesy.

To my country and my people, I pledge my devotion and in their well-being prosperity alone lies my happiness.

PERSONAL MEMORANDUM

Name : ……...

VTU No. : ……...

Year / Programme / Section : …….....

Date of Birth : ……

Name of the Parent / Guardian : ……...

Permanent Address : ……...

: ……...

: ……...

: ……...

Phone No. : ……...

Hosteller / Day Scholar : ……...

Room No. / Hostel : ……...

University Examination

Register No. : ……

E-mail Address : ……

Mobile No. :…….

Blood Group :…….

Any other Information : ……

VISIONARY LEADERS

Col. Prof. Vel. Dr. R. Rangarajan
Chancellor and Founder President

Dr. Sagunthala Rangarajan
Foundress President

Passionate . Doers

Prof. M. Siva Kumar
Dean-FME
Vel Tech Rangarajan Dr. Sagunthala R&D
Institute of Science and Technology.
Chennai – 600 062.
Off : 73730 33270
E-mail : deanfme@veltech.edu.in

PREFACE

Welcome to the Freshman Engineering (FME), Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology. This handbook has been prepared in the view of providing as much guidance as possible to the FME students vis-à-vis FME Divisional Structure, Teaching & Learning, Academic Infrastructure, Leave Applying Procedure, Mentoring System, Section Representatives, Students Support Services, Functional Cells, Talent Search Forum (TSF), Disciplinary Rules, Fees Payment Process, Campus Central Facilities etc. It is prudent to keep this handbook as a reference guide during your FME tenure. I wish to advise that this handbook is neither a comprehensive statement of all policies and procedures, nor it is intended to preclude the academic policies and institute regulations.

I hope that the information provided in this handbook will help FME students to realize and plan their campus life more sensible and efficient. I wish you all a very rewarding and successful experience at Vel Tech.

Thank you.

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

VISION

To create, translate and share frontiers of knowledge embedded with wisdom and innovation for a positive transformation of emerging society.

MISSION

To nurture excellence in teaching, learning, creativity and research; translate knowledge into practice; foster multidisciplinary research across science, medicine, engineering, technology and humanities, incubate entrepreneurship; instill integrity and honor; inoculate scholarly leadership towards global competence and growth beyond self in a serene, inclusive and free academic environment.

3. A BRIEF HISTORY OF THE INSTITUTION

Vel Tech, "A Place to Progress and Prosper", was started as an Engineering college in 1997 under the Trust founded by the Educational-Philanthropic personalities **Dr. R. Rangarajan and Dr. Sagunthala Rangarajan,** who are the Chancellor & Founder President and Foundress President respectively. Vel Tech has grown steadily over the years by the uncompromising vision, leadership and guidance of these Founder couple and has reached the status of Deemed to be University **"Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology"** u/s 3 of UGC Act, 1956 in 2008.

The foremost aim of the institution is to impart innovative procedural education and inspire an elevated prototype of regulation through the dedicated faculty. Over the two decades of service to higher education, Vel Tech has witnessed a great positive transformation from the year of its inception till date. The Institution has been recognized and endowed with several awards. The Institution offers Under Graduate, Post Graduate and Doctoral Programmes in Engineering and Technology, Arts & Science, Management Studies, Media and Law. Accreditation, approvals and

rankings have enabled Vel Tech to stay on the limelight. The institution is approved by UGC, AICTE and BCI.

Vel Tech Mahatma Gandhi Scholarship Scheme has bestowed 9500 scholarships worth Rs. 35 Crores so far.

Significant Achievements of the Institution:

- Stands **43rd position** along with its peers IISc. 27th position and IIT Madras 42nd position as per the **Times Higher Education (THE) Asia** University Ranking 2017.

- Stands **1st** in India and **74th in the world**, according to the THE Young University Ranking 2017 of the Globe.

- **THE Impact Rankings 2019**, the institution has been ranked **band 101-200 in the World** under the Sustainable Development Goal (**SDG 9**): **Industry, Innovation and Infrastructure**. Only five Institutions from India were ranked under **SDG 9** out of which, Vel Tech stood first in India.

- **THE Impact Rankings 2020**, the institution has been ranked as follows.
    - **Band 101-200 in SDG 6**: Clean water and sanitization,
    - **Band 201-300 in SDG 9**: Industry, Innovation and Infrastructure,
    - **Band 301-400 in SDG 10**: Reduced Inequalities,
    - **Band 301-400 in SDG 17**: Partnership for the goals and
    - **Band 401-600 in Overall** category in the world.

- National Assessment and Accreditation Council (NAAC) accredited the Institution Deemed to be University with 'A' Grade **(CGPA 3.17)**.

- **Six B.Tech. programmes** namely Aeronautical Engineering, Automobile Engineering, Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering and Mechanical Engineering were accredited by **National**

Board of Accreditation (NBA) under Tier-I category.

- **QS I·GAUGE** awarded the Institution with a **Diamond University Rating** through rigorous and independent data collection and analysis against performance metrics as set out in the QS I·GAUGE methodology.

- Vel Tech has been ranked **5th** among "**Privately Funded Institution**" in India by "**Atal Ranking of Institutions on Innovation Achievements (ARIIA) 2019**" an initiative of MHRD, Government of India for "Innovation and Entrepreneurship Development".

- Stands in **Top hundred position** for the consecutive four years **in India as per NIRF India Rankings** under **Engineering category** from 2017 to 2020.

- Times i3RC has placed Vel Tech in **3rd position** in the South Zone and **12th** in India.

- According to Times Annual Engineering College Ranking Survey 2019, the institution has been placed

at **4th position in India (Overall)** and **2nd position in India (Private Engineering Institutes)**.

- THE WEEK-Hansa Research Survey 2019 ranked **70th position** in Engineering Colleges All India, **32nd position** in Private Engineering Colleges in All India, **21st position** in Private Engineering Colleges (South Zone) and **5th position** in Private Engineering Colleges (Chennai).

- According to **CSR-GHRDC Engineering College Survey 2019**, the Institution has been ranked **5th in India** under Ranking of Top Engineering Colleges of Super Excellence, **15th in India** under Top 25 Engineering Colleges Ranked by Faculty, Research, Consultancy, EDP and Other Programme, **15th in India** Top 25 Engineering Colleges Ranked by Placement, USP, Social Responsibility, Networking and Industry Interface and **7th position in Tamil Nadu**.

- According to DataQuest-CMR T-School survey 2020, the institution has been ranked **38th among Top 100**

T-Schools (Overall – Government and Private) and **29th among the Top T-Schools (Private)**.

- The institution has been awarded for **Excellence in Promoting Industry-Academic Interface-South** and **Excellence in Serving for Social Cause** in ASSOCHAM 13th Higher Education, Skill and Livelihood Conclave – Future of Higher Education and Skills 2030.

- The academic insights honored the Institution as **Engineering College of the year 2019**.

- Digital Learning awarded the institution as **Excellence in Entrepreneurship Development**.

- **Prof. Takaaki Kajita, 2015 Nobel Prize winner** in Physics and Director, Institute for Cosmic Ray Research, University of Tokyo, Japan, inaugurated the WABCO Centre of Excellence in Vel Tech Research park on 10th June 2017.

- Vel Tech is the **First Member of CDIO** initiative wherein QS top ranked universities such as MIT-

USA, Chalmers – Sweden and Leeds – UK are the Founder CDIO members. Course delivery, imparting knowledge & skills, are made through Active learning, Problem/ Project based Learning and CDIO projects in Engineering workspaces; http://www.cdio.org/cdio-action/school-profiles/vel-tech-drrr-drsr-technical-university

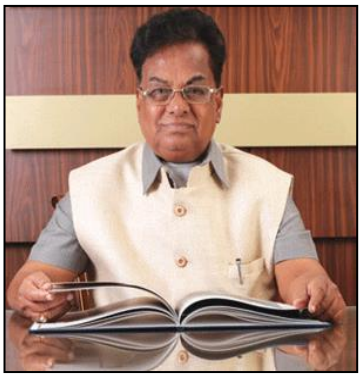
- Outcome Based Education and Evaluation in-line with Washington Accord followed since 2012; Curricula and course syllabi continuously updated considering the Stakeholder's input. Intense industry integration from inception is reflected in our curriculum and courses that are co-developed by top-notch engineering industries, automotive institution **(ARAI-Pune, TAFE, CIRT, GARC etc.) and IT organizations (C-DAC and NASSCOM).**

- Student developers participate in solving code challenges such as **HackerRank** (about 150 students within 20,000 ranks), **Hackathon, Hackerearth and IEEEXtreme.**

4. LEADERSHIP

"A successful administrator needs to be both a strong *leader and manager*", "Go do it says a boss, let's do it says a leader." Vel Tech is gifted with such able leaders who get their team on board to follow them towards their vision of success. The following overseers at Vel Tech make the above mentioned statement true.

4.1 CHANCELLOR



Col. Prof. Vel. Dr. R. Rangarajan, Chancellor of the Institution has a cherishing memory behind his success. It was our passionate vision to make India stronger. He realized that creating knowledge assets would propel both social and economic development for the country. This passion is still the pulse in every effort taken in the Institution and the successful endeavor of every student is our reward.

"Have big aspirations for your future and take every step to get there"

We welcome you to be a part of Vel Tech, a step towards making your aspirations a reality.

4.2 CHAIRPERSON AND MANAGING TRUSTEE

Mrs. Rangarajan Mahalakshmi Kishore is one of the prominent Institutional builders from South India. She is a legitimate stakeholder in several Schools and Institutions offering Engineering, Technology, Management, Law and Science education under the Vel Tech group. She serves in the Governing Board of several educational institutions as chair/member. She also enthusiastically participates as a representative of educational philanthropists in many government committees. She has visited Sweden as a member of the President of Indian delegation.

She is instrumental in bringing educational reforms such as Outcome Based Education (OBE), reforms in assessment and evaluation, faculty capacity enhancement initiatives etc. both in School and University. She has been the motivation behind the Institution's achievements, various awards and recognitions. She stalwartly deems transformational

leadership and empowerment of youth. As the saying goes, “A Leader is one who knows the way, goes the way and shows the way”, the Chairperson and Managing Trustee of Vel Tech is paving the way for a knowledgeable society of responsible citizens.

4.3 VICE CHANCELLOR

Prof. S. Salivahanan, has over four decades of teaching, research, administration, and industrial experience both in India and abroad. He has authored 65 popular Engineering books published by Internationally renowned publishers and his book on Digital Signal Processing has also been translated into Mandarin, the Chinese Official Language spoken by the world’s largest population. As an add-on credit, he has published 116 papers in International Journals and Conferences.

He was the Chairman of IEEE Madras Section for two consecutive years 2008 & 2009. He was the Chairman of IEEE Microwave Theory and Techniques Society, Chennai Chapter for 6 years. Currently, he is the

Chairman of IEEE Signal Processing Society, Chennai Chapter.

He was a member of Education Activities Committee of IEEE Region 10, and Working Group on Technical & Professional Education of the 11th Five Year Planning Commission (2007 – 2012), Government of Tamil Nadu.

He is the recipient of Bharatiya Vidya Bhavan National Award for Best Engineering College Principal for 2011, Life Time achievement award for 2018 from ISTE, and IEEE Outstanding Branch Counsellor and Advisor Award in the Asia-Pacific region for 1996-97.

He is a Fellow of IETE, Fellow of The Institution of Engineers (India), Senior Member of IEEE, Life Member of ISTE, and Society for EMC Engineers. He is a Member of DST expert group on Patent Facilitation Program and Member of DST expert group on S&T Councils.

He was Syndicate Member, Academic Council Member and Member of Board of Studies of Anna University and currently he is a Senate Member of University of Madras.

4.4 REGISTRAR

Prof. E. Kannan (Registrar & Dean Campus Life), obtained his Ph.D from NIT, Trichy in 2006. He is having 28 years of teaching experience in various institutions and working at Vel Tech since 2007. His research interest spans across computer networking and parallel computing. Much of his work has been on improvising the understanding, design and the performance of parallel and networked computer systems, mainly through the application of data mining, statistics and performance evaluation. He has published many research papers in refereed international journals and conferences. He began his career in 1991 and has held various responsible positions in reputed institutions. He is also a member in many professional societies and a senior member of IEEE.

4.5 CONTROLLER OF EXAMINATIONS

Dr. R. Sivaraman (CoE), is known for his dedication and integrity. He has 20 years of Academic and Industry Experience. He is responsible for the

timely conduct of examinations, evaluation and declaration of results, issue of grade cards, transcripts and consolidated grade statements.

4.6 DEANS

Dean - FME

Prof. M. Siva Kumar from the Department of Mechanical Engineering. He has 27 years of experience put together in industries, academia, research and administrative capacity. Professor is well known amongst the academicians for his expert lectures in the area of optimization techniques using MATLAB codes and published more than 40 papers in the reputed international journals. As the Dean of FME, he takes care of the academic run of first year.

Dean - Quality Assurance

Prof. R. S. Valarmathi from the Department of Electronics and Communication Engineering has 27 years of experience in teaching, research and administration. She has

published 125 research articles in refereed International and National Journals and 105 articles in International and National Conferences. She has produced 10 Ph.D. graduates and received quite a few Best Faculty Awards. As the Dean Quality Assurance, she is responsible for planning, developing, directing quality assurance strategies and initiatives to fortify the academic and administrative enactments of the institution.

Dean - Human Resource & Development Centre

Prof. E. B. Perumal Pillai from the department of Civil Engineering is renowned for his tireless efforts. He was the first Registrar of State -owned Anna University of Technology, Madurai. He has 36 years of experience in academics, administration and research including five years of experience in foreign countries. He is mainly entrusted with the responsibility to plan, organize, implement, monitor and evaluate orientation courses for newly appointed faculty members in the institution.

Dean - Hostels

Prof. Dr. Irudayaraj. S, Professor from the department of Mechanical Engineering hasobtained his M.E. degree from NIT, Trichy in the year 1994 and Ph.D from Anna University. He has published many research papers in national and international journals and conferences. He has around 30 years of experience in teaching and Industry. He looks after the administration of Hostels.

Dean - International Relations and R & D

Dr. S. Sivaperumal, Associate Professor from the Department of Electronics and Communication Engineering. As the Dean of International Relations, he helps in developing ways to promote student mobility and providing a channel for international communication by managing existing formal or informal collaboration and seeking new partnership as the Dean of International Relations. As the Dean R & D, he is responsible for

research, planning, implementing new programs and strengthening of the R & D activities.

Dean - Industry Relations and TBI

Dr. P. Chandra Kumar, from Department of Mechanical Engineering is an academician with 11 years of experience and has been nurturing the Technology Business Incubator (TBI) established in the institute to promote technology driven start-ups. His core activities involve in planning and executing various joint activities to foster sound, fruitful and sustainable industry-institute relations, innovation, entrepreneurship and venture development.

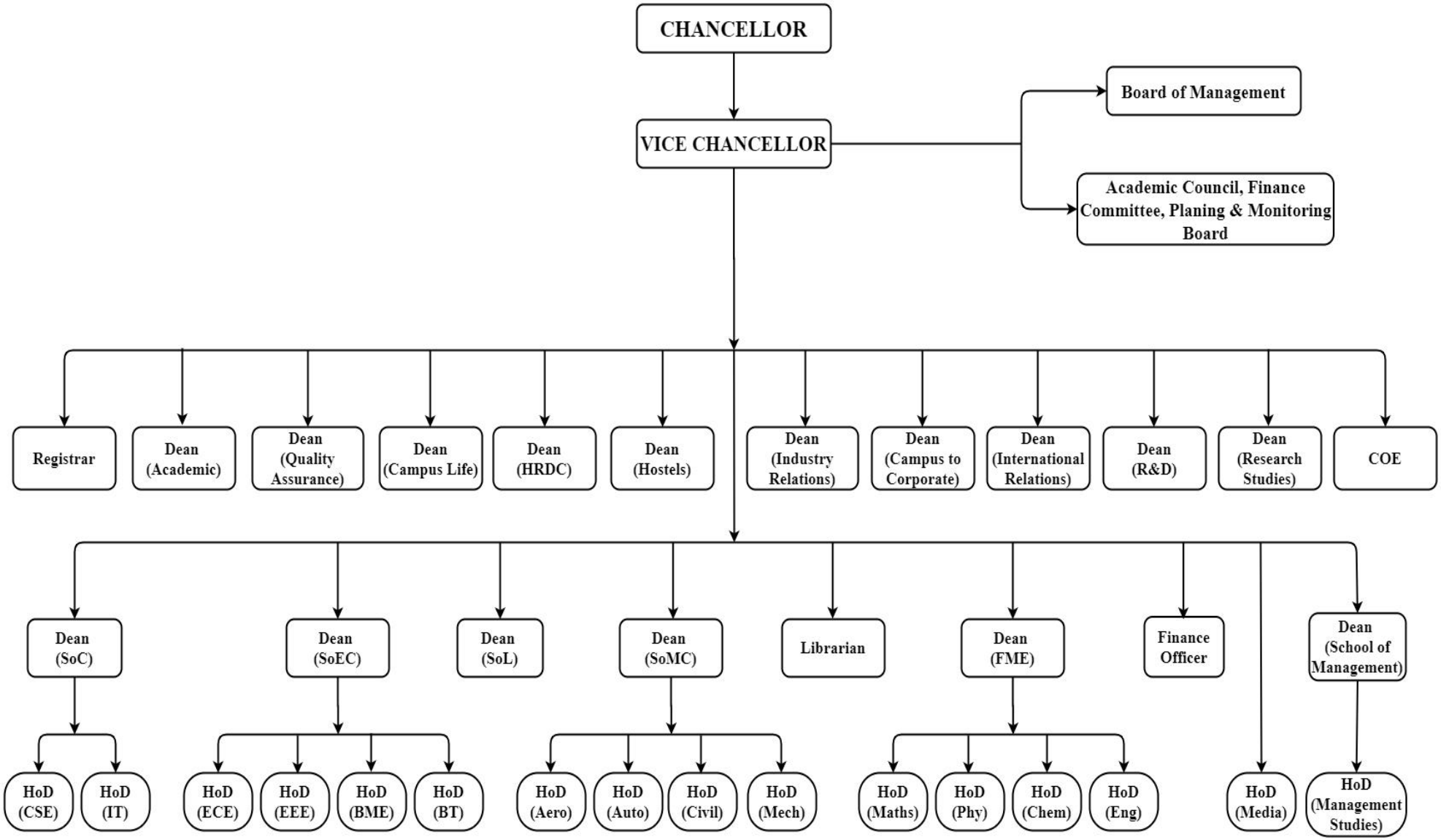
Dean (In-charge) – Campus To Corporate

Mr. P. Vijayaraman, from the Department of Computer Science and Engineering, is passionate and enthusiastic teaching professional. He has 11 years of experience in teaching, training, and placements. He enjoys teaching

subjects like C, C++, Java, Python, Data Structures Algorithm, and DBMS. He runs a channel on YouTube to teach programming and help students on Infosys' InfyTQ Courses. He is recognized as a Wipro Certified Faculty (WCF) for Project-Based Learning (PBL). He has helped more than 10,000 students to improve their skills and choose the right career path. He is responsible and accountable for campus placements, for which he performs various activities including liaison with corporates. Campus to Corporate department train students in Cognitive, Analytical, Verbal and Technical ability for a smoother transition into corporate life.

5. ORGANISATIONAL STRUCTURE

Organisational Structure typically gives the hierarchical arrangement of lines of authority, communications, rights and duties, the roles, power and responsibilities of the members of Vel Tech.



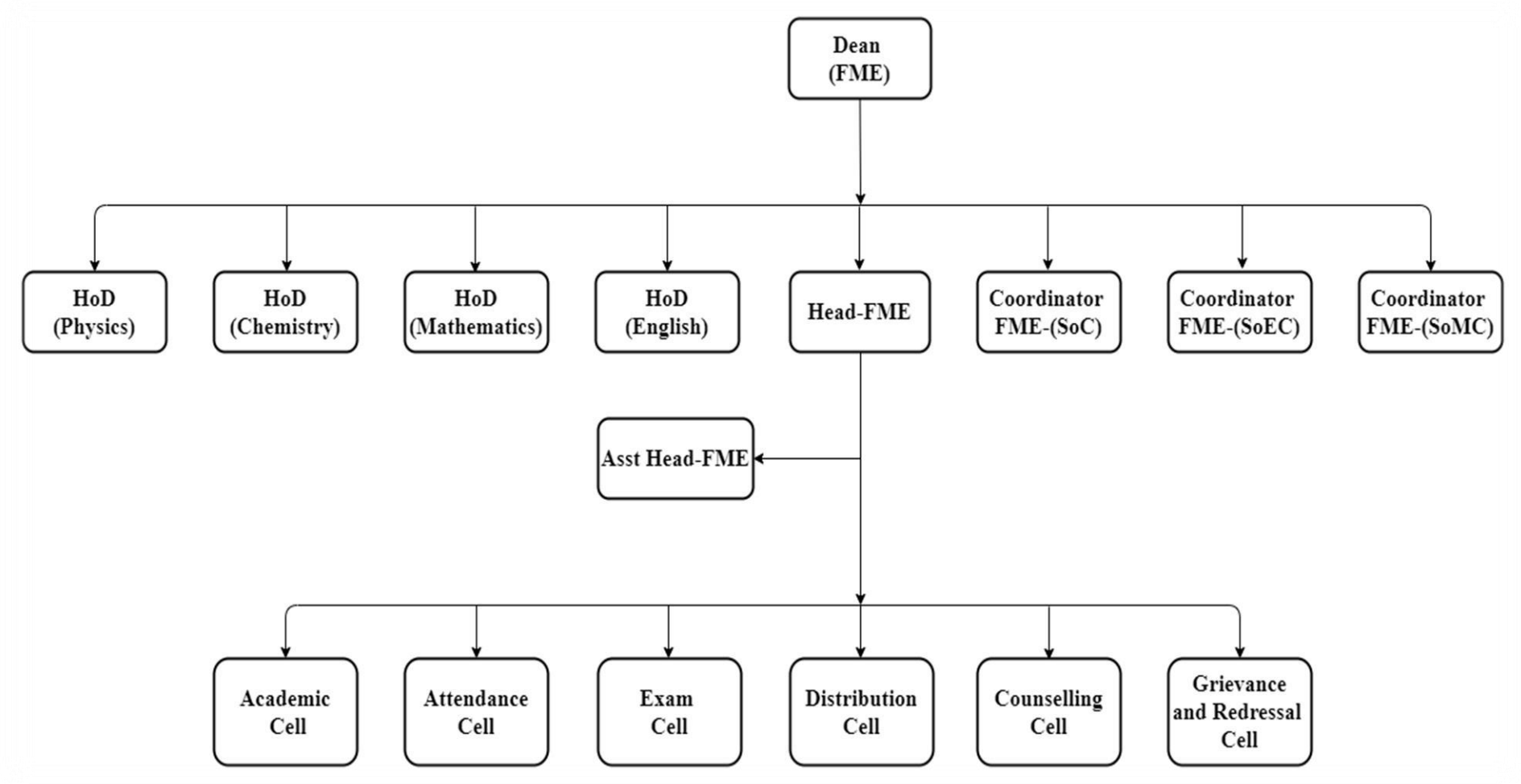
Organisational Structure of the Institution

6. FRESHMAN ENGINEERING (FME)

Freshman Engineering is a special name given to first year B. Tech. students of Vel Tech. FME division solely handles all the demands, issues and requirements in relation to the first year B.Tech. students. Since FME students are new to the institution, they get total support and guidance here. It is a complete network working for the betterment of the FME students. It embraces four departments namely Physics, Chemistry, Mathematics and English. It takes care of imparting the fundamental knowledge and skills that are required for the first year Engineering students.

6.1 DIVISIONAL STRUCTURE

Divisional structure helps to know the pecking order on how the FME office functions. Communication generally occurs within each functional department and is transmitted across departments through the department heads.



Divisional Structure of FME

- Dean-FME – Dr. M. Siva Kumar
- Head-FME – Mr. M. Vijay Albert William
- Asst. Head-FME – Mr. D. Balaji
- HoD Physics – Dr. R. Jothilakshmi
- HoD Chemistry – Dr. C. Hazarathaiah Yadav
- HoD Maths – Dr. M. L. Suresh
- HoD English – Dr. M. R. Bindu
- FME Coordinator (SoC) – Dr. R. Suguna
- FME Coordinator (SoEC) – Dr. K. Baskar
- FME Coordinator (SoMC) – Dr. J. Udaya Prakash
- Academic Cell Incharge – Mr. M. Vijay Albert William
- Attendance Cell Incharge – Mr. D. Balaji
- Examination Cell Incharge – Dr. R. Suresh
- Distribution Cell Incharge – Mr. J. Raja Beryl
- Counseling Cell Incharge – Ms. H. Revathi
- Grievance and Redressal Cell Incharge – Dr. P. Narayanasamy

6.1.1 DEAN-FME reports to Vice Chancellor. He is responsible for the operation of the FME division. He plays an exclusive continuum of FME academic administrator, as the facilitating connection amongst Department Heads, Faculty Members, Staff and Institution Officials. Head-FME, Department Heads, FME Coordinators directly report to Dean-FME.

6.1.2 HEAD-FME

He coordinates the FME School by carrying forward the instruction given by Dean-FME. He is bestowed with the responsibility of planning and executing student related activities. He directly reports to Dean-FME.

6.1.3 HoDs play a vital role in monitoring the academic progress efficiently as per the proposed schedule; any deviation in the system is reported to the Dean-FME. The faculty members of the concerned departments directly report to concerned HoDs.

6.1.4 FME COODRINATORS from Engineering wing plays similar role like HoDs of FME. These coordinators direct the General Engineering Faculty members (GEF) who handle classes for the FME students. General Engineering Faculty members (GEF) report directly to the FME Coordinators.

6.2 PROFILE OF THE DEPARTMENTS

6.2.1 Department of Physics

Dr. R. Jothilakshmi, Professor, heads the Department since 2012. The department was established in 1997. The department offers Foundation courses for Undergraduate Programme (UG) - Bachelor of Technology (B.Tech.) in Engineering Physics and Engineering Materials, Institute Electives in Medical Physics and Nanostructures. The department also offers vibrant Post Graduate Programme (PG) – Master of Science (M.Sc.) in Physics. The department comprises well-qualified and goal oriented faculty members whose research expertise includes major

frontier areas. Currently, the department has two Professors, three Associate Professors (NET cleared - one), 13 Assistant Professors (SLET cleared - one) and three Lab Instructors with the total of 18 faculty members of which 17 are Doctorates including two Post Doctorates. Faculty members are specialized in wide areas of research in various fields. The goal of the department is to develop well-qualified as well as outstanding students. Various innovative Physics projects have been included in the laboratory curriculum based on the outcomes. Every semester, Faculty Development Programmes (FDP) are conducted to enhance faculty teaching and to share their knowledge in improving the Teaching learning.

6.2.2 Department of Chemistry

Dr. Hazarathaiah Yadav, Professor, leads the Department since 2014. The department was established right from the inception of the Institute. The department offers M.Sc. programme in Chemistry for PG students and also offers many supporting courses in

Chemistry for the students of B.Tech. and M.Tech. Programmes. The Department of Chemistry consists of 21 faculty members among them three are Professors, six are Associate Professors and 12 are Assistant Professors. 20 of them are Doctorates in various specializations of Chemistry and few of them are Post-Doctoral Fellows. Faculty members are aware of Outcome Based Education (OBE) and are committed to impart quality scientific knowledge and develop necessary skills that will enable the students to successfully meet the challenges of the professional world. The department imparts various Active Learning Methods (ALM) to make the students participate and involve in the learning process more effectively. Further, the department supports the students for Project Based Learning. The department has one ongoing project funded from DST (SERB) in addition to the four funded projects to its credit. The department strives hard training the students to get exposure to the industrial problems which they may have to face in their professional life.

6.2.3 Department of Mathematics

Dr. M. L. Suresh, Professor, heads the Department since 2018. The department was established since the inception of the Institution. The department has been offering Foundation courses in Mathematics for the students of B.Tech., M.Tech., and supporting courses for M.B.A. Programme. The department has got approval to start M.Sc. Programme in Mathematics from the academic year 2020-21. The department has 16 renowned supervisors to guide Ph.D. programme in Mathematics. So far, 15 scholars have been qualified for Ph.D. degree and currently there are 21 scholars pursuing their research. The thrust areas of research offered by the department are Stochastic Models, Reliability Models, Queuing Models, Neural Networks, Algebra, General Topology, Differential Equation, Fuzzy Set Theory, Graph Theory, Stochastic Graphs, Fuzzy Topology, Fuzzy Graph Theory, Inventory Models, Man Power Planning Models, Non – linear Dynamics, Control Theory, Chaos Theory, Time Series Analysis and

Design of Experiments. Several courses of the department involve training in software packages so as to augment the computing capabilities of the students. Every semester, the department organizes Faculty Development Programmes (FDP) to update the knowledge of the faculty.

6.2.4 Department of English

Dr. M. R. Bindu, Professor, heads the Department since 2018. The department was established since the inception of the Institution. The department has commendable faculty members from various specializations with potential brilliance and proficient knowledge. The department meticulously works at improvising the students' quality of English Language and caters to the demands of the present corporate world. The department has been offering various language development courses such as Technical English, Technical Communication, Workplace Communication I and Workplace Communication II for Undergraduate Programme (UG), B.Tech. students. To enhance their

communication skills and to impart moral values, the department also offers various Value Education Electives and Institute Electives like Public Speaking, Effective Group Discussion, Moral Values in Thirukkural, Autobiography and Memoirs, Stress Management, Passionate Leadership, Soft Skills, Creative Writing, Learning to Learn, Academic Writing and Intensive English for Beginners. The Department has six recognized supervisors to guide Ph.D. programme in English with 15 scholars pursuing research under their supervision. The areas of research include Indian Writing in English, Dalit Literature, British Literature, Black Literature and ELT. Faculty Development Programmes (FDP) are conducted for upgrading teaching skills bringing positive effect on students' academic achievement. The Department has taken an initiative of signing an MoU with Cambridge Assessment English, University of Cambridge, U.K to enhance English language skills of the students to satisfy the needs of the industry.

Vel Tech Centre for English Proficiency-IA072

Vel Tech Centre for English Proficiency-IA072 is an authorized centre for Cambridge English Language Assesment. The centre was established on 29th April, 2019 at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology. This Intensive Training Centre conducts various certificate courses for English language learners and teachers. Cambridge English qualification is designed to help professionals develop the English language skills to communicate confidently in an international workplace and use the English language in professional and academic contexts at a high level.

There are three levels in the Business English Certificate qualification:

i. B1-Business Preliminary shows that the students have mastered the basics of Business English. This course is added as one of the complementary skills courses(non credit) in the academic regulations of B.Tech. programmes (VTUR15-7.2.9) Group I.

ii. B2-Business Vantage helps when applying for new jobs, getting a promotion or to develop the career.

This course is considered as Institute Elective (2 credit) for industry demands.

iii. C1-Business Higher gives learners the practical language skills they need to operate confidently at a senior level in global business.

The centre conducts different levels of examinations depending upon the student requirements. As a result, 801 students have cleared this examination and many students have attained B1 and B2 levels of the examination.

7. FME ACADEMICS

7.1 TEACHING AND LEARNING

Now-a-days, bringing and retaining the Engineering students in the conventional classrooms is a big challenge. The solution, pronounced by the learning scientists, is that Teaching-Learning should be transformed as Learning by facilitation which happens in a space wherein students will learn actively with peers. Vel Tech has established seven such active learning spaces and faculty members have been facilitating students towards Collaborative and

Cooperative Learning through different learning methods like Jig-Saw, Think-Pair-Share, Peer Instruction, ConcepTest, Mud Card and Flipped Classroom.

To cope up with the revolutionary changes happened in the Engineering education internationally during recent years, Vel Tech has adapted the new pedagogical process so-called “Conceive-Design-Implement-Operate” **(**CDIO) approach. This rationally developed CDIO syllabus helps the students to acquire professional, personal and inter-personal skills systematically. As the first initiative of this transformation, Vel Tech has established an Engineering Workspace to support and encourage hands-on learning of product, process, and system building, disciplinary knowledge and social learning.

Teaching and Learning is organized to align with graduate learning outcomes. It has been done by monitoring and updating courses to always align with industry insight. The courses are meticulously designed by involving industries, research organizations, and

international universities of repute and student employers.

7.1.1 Academic Calendar

FRESHMAN ENGINEERING		
ACADEMIC CALENDAR (2020-21)		
B.Tech. - I YEAR	**SUMMER SEMESTER**	**WINTER SEMESTER**
COMMENCEMENT OF IcA PROGRAMME	27-Sep-20	Not Applicable
COMMENCEMENT OF STUDENT SEMESTER REGISTRATION	Not Applicable	10-Feb-21
COMMENCEMENT OF CLASS WORK	12-Oct-20	18-Feb-21
LAST DATE FOR SEMESTER REGISTRATION	Not Applicable	25-Feb-21
LAST DATE FOR SEMESTER REGISTRATION WITH LATE FEE/ COURSE REGISTRATION	Not Applicable	05-Mar-21
UNIT TEST - 1	02-Nov-20	10-Mar-21
MID TERM TEST - 1	23-Nov-20	31-Mar-21
UNIT TEST -2	14-Dec-20	23-Apr-21
MODEL-PRACTICAL EXAM	29-Dec-20	15-May-21
MID TERM TEST - 2	06-Jan-21	25-May-21
LAST INSTRUCTIONAL DAY	19-Jan-21	07-Jun-21
EXAMINATIONS		
SEMESTER END EXAM TIME TABLE NOTIFICATION.	28-Dec-20	17-May-21
SEMESTER END PRACTICAL EXAM	22-Jan-21	11-Jun-21
SEMESTER END THEORY EXAM	28-Jan-21	17-Jun-21
HOLIDAYS		
LIST OF PUBLIC HOLIDAYS	**AS PER TAMIL NADU STATE GOVERNMENT PUBLIC HOLIDAYS**	
COMMENCEMENT OF NEXT ACADEMIC YEAR (2021-2022) – 12th July-2021		

7.1.2 Induction cum Acquaintance (IcA)

Every year Induction cum Acquaintance (IcA) is coordinated by Freshman Engineering. All academic departments and supporting departments contribute by organizing induction classes on the subjects they are specialized. It is a three weeks induction programme to the fresher's every year to ensure better acquaintance of the students to the new environment. It is a well-designed programme where in the students get an initial exposure to Vel Tech academic environment in a span of three weeks. This programme helps the students to acquaint a brief knowledge about their school of study, the rules and regulations and the various facilities available in the institution. The modality of the activity/events of IcA may be lecture sessions (LS) including videos or individual task (IT) or group task (GT) alone or combination of either any two or all three.

Activities / Events of Induction cum Acquaintance (IcA) Programme for the Academic Year (2020-21)

- My First Day at VTU
- Basics of Arduino Programming and Circuit Design

- Under Pressure
- Do and Learn
- Concept Car Sketching
- My First Flight
- Basic Mathematics and its Applications
- Boundless Physics
- Everyday Chemistry
- Fun with English
- My First Project (CDIO)
- FME Students Handbook-Gist
- Best of My School
- Skillset for Best Professional
- Technical Draft & Playing with Slides
- Critical Thinking
- Gaming and Animation
- Web Designing
- 3D Printing
- History of Computing
- Programming Logic with Scratch
- Break & Make
- Financial Technology (FinTech)

Online Class Timings for IcA:

Period 1:- 09:45 AM to 10:35 AM

Period 2:- 10:45 AM to 11:35 AM

Period 3:- 01:45 PM to 02:35 PM

Period 4:- 02:45 PM to 03:35 PM

Students can attend all the activities of IcA program in online either by using laptop (Quad core/ Core i3) or smart phone by simply clicking the link.

- Cyber Forensics
- Network Management
- Landscape of Programming Languages
- ECE for Smart Living
- App Development
- Think like a Computer
- Programming Language & Tools
- Exploring Smart Connectivity
- Online Learning Resources MOOC, NPTEL, SWAYAM, SBSI, etc.,
- Social Media Awareness
- Understanding Human Values
- Gender Sensitization & Psychology
- Examination Procedures
- Corporate Talk
- Entrepreneurship Opportunities @ Vel Tech
- Industry Relations
- International Opportunities
- Career Opportunities
- Placement Opportunities and Guidance for Preparation

- University Central Library
- NCC, NSS & Club activities
- ports achievements and facilities

IcA ACTIVITIES DURING 2019 - 20

IcA Innagural

Corporate talk

Corporate tour

Brick 'O' Mania

3D Printing

Hands on PCB making

My first flight

Build my Vehicle

Break & Make

Exploring Smart connectivity

My first Project (CDIO)

7.1.3 Gist of B.Tech. Academic Regulations VTUR15

Duration	**Minimum (N) =** 4 years (8 semesters) **Maximum = N**+2 years	
Course Registration request in a semester		
Minimum :	18 Credits	Out of which minimum 15 credits from Section 7.2.1 and/or 7.2.2 of VTUR15
Maximum :	28 Credits	

Programme Structure

A. ***Foundation Courses (60 credits)***

The foundation courses will have the courses related to Basic Sciences & Mathematics, Basic Engineering Sciences and Humanities and Social Sciences. (Refer to Section 7.2.1 of VTUR15)

B. ***Programme Core Courses (60 credits)***

Programme Core consists of set of courses considered necessary for the respective programme and programme specific criteria prescribed by the appropriate professional societies. (Refer to Section 7.2.2 of VTUR15).

C. ***Programme Electives (18 credits)***

Programme Electives are the courses offered in the programme which covers the depth and breadth to further strengthen the programme specific knowledge. (Refer to Section 7.2.3 of VTUR15).

D. ***Allied Electives (6 credits)***

Allied Electives are the courses offered in other departments from the respective school which provides the desired knowledge and skills in allied areas. (Refer to Section 7.2.4 of VTUR15)

E. ***Institute Electives (10 credits)***

Institution Electives are the courses offered across the respective schools to enhance the knowledge breadth and professional competency. (Refer to Section 7.2.5 of VTUR15).

F. ***Value Education Electives (4 credits)***

Value Education Electives are the set of value based courses which are aimed at man-making education. (Refer to Section 7.2.6 of VTUR15).

G. Independent Learning (20 credits)

To learn the courses offered under this category on your own (Refer to Section 7.2.7 of VTUR15).

The courses offered under this category include:

1. Self-Learning Course
2. Seminar, Minor Project and Major Project.

H. Industry/Higher Learning Institute Interaction (2 credits)

To earn a minimum of two credits by undergoing internship and/or specialized courses as mentioned in the sections 7.2.8.2 & 7.2.8.3, respectively (Refer to Section 7.2.8 of VTUR15).

I. Complementary Skill Courses (No credits)

The courses offered under this category are to complement the knowledge, skill and attitude acquired through the regular curricular courses (Refer to Section 7.2.9 of VTUR15)

List of Complementary Skill Courses

Group	Category	Requirement
Group-I	Soft Skills I and II	All
	Aptitude Proficiency I and II	
	English Proficiency Certification	
Group-II	Sports/Yoga	At least one course
	National Cadet Corps	
	National Service Scheme	
	Extra-Curricular Activities	
Group-III	Value Added Courses	At least one course
	Globally accepted Certification Courses	
	Co-curricular Activities	
	Foreign Languages	

Eligibility for Semester End Examinations

- To secure a minimum 75% attendance in each course.

Conditions for Pass

- For all the Individual Theory/drawing courses, students have to secure a minimum 50% aggregate marks out of which minimum of 45% is required in Semester End Exam.
- For all the Individual Lab/Project courses, students have to secure a minimum 50% aggregate marks out of which minimum of 50% is required in Semester End Exam

Eligibility for award of B.Tech. Degree

- Secure a minimum of 180* credits.
- Fulfill the minimum credit requirement in each category as mentioned in Programme structure.
- Complete the complementary skill courses mentioned in Table 1.
- Secure minimum of CGPA 6 in 10 point scale.

*Revision under process as per AICTE Norms.

Credits Required for Program Specialization

S.No	Course Category	Minimum Credits Required
1	Programme Elective (Section 7.2.3 of VTUR 15)	18
2	Independent Learning (Section 7.2.7 of VTUR 15)	20
3	Industry/Higher Institute Learning Interaction(Section 7.2.8 of VTUR 15)	2
Total		**40**

EXAMINATIONS AND SCHEME OF EVALUATION

Total Marks (100) = Continuous Evaluation (40) + Semester End Examination (60)

Continuous Evaluation (40 marks)

<table>
<tr><th>Course category</th><th colspan="5">Continuous Evaluation</th></tr>
<tr><td rowspan="6">Theory courses</td><td rowspan="6">Two* Unit Tests (10 marks each)</td><td rowspan="6">Two* Mid-Term Tests (20 marks each)</td><td rowspan="6">Two* assignments (5 marks each)</td><td colspan="2">Regularity of students (5 marks)</td></tr>
<tr><td>Attendance (%)</td><td>Marks</td></tr>
<tr><td>90% and above</td><td>5</td></tr>
<tr><td>80 to 89%</td><td>4</td></tr>
<tr><td>75 to 79%</td><td>3</td></tr>
<tr><td>Below 75%</td><td>No mark</td></tr>
<tr><td>Lab courses</td><td colspan="2">Model Lab (25 marks)</td><td colspan="3">Evaluation of Lab experiment (15 marks)</td></tr>
<tr><td>Theory integrated courses</td><td colspan="2">Two mid-term* tests (20 marks each)</td><td colspan="3">Model Lab (20 marks)</td></tr>
<tr><td>Lab integrated courses</td><td colspan="2">Model Lab (25 marks)</td><td colspan="3">Evaluation of Lab experiment (15 marks)</td></tr>
</table>

* 2/3rd of best test & 1/3rd of other test

Semester End Examination (60 Marks)

<table>
<tr><th>Course category</th><th colspan="4">Semester End Examination</th></tr>
<tr><td>Theory courses</td><td>PART A
10 Marks</td><td>PART B
20 Marks</td><td colspan="2">PART C
30 Marks</td></tr>
<tr><td>Lab courses</td><td>Performance of conducting Experiment (30 Marks)</td><td>Result & Analysis (20 Marks)</td><td colspan="2">Viva (10 Marks)</td></tr>
<tr><td>Theory integrated courses</td><td>PART A
10 Marks</td><td>PART B
20 Marks</td><td colspan="2">PART C
30 Marks</td></tr>
<tr><td rowspan="2">Lab integrated courses</td><td>PART A</td><td colspan="3">PART B</td></tr>
<tr><td>Theory questions (20 Marks)</td><td>Performance of conducting Experiment (25 Marks)</td><td>Result & Analysis (10 Marks)</td><td>Viva (5 Marks)</td></tr>
</table>

Award of Division

Criteria for award of division

CGPA nominations	Division
$6 \leq CGPA < 6.5$	Second Class
$6.5 \leq CGPA < 8$	First Class
$CGPA \geq 8$	Distinction*

*All the courses contributing to CGPA shall be cleared in the first appearance.

7.1.4 Semester Registration and Course Registration

Students must register themselves by filling the semester registration pro-forma before the commencement of each semester. The procedure to complete the registration process is given below:

- Students should login to their Institution official email ID.
- After login to the Institution official email ID, student can type URL in the new tab to fill the semester registration pro-forma.
- The pro-forma must be filled by giving the details asked for.

- Students must pay the fees for the respective semester before filling the form.
- Finally, a print out of the filled in pro-forma should be taken and submitted to respective mentor.

The filled- in forms should be processed as follows

1. Students should enclose the copy of proof for permanent address.
2. Hostellers shall obtain the signature from Dean-Hostels/Respective Supervisor of the hostel in the Semester Registration pro-forma.
3. While submitting the filled-in Semester Registration pro-forma to their mentor, he/she should furnish the following details.
   i. Address proof of residence (Day boarders/Day scholars).
   ii. Fee paid challan. (Second semester)
   iii. Photo copy of the hall ticket (First semester).

Late Registration

Late registration after the announced registration dates may be permitted only for valid reasons and on

payment of a late registration fee. In any case, registration must be completed before the prescribed last date for late registration. These dates shall be mentioned in the academic calendar. He/ She will not be allowed to attend the classes without registering the course through online. The names of unregistered students will be removed from the rolls without any notice. Attendance will be calculated from the commencement of classes irrespective of the registration date.

7.1.5 Class Timings

The class timings for Freshman Engineering students start at 7:45 A.M. and ends at 3:35 P.M. Each period is followed by 10 minutes break.

Class Timings

Periods	1	2	3	4	LUNCH	5	6	7
TIMINGS	7:45 AM to 8:35 AM	8:45 AM to 9:35 AM	9:45 AM to 10:35 AM	10:45 AM to 11:35 AM		12:45 PM to 1:35 PM	1:45 PM to 2 35 PM	2:45 PM to 3:35 PM

During Covid pandemic period, the students can attend online classes in any allotted four periods either by using laptop (Quad core/ Core i3) or smart phone by simply clicking the link

7.1.6 Continuous Evaluation Tests

A well-planned continuous Internal Assessment pattern is required to ensure and assess the continuous learning among the students. It also motivates the students to score good marks so that they would earn good Internal Marks. The tests will be conducted on the dates mentioned in the academic calendar and assignment submission dates will be given by the course handling faculty.

Continuous Internal Assessment Pattern

S.NO	CATEGORY	PORTIONS COVERED	MARKS
1	Unit Test – I	Unit - I	10
2	Mid -Term Test – I	Unit - I & II	20
3	Assignment – I	Unit - I & II	5
4	Unit Test – II	Unit - III	10
5	Mid -Term Test – II	Unit - III, IV & V	20
6	Assignment – II	Unit - III, IV &V	5

7.1.7 Course Attendance and Eligibility

It is mandatory for him/her to get the course eligibility during the course of study.

i. He/She shall possess 75% attendance and above in each subject to attain Course Eligibility.
ii. As the Institution follows Choice Based Credit System (CBCS), he/she should have above 75% attendance in all the subjects to write End Semester Examination.
iii. If the attendance of the students falls between 65% -74% in any of the subject, he/she may appeal for condonation by producing Medical Certificate and it will be accepted only for genuine cases after the recommendation of mentor, HoD and approval of Dean-FME.
iv. If a student has less than 65% attendance in a course he/she will not be eligible to write the end semester exam of that semester. He/She has to re-register the course in the next semester by paying the course re-registration fee and by attending the classes with the eligibility of minimum 75% attendance.
v. If a student avails continuously more than 5 days leave, he/ she has to give proper

explanation and produce Medical Certificate which may be considered if approved by the Dean-FME.

Note: The Medical Certificate will be accepted only if the student has attendance of minimum 65%. The requirement as per VTUR15 Regulations a minimum of 75% attendance is compulsory in each course.

Attendance marks for each theory course shall be awarded as given below:

Attendance marks for theory courses

Attendance (%)	Marks
90% and above	5
80 to 89%	4
75 to 79%	3
Below 75%	No mark

7.1.8 Internal Marks

Unit Test: There shall be two unit tests each carrying 10 marks. Two-third of the best unit test mark and one-third of the other unit test mark shall be considered for internal marks. It shall measure the knowledge of the students at regular intervals and

match the levels as mentioned against the respective course outcomes, in cognitive learning domain, as per the revised Bloom's Taxonomy. The test shall consist of two questions each carrying five marks.

Mid-Term Test: There shall be two mid-term tests each carrying 20 marks. Two-third of the best mid-term test mark and one-third of the other mid-term test mark shall be considered for continuous evaluation. It shall measure the knowledge of the students in all levels as mentioned against the respective course outcomes, in cognitive learning domain, as per the revised Bloom's Taxonomy. The test shall consist of two parts – Part A and Part B. Part A shall cover remember and understand level questions and carry five marks. Part B shall cover understand and above levels questions as mentioned against the respective course outcomes and it shall consist of four questions each carrying five marks, out of which student shall answer any three questions.

Assignments: There shall be two assignments each carrying five marks. Two third of the best assignment

mark and one third of the other assignment mark shall be considered for Continuous Evaluation.

7.1.9 Clearance Certificate and Process of Issuing Hall Tickets

He/She will be admitted into the exam hall only after producing the Hall Ticket. Hall Tickets will be provided to students who have 75% of attendance in each subject. If the attendance percentage is between 65% and 75%, he/she may become Eligible by providing genuine reason and a valid proof; this proof shall be verified and approved by the Dean-FME. The process for receiving Clearance Certificate and Hall Tickets is as follows:

i. The subject wise attendance percentage of him/her will be calculated and displayed.
ii. He/She will then be instructed to collect the Clearance Certificate from their respective mentors on the allotted dates.
iii. The students who have above 75% attendance become automatically eligible to receive the Hall Tickets, students whose percentage is between 65%

and 75% must apply for Condonation while students having less than 65% become Not Eligible.

iv. He/She has to fill the form and get clearance of fees from the accounts sections.

v. In case of Condonation, he/she may apply for the same by getting acknowledgement from their mentors, respective subject handling faculty and the section Head. The filled in form has to be forwarded to the Dean-FME for approval.

vi. After completing the entire process, the filled in forms should be submitted to the mentor to receive their hall tickets.

7.1.10 Special Classes for Slow Learners

Slow learners are identified by the respective course faculty and special classes are conducted after the class hours or during non-instructional days. The mentor also identifies the slow learners based on their performance in the assessments and helps them out by informing their parents, counseling the students and also requesting the course handling faculty to provide special attention to such students.

7.2 ACADEMIC INFRASTRUCTURE

7.2.1 Classrooms

The administrative office and classrooms of FME is located in the 6th block. Nearly, 39 classrooms are allocated exclusively for the School of FME. Every classroom is equipped with necessary amenities like good LED light, Green Board, Furnished Desks, Projector, CPU and Faculty Desk.

FME – Classrooms

S.NO	LOCATION	ROOM NO.
1	B6 - Ground Floor	6002-6007, 6009-6012, 6014
2	B6 - First Floor	6104 – 6113
3	B6 - Second Floor	6202 – 6213
4	B6 - Third Floor	6303, 6305, 6307, 6311-6313

7.2.2 Engineering Hives

The School of Freshman Engineering exclusively has 2 Engineering Hives for the first year students. These hives are used by the first year faculty to practice Active Learning Methods. Hives are well furnished with movable tables and chairs, writable walls, good audio system with projectors and white board.

FME – Engineering Hives

S.NO	NAME OF THE HIVE	LOCATION	ROOM NO
1	Sri Ramanujan Hive	B7 - Ground Floor	7001
2	Sir C V Raman Hive		7002

7.2.3 Drawing Halls

Apart from classrooms and labs, FME has spacious and well equipped drawing halls exclusively for the first year students to practice engineering drawings on the unique drawing tables with provision for height and angle adjustment. Each drawing hall can accommodate 60 students and in some drawing halls can accommodate more than 60.

FME – Drawing Halls

S.NO	NAME OF THE HALL	LOCATION	ROOM NO
1	Drawing Hall	Block 6 III Floor	6302
2			6304
3			6309-6310
4		Research Park III Floor	RP21308

7.2.4 FME Laboratories

Physics Lab

The Physics Lab is designed with well equipped and advanced instruments to conduct the experiments. The laboratory is spacious enough to accommodate about 120 students. Some of the equipment used in Engineering Physics Lab is: Semi-Conductor Laser, Ultrasonic Interferometer, Photo Voltaic Setup, Spectrometer-Grating, Young's Modulus, Torsional Pendulum, Hall Effect Setup, Dielectric Constant Setup, Four Probe Setup and Travelling Microscope. It allows the students to develop experimental skills to design new experiments in Engineering. With the exposure to these experiments the student can compare the theory and correlate them to their core subjects.

Chemistry Lab

The Engineering Chemistry Lab is set up with a wide range of latest equipment. The lab is aptly planned to impart education in Chemistry in a neatly designed, spacious and well-ventilated laboratory with a capacity to accommodate about 120 students. It provides students with a practical approach towards the various techniques used in engineering application. Some equipment used in Engineering Chemistry Lab are: Conductivity Meter, pH Meter, Flame Photometer, Potentiometer, Spectrophotometer, Deionizer, Electronic Balance, TDS Meter, Polishing Machine, Ultra Sonicator, etc.,

Mathematics Lab

MATLAB (Matrix Laboratory) is a high performance language for technical computing. It integrates computations, visualization and programming in an easily usable environment to obtain solutions to the problems using mathematical equations. It is multi-paradigm numerical computing environment. Using MATLAB, students can learn matrix manipulations, plotting of functions and data, implementation of algorithm, creations of user interfaces. R is a programming language and free software environment for statistical analysis and computing. Using R, students can learn matrix manipulations, import and export data, plotting of curves, linear and nonlinear modeling, classical

statistical test, time series analysis, clustering and graphical representations.

English Language Lab

English Language Lab helps in identifying the need for development of the language among students. The English Language Lab had been set up in the view of providing a workspace for practical learning and usage of the English language. These are well-equipped laboratories with accommodation capacity of about 120 students. The lab is equipped with 120 systems, installed with iTell software, printers and other necessary accessories like headphones, projectors, speakers, microphones etc. The first year students can make use of the lab for language improvement.

Programming Lab


The Programming Lab provides a computing environment for student programming assignments and practice. Our cloud-based learning environment pairs an extensive fully-managed software library with a user-friendly and pedagogically effective workbench for creating, distributing and grading of coding assignments. Features include auto-graded assignments, in-line feedback on code, leader boards, etc.

BEEE Lab


The Basic Electrical and Electronics laboratory is utilized for performing experiments related to fundamentals of Electrical and Electronics Engineering. We are all surrounded by electrical and electronic devices. As such Electrical and Electronics Engineering, becomes a core discipline to all Engineering branches as well. This lab is devoted to study of the principles of electricity to develop machines, devices and systems. It covers all the basic devices that serve as the most basic building block of almost all electronic and electrical devices. This lab lays a firm foundation for what is to be learned throughout the Engineering curriculum. Some instruments used in BEEE lab are: Function Generators, Step Down Transformers, Regulated Power Supply, Voltmeter, Ammeter, Solar Panel, Capacitor, and Integrated Circuits for Logic Gates etc.

FME – Laboratories

S.NO	NAME OF THE LAB	LOCATION	ROOM NO
1	Physics Lab	B7 - Third Floor	7301 & 7302
2	Chemistry Lab	B8 - Ground Floor	8001 & 8002
3	Mathematics Lab	B8 - Second Floor	8201 & 8202
4	English Language Lab	B9 - First Floor	9101, 9102 & 9103
5	Programming Lab	B8 - First Floor	8101 & 8102
6	BEEE Lab	B9 - Second Floor	9201 & 9202

7.2.5 Engineering Workspaces

Students stepping into the Institution would feel themselves as Student Engineers rather than Engineering students from day one of their programme of study. The Institution has the privilege to be the First Member from India in Conceive-Design-Implement-Operate (CDIO) worldwide initiative with an aim to

produce the next generation engineers by adopting CDIO Syllabus/Outcome Based Education/ Choice Based Credit System.

FME Students are encouraged to do their project in the very first year under the course Introduction to Engineering by earning 2 credits. It gives them a feel of industrial experience under the guidance and support of trained faculty members. It encourages hands on learning to perform all the duties of Professional Engineers during the entire programme of their study.

FME – Engineering Workspaces

S.NO	NAME OF THE LAB	LOCATION	ROOM NO
1	CDIO Workspace-I	B29 - First Floor	29105
2	CDIO Workspace-II	B13 - Ground Floor	1305
3	CDIO Workspace-III	B25 - Ground Floor	2501

7.2.6 FME Faculty Cabins

The FME faculty is provided with spacious cabins. Faculty members accommodate this place during Non - Teaching hours for other academic activities such as preparing their course materials, updating log books

and course work, research works etc. The students may approach the faculty in the faculty cabins for assignment submission, record correction, to clarify subject related doubts and queries if any. The students may also approach their respective mentors in their faculty cabins to get leave approval, outing permission and other mentoring activities.

FME – Faculty Cabins

S.NO	NAME OF THE DPARTMENT	LOCATION	ROOM NO
1	Mathematics	B6 - Ground Floor	6001
2	English		6008
3	Chemistry		6012
4	Physics	B6 - Third Floor	6301
5	Faculty Cabin	B7 - Second Floor	7201 & 7203

7.2.7 Library

The Central Library has carpet area of 3500 square meters having 500 seating capacity. It has 6 spacious bays exclusively for SoC, SoEC, SoMC, S&H, MBA and IT located at Third Floor in Block No. 21 to 24, 8 & 9. The Library follows open access system. It has separate sections like spacious stack area, circulation counter, information desk, digital library, periodical section, back volumes section, reference section, acquisition section, technical section, and Wi-Fi enabled reading halls.

Library Timings: 7:30 AM to 8:00 PM

Library

S. NO.	NAME OF THE LIBRARY	LOCATION	ROOM NO.
1	Sciences and Humanities	B24 – Third Floor	2403

7.3 LEAVE APPLYING PROCEDURE

7.3.1 General Guidelines

Availing leave should be properly communicated by the student to his/ her mentor. It is the student's responsibility to intimate mentors regarding his/her absence before availing leave. Mentee's parents

should call and confirm regarding the availing of leave of their wards to their respective mentors. A prior application for leave should be processed through mentors for permission.

i. If the period of leave is for one day, the mentors shall sign and forward it to Dean's office for a seal.

ii. If the period of leave is for two days, the mentors shall forward the letter with recommendations to HoD or Coordinators for seal and sign.

iii. If the period of leave is for three and more, the application shall be made to Dean with the recommendations of mentor and the concerned HoD stating the reason for the leave.

Leave Approval (Non-Instructional Days)

On the request of the students, mentor shall approve the leave and forward to the hostel supervisor during the Non-Instructional days with the concurrence of the parents through phone.

7.3.2 Medical Leave

Medical Leave (ML) should be processed through their respective mentor once the student returns to

college after his/her course of treatment. In this case, student will be marked as excused absence (Medical Leave) in the attendance and will be counted for condonation if the attendance is between 65% and 75%.

7.3.3 On Permission

Student should get On Permission (OP) well in advance if he/she is getting absence for the class in order to attend any kind of competitions, conferences, seminars, guest lectures and extra-curricular activities within or outside the college premises. The On Permission (OP) should be submitted to Dean's office before availing by getting approval from the respective mentor and HoD.

8. STUDENT MENTORING SYSTEM

An effective mentoring system is implemented to provide guidance and counseling to the students. A mentor is allotted to each student on the very first day of his college. Each mentor has approximately 20-25 students under them. The mentor acts as the education parent for the students. Any issue related to

the students is taken to the mentor first. A separate Student Record is maintained for each student; recording his/her progress of all four years, including his/her progress of all four years, including his/her placement details and offered continuous professional assistance thereafter.

Roles and Responsibilities of the Mentor

i. The mentor periodically conducts meeting with his mentees and maintains complete details of the student's activities like, academic progress, curricular, co-curricular, extra-curricular, achievements, social activities, personal and disciplinary issues and details of parent's meetings in his respective student's record.

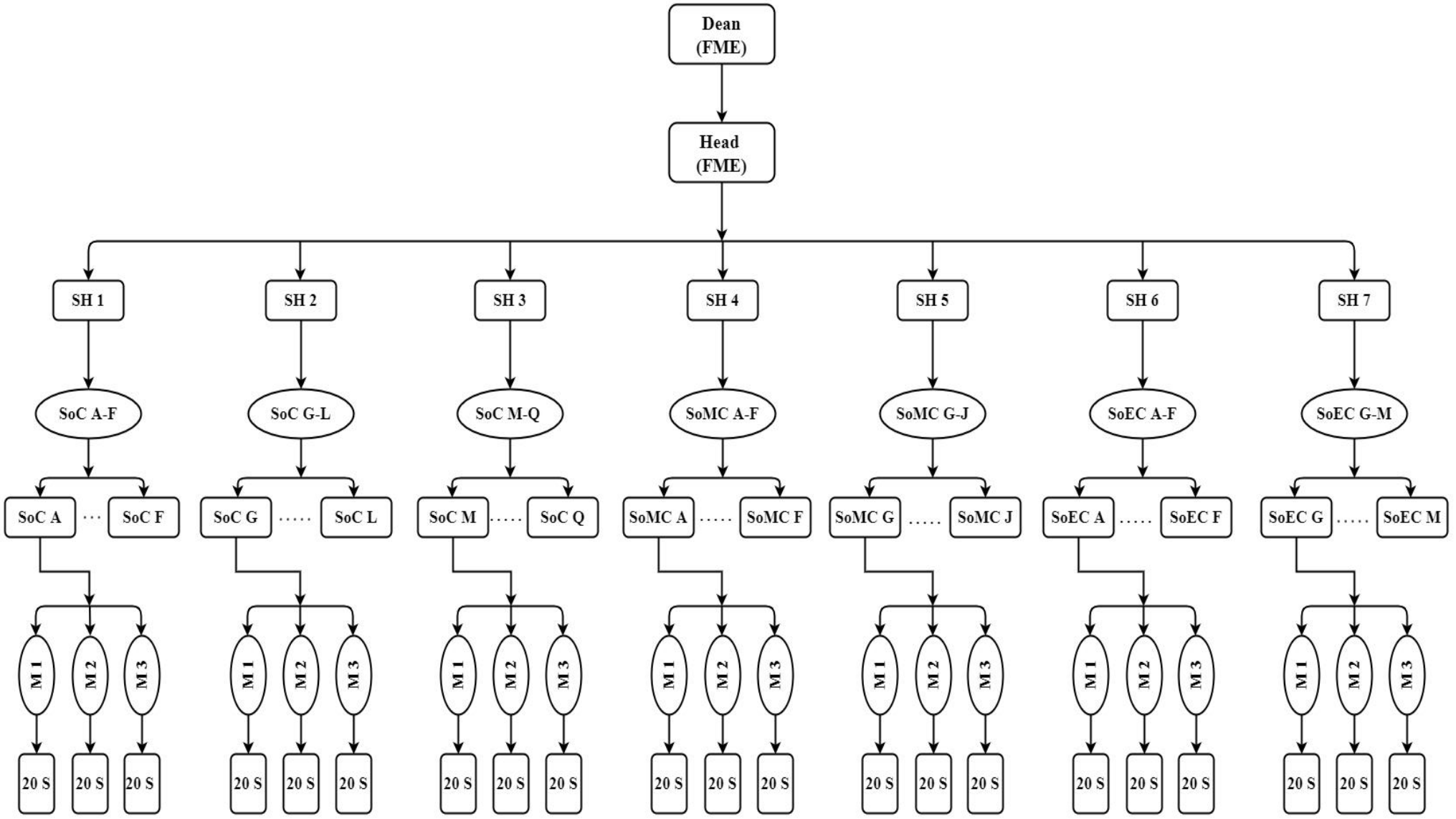
ii. Approves leave and on permission to the students after consulting with their parents over the phone.

iii. Informs the parents about their ward's academic progress over the phone or email and assists the student in case he/she is eligible for re-test.

iv. Any discrepancies noticed in the student's behavior in the matters of discipline and attendance a special counselling will be given with care. Students who

require advance counseling and medical attention are referred to the Institution student counselor and to the medical team.

v. Educates on the Institution policies, regulations, Anti Ragging measures and informs the consequences of involving in ragging or anti-social activities. Thus, the mentoring system takes care of the complete overall development of the students during their tenure in the Institution and thereafter.



SH- Section Head
M – Mentor
S- Students

FME-Structural Mentoring System

9. SECTION REPRESENTATIVES

i. Section HoDs or Mentors will recognize suitable candidates as the class representatives in the beginning of the first semester for each class. It will be later approved by Dean.

ii. A girl and a boy from a class will be selected to represent both the genders.

iii. The selected representatives will charge the duty of a representative for a semester.

iv. Based on the conduct of the student representative the mentor allows the same representative to continue for second semester.

v. If any disciplinary issue against the representative arises the selected committee has full rights to change the representative even in the middle of the semester.

vi. The selected representative acts as a voice for the whole class and proposes the queries to the section HoDs and to the Dean.

vii. Twice in a semester Dean-FME conducts meeting with the representatives in order to get the feedback of the students in the category of academic and other issues.

10. FME SUPPORT SERVICES AND FUNCTIONAL CELLS

FME Support Services is a set of services offered by the FME exclusively for the Freshman Engineers. It comprises about 7 inter-related cells which make the academics and other activities convenient for the first year students. As the college life is new to the first year students, these cells extent extra support and guidance to the students. The following are the cells that act as a supporting service for the Freshman Engineering Students.

Students shall request Dean-FME Office for the following queries:

i. Leave/On Permission (OP), Additional lab utility.
ii. Hostel Booking, Room change, Permission for parents to stay at hostel.
iii. Controller of Examinations (CoE) office related.

iv. Bonafide, Scholarship, Bank Loan, Attestation.

v. Train/Bus pass concession.

vi. Certificate Scan/Xerox, Certificate Original, ID card.

vii. Semester Fee/Admission/VTU Scholarship related clarification.

10.1 ACADEMIC CELL

The Academic Cell is responsible for planning, organizing and executing all the academic activities of the School of FME. This cell is headed by Mr. Vijay Albert William (Head-FME) Assistant Professor from ECE department. The cell takes care of

- Preparing Time Table
- Selecting Class Representatives
- Allotting Mentors
- Internal marks
- Semester Exam eligibility
- Fee payment (Debit)
- Scholarship / Bonafides
- Maintenance of Classroom and Lab

10.2 ATTENDANCE CELL

The Attendance Cell is responsible for uploading and maintaining the students' attendance records in green sheet and in system. **Mr. D. Balaji,** Assistant Professor, ECE is the incharge for:

- Updating the attendance in V-Learn and system
- Test/ Internal marks verification
- Student database maintenance and correction (Name/ DoB etc.,)
- Allotment of students VTU No/ Register number
- Semester registration process
- On-Permission(OP) / Medical Leave(ML) Letters
- Allocation of official email Id and login password
- Section allotment

10.3 EXAM CELL

The Exam Cell is accountable for conducting continuous assessment test and maintaining the students' internal mark in records. **Dr. R. Suresh,**

Professor, Mathematics is the Exam Cell Coordinator and takes care of the following duties:

- Continuous Assessment Tests
- Retest for Unit Tests /Mid-Term Tests
- Seating arrangements for Tests
- Internal exam attendance
- Distribution of temporary Hall Tickets/ ID Cards for Semester End Exams

10.4 DISTRIBUTION CELL

The distribution of the various academic requirements for the FME students is done by the Distribution Cell. **Mr. J. Raja Beryl,** Assistant Professor, Chemistry holds the responsibility for the cell. The Cell distributes and takes in charge of:

- Academic kits
- Text books and Note books
- Record / Observation / Stationery
- ID card and its accessories
- Blazer measurement

- B7 Engineering Hive (Maintenance and Hive booking)

10.5 COUNSELLING CELL

Psychological issues such as stress, anxiety, complex etc., and so on are becoming the most challenging problems faced by the present day students. Therefore to encounter these challenges, the FME Counselling Cell provides valuable counseling to students done by **Ms. H. Revathi**, a trained counselor helps the students to come out from such issues by counseling in person and by talking to their parents. Psychological support and motivation for the underachieving students are also given Counseling assistance. This cell assists students facing issues on:

- Interpersonal skills development
- Personal/ Social growth
- Career development
- Poor academic performance

10.6 GRIEVANCE AND REDRESSAL CELL

Grievance & Redressal Cell addresses the students' grievance and takes care of the disciplinary issues inside the campus. **Dr. P. Narayanasamy,** Professor from Mathematics is the Convener of the committee. This cell addresses the grievances and issues faced by students within the college premises such as:

- Academic issues with course handling
- Ragging
- Indisciplinary activities with peers
- Manhandling and altercations
- Mobile related issues
- Meeting parents regarding enquiry

11. FME-TALENT SEARCH FORUM (FME-TSF)

FME Talent Search Forum (FME TSF) is a platform for the Freshman Engineers to showcase their talent in various co-curricular and extra-curricular activities. Assortment of events is conducted throughout the year which gets concluded with the celebration of Science Fest. Science Fest is an event

that is celebrated annually on 28th February at the Vel Tech campus in memory of the Nobel laureate Sir. C.V Raman. Vel Tech is a place where Science and Technology go hand in hand. Freshman Engineering-Talent Search Forum was established in the year 2018 as an initiative to provide an excellent opportunity to the budding Engineers to exhibit their talents in various fields. The theme for the year 2020 Science Fest was *"The Women in Science"*.

The various events were organized under the FME committee comprising four wings namely, Science and Sustainability Wing, Literary and Life Skills Wing, Cultural and Creative Arts Wing and Sports and Games Wing. The main objectives of the forum are to provide a supportive and stimulating environment for the interested students, to encourage the students to reach their full potential as independent learners and develop a positive attitude to life-long learning, to contribute to the development of positive personal attributes within each student and to foster the enjoyment of writing and speaking as a recreational activity among the students.

Science and Sustainability Wing

Science and Sustainability Wing conducted various events like quiz, debate, paper presentation, collage, poster presentation, technical talk, space exploration, science exhibition, code debugging and technical drawing.

Literary and Life Skills Wing

The Literary and Life Skills Wing organized events like Connections, Conclude with Clues, Essay writing, Listen and repeat, Test your IQ, Poetry Writing, shipwreck and Story Writing.

Sports and Games Wing

Football, volley ball, throw ball, basketball, kabaddi, chess, shuttle, field and track events were organized by the Sports and Games Wing.

Cultural and Creative Arts Wing

Cultural Wing came up with interesting events like vegetable carving, mime, solo dance, group dance, solo song, fireless cooking etc.

Out of 2220 students, maximum of the students registered for the events and about 1500 (ie., approximately one-third of the students) received prizes in various events on this occasion and a lump sum of Rupees 4 lakh was given away as prize amount for the winners. Participation certificates shall be distributed to the other participants as a token of appreciation.

Vel Tech, every year takes immense pleasure in recognizing the National Science Day and accelerates a pace for the development of sciences and its related fields. The programme was initiated to trigger science into vogue among the students wherein they are encouraged to showcase their talents in various fields of sciences.

12. DISCIPLINARY RULES

Every student should carefully note the following rules and should follow them both in letter and in spirit.

i. He/She should possess and exhibit his/her college identity card in the campus.
ii. Until the class is dismissed or without the permission of the faculty, no student should enter or leave the class.

iii. Late comers are not allowed to enter the class.

iv. He/She should intimate to his/her mentor in prior before taking leave.

v. Cell phones in the campus, in the class room and examination halls are strictly prohibited.

vi. If he/she involves in any kind of ragging inside the campus is liable for dismissal from the college.

vii. He/she should not encourage unauthorized outsiders to enter into the campus as well as the hostels.

viii. Students are prohibited from indulging in anti-institutional, anti-national, anti-social, communal, immoral or political activities and expressions within the campus and the hostels.

ix. Students who are charged in criminal offence or under suspension will not be allowed to enter the college campus without the permission of the concerned committee.

x. Students in the campus should be neatly dressed.

Boys: Boys are expected to wear decent pants, shirts and Collared T-Shirts. Boys should not have long hair or beard.

Girls: Girls are expected to wear decent Churidhar, Kurthi and Jeans. T –Shirts must be sleeved. Slippers are not permitted, unless for some genuine case.

13. FEE PAYMENT PROCESS

Students can approach the office for any payments or queries related to academic or hostel payments during the working hours.

Fees can be paid in the following modes:

- Students may login to the specified portal (V-hive) through their official email ID.
- Fees can be paid online through this portal.
- Fees can also be paid directly in the bank.
- Fee is collected by the Accounts Section. Students can approach this section during Admission, for Semester Registration and for paying Examination fees. The fee payment would be arranged for the convenience of the students by providing swiping machines.

Note: Students can mail to : **accounts@veltech.edu.in** for clarification, if any

14. CAMPUS CENTRAL FACILITIES

State-of-the-art infrastructure is spread over 100 acres, 22 lakh sq. meters built up area providing the environment for perpetual learning. Vel Tech offers:

- Campus Security
- Accommodation for Faculty, Staff and Students
- Recreational meet–up points
- Dining
- Sports facilities
- Health Centers
- Library
- Transportation
- Smart Classrooms
- Engineering Hives (Active Learning Halls)
- Well equipped Seminar Halls
- Modern Conference Halls
- Auditoriums
- Laboratories
- Research Park
- Knowledge Resource Centre
- Mentoring & Counselling Cell
- Training and Placement Division

- Entrepreneur Development Cell
- Wi-Fi enabled campus
- Institute Innovation Cell
- Hostels for Boys & Girls
- Bank with ATM Facility
- Canteen/Cafeteria
- International Guest House
- 24×7 Power Back-Up Facility
- Sewage Treatment Plants
- Mineral Water Plant
- Post Office

15. ANTI RAGGING COMMITTEE

The Anti Ragging Central Committee is a body at institutional level to establish measures for prohibiting, preventing and banning activities of Ragging Menace within and outside the campus in accordance with AICTE/UGC Regulations, Supreme Court directives and state act. The committee is responsible for taking action against those found guilty of ragging and or abetting ragging, actively or passively or being part of a conspiracy to promote ragging.

Constitution of Anti Ragging Central Committee

The Central Anti Ragging Committee is constituted as given below:

Prof. S. Salivahanan, Vice Chancellor	Chairman
Prof. M. Siva Kumar, Dean-FME	Member – faculty
Prof. A. T. Ravichandran, Dean-SoMC	Member – faculty
Prof. V. Jayasankar, Dean-SoEC	Member – faculty
Prof. Srinivasa Rao, Dean-SoC	Member – faculty
Dr. S. Irudayaraj, Dean-Hostels	Member – faculty
Mr. M. Vijay Albert William, Head-FME	Member – faculty
Lr. N. V. Badrinath, Judge (Debts Tribunal-I)	Member - Civil administration
Mr. Natarajan, Inspector of Police T7	Member - Police administration
Dr. G. K. Dhas, Chairman, Mother Teresa Charitable Trust	Member – NGO
Dr. E. Kannan, Registrar	Member Secretary
Mr. Jamal Mohidden, Editor News, Dinamalar	Member - Local media

Ms. H. Revathi, Student Counsellor	Member - Student Counsellor
Mr. P. Hari Prasad, Hostel Supervisor, Junior Boys Hostels	Member - Non-Teaching
Mr. S.Vijay, Hostel Supervisor, Senior Boys Hostels	Member - Non-Teaching
Ms. J. Vijaya Lakshmi, Hostel Supervisor, Girls Hostels	Member - Non-Teaching
Mr. M. Prasad, Librarian	Member – Librarian
Mr. Raja Rajan, Physical Director	Member - Physical Director
Mr. Munusamy, Transport Manager	Member - Non-Teaching
J. E. Simon, Retired Station Manager, Railways	Member - Parent representative
Mr. Rohith Kumar - VTU 15145	Member - Junior student rep.
Ms. R. Venkata Meghana - VTU 12608	Member - Junior student rep.
Mr. T. Sri Teja - VTU 13214	Member - Senior student rep.

16. SPARSH COMMITTEE

SENSITIZATION, PREVENTION AND REDRESSAL OF SEXUAL HARASSMENT

The SPARSH Committee is formed, in order to eliminate all forms of discrimination against women and take proactive steps towards gender sensitization and elimination of sexual harassment.

The functions of SPARSH Committee:

a) To provide campus environment free of gender-based discrimination, sexual harassment and other acts of gender-based violence.
b) To promote a social and psychological environment which will raise awareness about gender based discrimination and prevent sexual harassment and other acts of gender based violence.
c) To generate awareness about gender based discrimination, sexual harassment and other acts of gender based violence.

The Apex Committee of Sensitization, Prevention and Redressal of Sexual Harassment is constituted with the following members:

(Three faculty members nominated by the Vice Chancellor from Teaching Faculty)

Dr. N. Malarvizhi	Professor, CSE, Chairperson
Dr. R. Jothilakshmi	Professor, & HoD –Physics
Ms. H. Revathi	Student Counsellor, Member

(Two members are nominated by the Registrar from Non-Teaching staff)

Mrs. S. Noorjahan	Head, Student Information Centre
Mrs. B. Pavithra	Lab Instructor, Dept. of ECE

(Two students are nominated by the Dean – Campus Life)

Ishika Kumari Prasad-VTU 11868	II year, CSE, Student Member
Reethika Rao. V-VTU 14406	III year, ECE, Student Member

In addition to the above Apex Committee, the following members are appointed for the “Institution Complaint Committee (ICC)” for effective and efficient discharge of complaints against sexual harassment.

Dr. N. Malarvizhi	Professor, CSE, Chairperson

(Three women faculty members nominated by the Vice Chancellor)

Dr. M. Kavitha	Professor, CSE, Member
Dr. G. Sasikala	Professor, ECE, Member
Mrs J. Sridevi	Assistant Professor, MBA

(One Non-Teaching Staff nominated by the Registrar)

Mrs. Rasheeda Mohamed Kutty. T	Physical Director

Note: Students can also mail to : sparsh@veltech.edu.in for any issues.

17. STUDENT ACHIEVEMENTS DURING 2019-20

Important achievements of FME students are listed below:

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology				
STUDENTS ACHIEVEMENT LIST DURING 2019-20				
S.NO	**STUDENT NAME**	**NAME OF THE COMPETITION**	**NAME OF THE PROJECT**	**PRIZE DETAILS**
1	BhuvanSriram Harsh Adhitya P. Uday Bindu Sai Priya Bhavya Sri	SMART INDIA HACKATHON	SEMI-AUTOMATIC PESTICIDE SPRAYER	QUALIFIED TO PARTICIPATE IN NATIONAL LEVEL
2	Sruthi M Raniswetha Manisha Sravani Apoorva	SMART INDIA HACKATHON	VERTICAL FORMING	QUALIFIED TO PARTICIPATE IN NATIONAL LEVEL
3	BhuvanSriram Harsh Adhitya Prince	VISAI - 2020, VELTECH	SEMI-AUTOMATIC PESTICIDE SPRAYER	THIRD PRIZE
4	GunaSekhar Sanjeev Kumar Mohammed Hamthan	VISAI-2020, VELTECH	SMART BLIND AID	SECOND PRIZE
5	Gorla Sandeep K.Vamshi Krishna G.Shiva NallaMahendhar Reddy	SCIENCE FEST 2020, VELTECH	WASTE REMOVAL ROBOT IN OCEAN	SECOND PRIZE
6	G SrinivasaKartheek K Bhanu Prakash GallaSreeRanjan P Deepak Kumar P Anwar P Abdul Kalam	SCIENCE FEST 2020, VELTECH	AUTOMATIC IRRIGATION SYSTEM BY SENSING SOIL MOISTURE CONTENT	THIRD PRIZE
7	B Rahul S Mukesh S KiruthickRaghav K Balaji	SCIENCE FEST 2020, VELTECH	AUTOMATIC IRRIGATION SYSTEM	FIRST PRIZE
8	Gyankumar Ray BysaniIndu SathvikManoj Shaik Syed Faris	SCIENCE FEST 2020, VELTECH	OUTDOOR AIR POLLUTION CONTROLLER	THIRD PRIZE

SCIENCE FEST - 2020

VISAI - 2020

SMART INDIA HACKATHON - 2020

FME STUDENT'S PROJECT

18. CONTACT & LOCATION DETAILS

S.NO	NAME	DESIGNATION	PHONE NUMBER	ROOM NUMBER
1	Dr. M. Siva Kumar	Dean-FME	7373033270	6101
2	Mr. M. Vijay Albert William	Head-FME	8056349172	6101
3	Dr. R. Jothilakshmi	HoD Physics	9944126707	6301
4	Dr. M. L. Suresh	HoD Mathematics	7904054692	6001
5	Dr. C. Hazarathaiah Yadav	HoD Chemistry	8056224558	6012
6	Dr. M. R. Bindu	HoD English	9940377731	6008
7	Dr. R. Suguna	FME Coordinator (SoC)	9840346889	7201
8	Dr. K. Baskar	FME Coordinator (SoEC)	9597423705	2212
9	Dr. J. Udaya Prakash	FME Coordinator (SoMC)	7200763876	1931
INCHARGES				
11	Mr. M. Vijay Albert William	Academic Cell	8056349172	6101
12	Mr. D. Balaji	Attendance Cell	9487239719	6101
13	Dr. R. Suresh	Exam Cell	9003435320	6101
14	Mr. J. Raja Beryl	Distribution Cell	7708710250	6101
15	Ms. H. Revathi	Mentoring and Counselling	9566753621	6008
16	Dr. P. Narayanasamy	Grievance & Redressal Cell	9443159578	6101

TIME TABLE (Summer Semester)

DAY	Periods / Timings							
	1	2	3	4	LUNCH (11:35 AM to 12:45 PM)	5	6	7
	7:45 AM to 8:35 AM	8:45 AM to 9:35 AM	9:45 AM to 10:35 AM	10:45 AM to 11:35 AM		12:45 PM to 1:35 PM	1:45 PM to 2:35 PM	2:45 PM to 3:35 PM
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								

TIME TABLE (Winter Semester)

DAY	Periods / Timings							
	1	2	3	4	LUNCH (11:35 AM to 12:45 PM)	5	6	7
	7:45 AM to 8:35 AM	8:45 AM to 9:35 AM	9:45 AM to 10:35 AM	10:45 AM to 11:35 AM		12:45 PM to 1:35 PM	1:45 PM to 2:35 PM	2:45 PM to 3:35 PM
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								

NATIONAL ANTHEM

Jana-gana-mana-adhinayaka, jaya he

Bharata-bhagya-vidhata.

Punjab-Sindh-Gujarat-Maratha

Dravida-Utkala-Banga

Vindhya-Himachala-Yamuna-Ganga

Uchchala-Jaladhi-taranga.

Tava shubha name jage,

Tava shubha asisa mage,

Gahe tava jaya gatha,

Jana-gana-mangala-dayaka jaya he

Bharata-bhagya-vidhata.

Jaya he, jaya he, jaya he,

Jaya jaya jaya, jaya he!