SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMAKURU

(An autonomous institution affiliated to VTU, Belagavi, Approved by AICTE, New Delhi, Accredited by NAAC with 'A++' grade & ISO 9001:2015 Certified)

Proceedings of the 45th Academic Council Meeting held on 12-07-2025 in the Boardroom, Birla Auditorium, SIT Campus from 10:00 AM.

Members present:

1.	Prof. S.V. Dinesh	Chairman
2.	Dr. Rajan M A	Member, GC Nominee
3.	Prof. Mahadeva Prasanna	Member, GC Nominee
4.	Mr. Girish H R	Member, GC Nominee
5.	Dr. T.S. Sagar	Member, IQAC Coordinator
6.	Dr. M. Siddalinga Prasad	Member, CoE
7.	Dr. V. Siddeswara Prasad	Member, Dean Student Welfare
8.	Dr. Pavan Kumar Emani	Member, HoD, CV
9.	Dr. Virupaxi Auradi	Member, & HoD, ME
10.	Dr. Rashmi	Member, HoD, EE
11.	Dr. K.V. Suresh	Member, HoD, EC
12.	Dr. Sudhir H. Ranganath	Member, HoD, CH
13.	Dr. Latha H.K.E.	Member, HoD, EI
14.	Dr. G.V. Prabhushankar	Member, HoD, IM
15.	Dr. N.R. Sunitha	Member, HoD, CS
16.	Dr. R. Aparna	Member, HoD, IS
17.	Dr. K. Viswanath	Member, HoD, ET
18.	Dr. B.S. Gowrishankar	Member, HoD, BT
19.	Dr. P. Madhumathi	Member, HoD, AT
20.	Dr. H.M. Suresh Kumar	Member, HoD, Physics
21.	Dr. H.S. Lalithamba	Member, HoD, Chemistry
22.	Dr. P. Usha	Member, HoD, Maths
23.	Dr. C. Somashekar	Member, HoD (I/c), MBA
24.	Dr. B.G. Premasudha	Member, HoD, MCA
25.	Dr. C. Shashishekar	Member, Principal Nominee
26.	Dr. M.B. Nirmala	Member, Principal Nominee
27.	Dr. T.M. Kiran kumar	Member, Principal Nominee
28.	Mr. Ujwal Pai Jakarbet	Student Representative, VI Sem, CSE
29.	Mr. Rishik Punith M.	Student Representative, VI Sem, ECE
30.	Dr. Chowdari K.K.	Invitee, Head, T&P
31.	Dr. H.S. Jayanna	Member Secretary

Members sought the leave of absence:

1.	Dr. Ashwath M.U.	Member, VTU Nominee
2.	Dr. Suresh D.S.	Member, VTU Nominee

3. Dr. Sangappa S.B.	Member, VTU Nominee
4. Dr. U. Chandrashekar	Member, GC Nominee
5. Dr. B.M.R. Prasanna	Member, Principal Nominee
6. Dr. Shivakumaraiah	CEO, SIT & Joint Secretary, SSES

Dr. H.S. Jayanna, Dean Academic & Member Secretary welcomed Prof. S.V. Dinesh, Principal and requested him to Chair the session. Prof. S.V. Dinesh welcomed the members of the Academic Council, all the Chairpersons of BoS, Faculty and Student representatives.

Prof. S.V. Dinesh, Principal and Chairman of Academic Council Chaired the meeting and conducted the proceedings.

AGENDA AND DISCUSSION

45.1 Condolences to Dr. M.N. Channabasappa, Director, S.I.T., Tumakuru and Dr. Ganesh Prabhu, Academic Council member.

The Principal bring it to the notice of the Academic Council that Dr. M.N. Channabasappa. Director, SIT and Dr. Ganesh Prabhu, Academic Council Member have passed away on 04-01-2025 and 24-01-2025 respectively. He briefed about their accomplishments, achievements and contribution to the Institute to the Council. The Academic Council observed a moment of silence in honour of the departed soul, and the Chairman of the Academic Council passed condolences message to the bereaved family.

45.2 Reading and recording the proceedings of the previous meeting of the council

Dr. H.S. Jayanna, Dean Academic placed before the council, the proceedings of the 45th Academic Council Meeting held on 13-07-2024.

As it was previously circulated, and as there were no comments from the members, the council approved as read and recorded.

45.3 Presentation of action taken report on suggestions given in the 44th AC Meeting held on 13-07-2024.

Dr. H.S Jayanna, Dean Academic placed before the council the Action Taken Report for the suggestions given in the 44th Academic Council Meeting.

Actions taken on general suggestions given by Academic Council in the meeting held on 13-07-2024

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. Rajan M.A. suggested that the students from different branches together shall identify interdisciplinary projects in consultation with faculty members and submit proposals to various funding agencies like DST, DRDO, ISRO, etc. This would help students to understand the collaborative work requirements in industries and help for patent filing and product development	Students have undertaken interdisciplinary and KSCST-sponsored projects. The details of the projects carried out during the academic year 2024–25 are as follows: **Major Projects (KSCST sponsored):** **1. Durability and Performance of Lime Mortar using Kadukkai** **Amount Sanctioned: Rs. 4500** **Guide:** Dr. Nahushananda Chakravarthy HG (CV) **Students:** Manasa H G 1SI21CV022 Hema T H 1SI21CV013 Bhoomika Kiran 1SI22CV402 Sunil Singh 1SI22CV428 *The project is selected for KSCST 48th series SPP Annual State level Poster Presentation and Exhibition scheduled during August 2025 at JNNCE, Shivamogga* **2. Solar Powered Smart IOT device for real time monitoring and automation of Mushroom farms** **Amount Sanctioned: Rs. 5000** **Guide:** Dr. Shilpashree PS (ECE) **Students:** Chandru V 1SI22EC400 Ramesh G N 1SI22EC406 Shrishail Lagali 1SI22EC408 Chetan D 1SI21EC022 **3. $NiFe_2O_4$ – GC_3N_4 Nanocomposite as a Photocatalyst for Effective Degradation of Organic Pollutants** **Amount Sanctioned: Rs. 5500** **Guides:** 1. Dr. Poornima G. Hiremath (CH) 2. Dr. Nagarju G. (Chemistry) **Student:** Sanjana 1SI21CH028 **4. Sustainable Coconut Cultivation in Kalpataru Nadu with Edge Computing and Data Analytics** **Amount Sanctioned: Rs. 4500** **Guide:** Dr. Pramod TC (CSE) **Students:** Aditya Kumar Mishra 1SI21CS003 Arif A 1SI22CS402 Ekansh Gupta 1SI21CS042 Muzaffar M Motiwale 1SI21CS064

		Major Projects (Interdisciplinary): **1. Non-Invasive detection of Diabetes through PPG (Photoplethysmogram)** **Guides:** Dr. S J Sheela (ECE) Dr. Rajeshwari B S (EIE) **Name of the Students:** Vinay K S 1SI21EC107 Dasharatha R 1SI21EC027 Chetan Khajuria 1SI21EC023 Arrshith Acharya 1SI21EC009 Gowthami Jain 1SI21EI016 Syeda Umme Haani 1SI21EI045 **2. IoT Enabled Digital Stethoscope** **Guides:** Dr. S J Sheela (ECE) Dr. Rajeshwari B S (EIE) **Name of the Students:** Harsha M 1SI21EC036 Subhash T D 1SI21EC094 Tejas H S 1SI21EC099 Thanmaya Ganesh C S 1SI21EC100 Harsha S M 1SI21EI018 Keerthana T V 1SI21EI020
2.	Dr. Rajan M.A. suggested to set up Data Centre wherein the data generated from IoT and other devices can be preserved for further research or project work. For archiving data, he suggested to incorporate AI/ML angle.	The existing Data Centre is upgraded with two newly purchased NVIDIA L-40 GPUs, which have enhanced the computation and storage capabilities. Eight to ten researchers are using this facility for deep learning computation and experimental work. All data sets generated through various IoT devices / projects / applications are archived for further use. Access to such data sets is given to authenticated users.
3.	Dr. U. Chandrashekar suggested to Introduce 2 or 3 interdisciplinary subjects like AI, Generative AI and Deep Learning etc. to make Electrical and Mechanical streams and Civil Engineering students to understand the applications of these technologies in their field.	**Civil:** AI&ML Course is introduced as Professional Elective for VI semester students. **Mech:** (1) Artificial Intelligence and Machine Learning (S6MEE06) course is introduced as Professional Elective for VI semester students. (2) Python Programming as an Advanced Technical Training Lab for IV semester students (3) AI in CAD and CAM is included in course CAD/CAM and CIM for IV semester students from the Academic Year 2025-26. **EEE**: Soft Computing and AI&ML courses are introduced as Professional Electives for VI & VII semester students. **IEM**: The Course "Artificial Intelligence And Expert System (S7IMPE03)" is introduced as Professional Elective for VII semester students.
4.	Dr. Suresh D.S. suggested to make Basic Electrical and Basic Electronic courses mandatory for Electrical Science stream students of first year as these courses are fundamental to pursue higher semester courses.	Basic Electrical and Basic Electronic courses are mandatory for First Semester Electrical Science stream students from the Academic Year 2024-25.

5.	Mr. Girish H.R. suggested that BE/B.Arch. students shall participate in the activities at Sree Siddaganga Math including food serving, teaching kids and various other activities as part of Social Connect and Responsibility course in III semester BE/B.Arch.	The faculty, staff members and students have been actively participating in various activities such as serving food, teaching students, and cleaning the premises at Sree Siddaganga Math especially during Birthday and Punyasmarane programmes of Dr. Sree Sree Sivakumara Swamiji. As part of AICTE activity points also, students have been participating in various activities mentioned above at Sree Siddaganga Math From the AY 2025-26, it is proposed to make all students to participate in Math services as part of Social Connect and Responsibility. Community Services is included in the Unit-5 of the course, 'Social Connect and Responsibility'.
6.	Prof. S.V. Dinesh suggested to include GATE questions in assignments in all the departments that would help students to prepare to crack competitive exams like GATE, IES, etc.	**Civil:** Moodle based questions are being designed for all courses with GATE level questions. **Mech:** Faculty members have prepared course wise questionnaire based on GATE question papers and shared the same to all students for their preparation **ECE**: Question bank comprising GATE questions on subjects viz. AEC, DEC, MSP, RP, ECA, CS, DSP, F&W is prepared and shared to students. One assignment in these courses will be selected from the question bank. **CH:** Selected GATE questions have been included in the assignment related to the following subjects, Mass Transfer, Biochemical Engineering, Transport Phenomena, Thermo-dynamics, Heat Transfer, Chemical Reaction Engineering **EIE:** Question paper comprising GATE question paper on Mathematical tools for signal processing, Analog Electronic circuits, Digital Electronic Circuits, Embedded Systems and Control Systems. One assignment in these courses will be selected from the question bank. **IEM:** GATE questions have been included in Quizzes, Tests and Assignments to help students crack competitive exams. **CSE**: In quizzes, faculty members have started including GATE questions in courses like OS, databases, data structures and algorithms. **ISE:** Faculty have included GATE questions in quizzes of the courses CO, ADA and Data structures. Informed all the faculty to frame assignment questions based on GATE questions. **ETE**: GATE questions are included from 2024. Question bank also prepared for subjects like AEC, DEC, ES and Control Systems **BT**: Faculties have included the questions from GATE in assignments given to students, which

<table>
<tr><td></td><td></td><td>in turn help the students while facing the GATE examination
Arch: All subject teachers are informed to include GATE questions in their quizzes and assignments. Students are encouraged to attend ACEDGE certification course titled ‘GATE QUEST - ethos community’</td></tr>
<tr><td>7.</td><td>Dr. Suresh D.S. suggested to inform the faculty members to register for the Indo Universal Collaboration for Engineering Education (IUCEE) courses and use Language learning lab tools provided by VTU to teach students</td><td>Faculty members have been registering for NPTEL courses and obtaining certificates in their domain. The details are as follows:
<table>
<tr><th></th><th>No. of Faculty members</th></tr>
<tr><td>2022-23</td><td>106</td></tr>
<tr><td>2023-24</td><td>126</td></tr>
<tr><td>2024-25</td><td>142</td></tr>
</table>
They are also informed about IUCEE courses and are motivated to register for the courses.
The Language learning lab tools of HINDU STEP programme was used in earlier years, but it was not very effective. Therefore, we switched over to training partner, Universal Education. They conduct Activity Based Learning including debate, quiz, pick & speak, etc. to teach 'Communicative English' and 'Professional Writing in English' for I year BE students.</td></tr>
<tr><td>8.</td><td>Ms. Sharanya, III CSE (Student representative) mentioned that the departments must encourage more number of students to participate in co-curricular activities like Hackathons, Coding Competition etc. and include them in assessment. Further, she mentioned that the core courses must be accommodated in the lower semesters' curriculum that would help them to understand the core technologies to participate in competitions.</td><td>Students who participate in Hackathon, Coding Competition, and similar activities are given weightage in internal marks in the following subjects:
1) Data Structure and Application (III Sem)
2) Data Base Management System (V Sem)
The Department has made it mandatory for all students to participate in various Hackathons and Coding Competitions. Additionally, the Placement Department has mandated participation in these activities to be eligible for high package company recruitments. As a result, there is a noticeable increase in student participation in these events.
<table>
<tr><th>Depts.</th><th>No. students participated in Hackathon and Coding Competition</th></tr>
<tr><td>CSE</td><td>756</td></tr>
<tr><td>ISE</td><td>211</td></tr>
<tr><td>ET</td><td>168</td></tr>
<tr><td>EC</td><td>64</td></tr>
</table>
Core courses such as Data Structures, Design and Analysis of Algorithms, Programming Languages, AI-related subjects, and skill-oriented courses are included in the lower semesters to help students build a strong foundation in core technologies.</td></tr>
</table>

Action Taken on suggestions given on curriculum of Department of Civil Engineering

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Mr. Girish H.R. suggested to include Contract Formulation, Asset Management and a small topic on ADR in the curriculum.	The topics of contract formulation and ADR have been incorporated in the course "Estimation, Costing, and Valuation" offered in the VII semester of BE-Civil Engineering. A topic on Asset Management is included in the course "Construction Management and Entrepreneurship" for V semester students.
2.	Dr. Suresh D.S. suggested to use BIM software in Civil Engineering department to model and optimize civil engineering related construction projects at SIT campus by planning, designing and operating BIM. The BIM experts have openings in Smart city projects in Tumkur and other places in India.	The BIM lab course is being offered to V semester BE students. From the Academic Year 2025-26, application of BIM for construction projects is included as part of BIM lab (V semester) in the syllabus as a case study. During the AY 2025-26 the construction of SITAA Innovation Training & Development Centre (ITDC) is planned as a case-study.
3.	Mr. Girish H.R. suggested to activate MoU with Medini Technologies in the Civil Department and look for more opportunities.	MEDINI Technologies conducted training program for 54 students of V Semester under BIM lab course. The course coordinator, Dr. Roopa M also got trained. One week FDP on BIM for Building and Infrastructure is scheduled in the last week of August 2025.

Action Taken on suggestions given on curriculum of Department of Mechanical Engineering

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. U. Chandrashekar suggested to include Geometric Tolerance in the curriculum as this course has more job opportunities. Further, he suggested to enhance the number of credits allocated to this subject to teach in depth.	The course is included in the curriculum as an Ability Enhancement Course in the III semester. It is currently offered as a one-credit theory course. In addition to this, GD&T concepts are also covered in the *Metrology and Measurements* course in the IV semester and the *Advanced Automobile Design* course in the VI semester.

Action Taken on suggestions given on curriculum of Department of Electrical and Electronics Engineering

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Mr. Girish H.R. suggested to include HT mode wiring, domestic wiring and godowns wiring in the curriculum.	The concept of HT mode wiring, domestic wiring and godown wiring are introduced in the Electrical Hardware Laboratory (S3EEA02) for III semester students.

2.	Dr. Rajan M.A. suggested to include Electrical infrastructure surveillance using AI and ML and security of smart grid in the curriculum.	Electrical infrastructure surveillance using AI and ML and security of smart grid concepts are included in the Professional Elective Course titled "Smart Grid (N7EEPE21)" in VII Semester.

Action Taken on suggestions given on curriculum of Department of Electronics and Communication Engineering

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. Rajan M.A. suggested to include AI for communication and AI for networks in the curriculum.	Topics on AI for network management are included in Unit V of the course "IoT and Network Technology" for 5th semester students starting from the AY 2024-25. Machine and Deep Learning applications are included in the Professional Elective Course, "MIMO Wireless" for VII semester students.

Action Taken on suggestions given on curriculum of Department of Chemical Engineering

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. Rajan M.A. suggested to include Quantum Chemistry as a course in the III year curriculum.	One unit on Quantum Chemistry is included in the course, "Technical Chemistry" for III Semester students of Chemical Engg.

Action Taken on suggestions given on curriculum of Department of Electronics and Instrumentation Engineering

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. Rajan M.A. mentioned that Digital twins has a huge requirement in industries and hence that can be introduced in the curriculum. Further, he suggested to include IT & OT and Computer Vision in the Curriculum.	• Digital Twin Technology (S7EIPE35) and Image Processing & Computer Vision (S6EIPE25) courses are introduced as Professional Electives for VII and VI semester students respectively from the academic year 2025-26. • Contents related to IT & OT are included in the new course IIOT (S6EII03) for VI semester and offered as Integrated Professional Core Course from the academic year 2025-26.

2.	Dr. Ashwath M.U. suggested to include modern instrumentation required for medical diagnostic and Healthcare in the curriculum.	Topics related to Modern Instrumentation for medical diagnostic are included in the course titled "Biomedical Instrumentation (SEIESC03)" for V Semester BE students. This course has been offered from the academic year 2024-25.

Action Taken on suggestions given on curriculum of Department of Industrial Engineering and Management

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. Rajan M.A. suggested to Introduce Block Chain Technology related topics in supply chain management course in the curriculum. Further, he suggested to include ICME a software based approach in the Supply Chain Management course.	Block Chain Technology related topics and ICME, a software-based approach have been included in Unit-V of Supply Chain Management course.

Action Taken on suggestions given on curriculum of Departments of Computer Science & Engineering and Information Science & Engineering

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. Rajan M.A. suggested to establish Infrastructure for handling Machine learning, Deep learning and AI based projects in the Departments.	The department has procured GPUs to provide facility in laboratories where high computation is required (details are given in Sl.No.2 of general suggestions).
2.	Dr. Rajan M.A. mentioned that the students of CSE, ISE, AI&DS and AI&ML must be exposed to all cloud technologies like Public, Private, hybrid and multi clouds.	Both CSE and ISE departments offer a course titled "cloud computing" for V semester students, where all these topics are taught under the chapter Cloud Infrastructure.
3.	Dr. Rajan M.A. suggested to include Responsible AI as a core course in the curriculum of AI&DS and Quantum ML, Quantum learning and Adversary ML as core courses in the curriculum of CSE (AI&ML)	Explainable and Responsible AI is included as Professional elective for VII sem. AI&DS and AIML students. Quantum Computing course is introduced for UG and PG from the Academic Year 2024-25 and 2025-26, respectively. A bridge course on Quantum Machine Learning, Quantum Learning and Adversarial ML is planned late for V semester AI&ML students in the month of October 2025.

4.	Dr. U. Chandrashekar suggested to include AI, ML & Data Science related courses in foundation semesters and he also suggested to include coding hackathons and coding activities in collaboration with industries as credit course for CSE, ISE, AI&DS and AI&ML students.	**CSE:** *AI & Data Science with Python* courses have been introduced in the lower semesters. Participation in hackathons and coding competitions—most of which are conducted in collaboration with industry—has been made mandatory for all students through an associated course in each semester. Students get internal marks for their participation. (Data are provided in Sl.No. 8) **ISE:** Students are motivated to participate in Hackathons and Ideathons. One course is identified in each semester (from III to VII) to provide weightage in CIE marks for participation and prize winning. (Data are provided in Sl.No. 8)

Action Taken on suggestions given on curriculum of Department of Electronics and Telecommunication Engineering

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Prof. S.V. Dinesh suggested to offer more skill oriented Ability Enhancement Courses (AEC) for III semester students.	The following four Ability enhancement courses are being offered from the Academic Year 2024-25: a) Arduino/Raspberry pi based micro projects b) LabVIEW Simulations c) Embedded C Basic Programming d) Signal Processing Lab
2.	Dr. Rajan M.A. suggested to include Network Management System (NMS) and SDI (Serial Digital Interface) in the curriculum.	Introduction of Network Management Systems has been included in Unit 5 of the course titled "Data Communication Networks" for VI semester students. The Serial Digital Interface concept has been introduced in the Unit 1 of the course titled Multimedia Communication for V semester students.
3.	Dr. Suresh D.S. suggested to make Basic Electrical and Basic Electronics courses mandatory for Electrical Science stream students of first year as these courses are fundamental to pursue higher semester courses.	Basic Electrical and Basic Electronics courses have been made mandatory for first-year students in the Electrical Science stream.

Action Taken on suggestions given on curriculum of Department of Architecture

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. Rajan M.A. suggested to include Critical Infrastructure, Smart Safety in Building Design, Landscape for Civil, Interior Fit Out Development, AI and	1. Modules of Interior Fit Out Development are added in the course Interior Design for VII Semester.

	Project Cost Automation in the curriculum.	2. Critical Infrastructure, AI and Project Cost Automation and Smart Safety in Building are introduced in the course 'Building Material and Construction' for VI semester from the Academic year 2025-2026 3. The topic 'Landscape for Civil Engineering students' is proposed in the course-'Building Planning and CAD' for III Semester Civil Engineering students from the AY 2025-26.
2.	Mr. Girish H.R. suggested to include Interior Fit Out Development course for Architecture students.	1. Modules of Interior Fit Out Development are added in the course Interior Design for VII Semester.

Action Taken on suggestions given on curriculum of Department of MBA

<table>
<tr><th></th><th>Suggestions given by
Academic Council in the meeting</th><th>Action Taken</th></tr>
<tr><td>1.</td><td>Dr. Ganesh Prabhu suggested to conduct mock interviews by industry experts/ professionals for MBA students to prepare them to face real interviews. Further, he suggested to implement Capstone and encourage students to take up SWAYAM course offered at IIMs on innovation.</td><td>Mock interview was conducted by professional trainers as part of the course Employability Skills for II semester students. We are planning to invite some senior alumni from industry for mock interviews during the Academic year 2025-26.
The suggestion for software-based Capstone project, which we consider for the current batch in their fourth semester
As far as offering SWAYAM courses are concerned, we are already offering a 2 credit NPTEL course as part of the curriculum. The details are as follows:
<table>
<tr><th>Name of the MOOC offered</th><th>No. of Students (2024-25)</th></tr>
<tr><td>International Marketing</td><td>88</td></tr>
<tr><td>Strategic Performance Management</td><td>11</td></tr>
<tr><td>Economic Growth and Development</td><td>3</td></tr>
<tr><td>Emotional Intelligence</td><td>1</td></tr>
<tr><td>Infrastructure Economics</td><td>5</td></tr>
<tr><td>Managing Change in Organizations</td><td>2</td></tr>
<tr><td>Total</td><td>110</td></tr>
</table>
We shall explore the possibility of including courses on innovation in the curriculum during the next revision.</td></tr>
<tr><td>2.</td><td>Dr. Rajan M.A. suggested to include Hospital management related electives and avenue based courses in the curriculum.</td><td>We will explore the possibility of offering one general course on Hospital Management during the next curriculum revision.</td></tr>
</table>

Action Taken on suggestions given on curriculum of Department of MCA

	Suggestions given by Academic Council in the meeting	Action Taken
1.	Dr. Rajan M.A. suggested to include Web 3.0 as a core course in the curriculum of MCA department as there are more job opportunities in industries in this domain.	The *Advanced Web Technologies* syllabus is revised to include topics on Generative AI, overview of Web 3.0 and Blockchain Technology in Units IV and V for II Semester students
2.	Mr. Girish H.R. suggested that the Dept. of MCA could trace Alumni data of the last five years of at least five branches of SIT including their profession and domains which would help the departments to revise the curriculum and build infrastructure requirements in the departments.	We will complete this task in the academic year 2025-26.

Agenda 45.4: Approval for

[1] Scheme and syllabus for UG - VII to VIII semesters

[2] List of MOOCs [OE & PE for VIII Semester]

[3] Modifications in syllabus of UG – I to VI semesters, if any

[4] Syllabus of new Professional Elective and Open Elective courses, if any

[5] Modifications in syllabus of PG - I & IV semesters, if any

The Schemes of Teaching, Examination and Syllabus for the following Departments which were circulated earlier were presented by the respective Chairpersons of the BoS before the Academic Council.

	Department	Pg No. in Agenda Book
i	Civil Engineering	41 – 86
ii	Mechanical Engineering	87 – 194
iii	Electrical and Electronics Engineering	195 – 232
iv	Electronics and Communication Engineering	233 – 416
v	Chemical Engineering	417 – 580
vi	Electronics and Instrumentation Engineering	581 – 622
vii	Industrial Engineering and Management	623 – 668
viii	Computer Science and Engineering	669 – 924
ix	Information Science and Engineering	925 – 978
x	Electronics and Telecommunication Engineering	979 – 1032
xi	Biotechnology	1033 – 1164
xii	Architecture	1065 – 1124
xiii	M.B.A.	1125 – 1140

The Academic Council approved the Schemes of Teaching, Examination and Syllabus as presented in the Agenda Book with the following suggestions **(Please refer page numbers from 41 to 1140 in Agenda Book).**

General Suggestions on the curriculum:

1. The Academic Council members mentioned that carrying out interdisciplinary projects help students to interact with other discipline faculty members and students. This, in turn, would help them to apply their knowledge across different domains to create innovative solutions for the problem. Therefore, it was informed that each department must encourage students to carry out at least two interdisciplinary projects. The Institute Project monitoring committee (IPMC) shall ensure that each department has a minimum of two interdisciplinary projects. Further, the council suggested that the faculty members shall identify sustainability related issues within SIT and offer them as interdisciplinary projects.
2. Mr. Girish suggested to start Toastmasters club in the institute to help students to improve their communication and leadership skills.
3. Dr. Rajan M A suggested to encourage CSE and Electrical streams of students to participate in TCS international students competitions and Hackathons. He also suggested to use GitHub Copilot for coding and testing in the higher semesters, as it would help students to tackle complex or real-time problems in hackathons and other competitive events. Prof. Mahadev Prasanna further suggested to conduct expert lectures on GitHub-Copilot specifically for third-year students to enhance their understanding and applications of the tool.
4. Dr. Rajan suggested that the use of co-pilot as mandatory for all students and faculty members to write code faster and more efficiently.
5. Mr. Girish suggested to constitute a committee to prepare and circulate a quarterly newsletter featuring special events and activities of the institute, so that industry and professional bodies are well-informed about the institute's initiatives and developments.
6. Dr. Rajan M.A. suggested to introduce a course on Quantum Computing for students of all streams. He further suggested that the Departments of CSE and EIE could focus on Operation Technology (OT) security related areas such as Post-Quantum Security, Post-Quantum Cryptography and strategies for migration to post-quantum systems. Prof. S V Dinesh suggested the departments of CSE, EIE and Physics to jointly organize a 5-day FDP on quantum computing to help all faculty members to gain insight into it as this is the future of computing.
7. Mr. Girish suggested the Architecture department to introduce a course on *Interior Fit-Out Development* for Civil Engineering students. This would help students to gain practical insights into interior construction, finishing techniques and integrated design execution.

Suggestions given on curriculum of Dept. of Civil Engineering

1. Mr. Girish suggested that a certificate for valuation shall be provided to the students as an integral part of the course 'Estimation, Costing, Valuation & Contract Management' offered in the VII semester.
2. Mr. Girish suggested that case studies reflecting real-world and day-to-day scenarios related to Civil Engineering should be included in every lecture in all subjects. This would help students to understand the subject more effectively which in turn would help them to perform better in examinations.

3. Prof. S. V. Dinesh suggested to activate the ASCE (American Society of Civil Engineers) students chapter to provide more real-time exposure to students.
4. Dr. Rajan suggested to introduce a course titled *Waste Management and Building Surveillance* for undergraduate students as it is an important subject to address waste management and ensure security in large cities and buildings.
5. Mr. Girish suggested to arrange at least two talks by industry experts on psychological well-being for students.

Suggestions given on curriculum of Dept. of Mechanical Engineering

Dr. Rajan suggested the following:

1. Include aerospace and defense-related subjects in the curriculum, as Bengaluru is a aerospace hub of India.
2. Include subjects related to Computer Vision, Artificial Intelligence, and Machine Learning in the curriculum, as most mechanical industries are now automated using these technologies.
3. The Smart Maintenance, Human-Computer Vision, design of disassembly and smart agriculture are the technologies of the future. Therefore, subjects related to these areas should be introduced in the curriculum keeping in view the future prospects of students.
4. Identify startups in the area of Mechanical Engineering in and around Tumkur and study their success stories to understand the implications of Industry 4.0 and 5.0 in the curriculum.
5. Dr. Mahadeva Prasanna suggested to include Industry 4.0 and 5.0 concepts in the curriculum, as they encompass emerging areas such as Cyber-Physical Systems, Industrial IoT, Big Data Analytics, Collaborative Robotics and Resilient Systems etc.

Suggestions given on curriculum of Dept. of Electrical and Electronics Engineering

1. Dr. Rajan suggested to include 'AI for Electrical Engineering' as a core subject in view of the increasing role of automation in the electrical engineering sector.
2. Dr. Mahadeva Prasanna and Dr. Girish suggested to incorporate topics on Artificial Intelligence and Machine Learning into the 'Power System-II' course of the VII semester as AI and ML are increasingly playing a crucial role in power generation and management.
3. Dr. Rajan suggested to include ISO 15118, CAN FD, CHAdeMO communication standards and the concepts of Software Defined Vehicle (SDV) in the course 'Electric Vehicle Technology' to make students to understand functionalities like charging, smart grid integration, and vehicle-to-everything (V2X) communication.
4. Dr. Mahadeva Prasanna suggested to offer *Electric Vehicle Technology* as a single course with the same syllabus for both Electrical Engineering and non-Electrical Engineering students rather than offering it under different nomenclatures.
5. Dr. Rajan suggested to teach *Soft Computing* with relevant use cases to help students to understand the importance of the subject in the field of Electrical Engineering.

Suggestions given on curriculum of Dept. of Electronics and Communication Engg.

Dr. Rajan suggested the following:

1. Include topics on 5G and 6G in the *course Advanced Communication* for VII semester students. Further, he suggested to include AI in 5G and 6G technologies and *TSDI (Time-Sensitive Data and Information)* use cases to help students to understand real-time data handling in domains such as autonomous vehicles, smart grids, and industrial automation."
2. Include hands-on experience in the open elective course 'Drone Technology' to provide students with practical exposure and enhance their confidence.
3. Redesign the course '*Cryptography and Network Security*' for VII semester students to include protocols and security aspects. He emphasized that students should study the subject to a level where they can apply these concepts which will help them understand its importance.
4. Include compressive sensing and NTPC coding concepts in the course 'Error Control Coding' for VII semester students to understand the coding standards.
5. Redesign the course 'Multimedia Communication' offered in the VII semester as 'AI enabled Multimedia Communication' as AI is now extensively used in multimedia communication.
6. Include underwater communication as a case study in the theory course 'RF and Microwave' for VII semester students and underwater experiments in Communication laboratory course.

Suggestions given on curriculum of Dept. of Chemical Engineering

1. Dr. Rajan suggested to include software project management tools such as Primavera and Microsoft Project (MSP) in the course 'Project Management' for VII semester students to understand project planning, scheduling, and tracking project activities, including costs, resources, and potential delays.
2. Mr. Girish suggested to include Hazard and chemical effect management during the crisis in one of the courses offered in the Chemical engineering department. Dr. Rajan also opined the same.
3. Prof. S. V. Dinesh suggested to the Biotechnology and Chemical Engineering departments that Biomass management within our institute is an important practical area for both the departments. Further, he suggested that they jointly study the system as a case study and propose efficient management solutions.

Suggestions given on curriculum of Dept. of Electronics and Instrumentation Engg.

Dr. Rajan suggested the following**:**

1. Include the concept of side channel attack analysis in the course 'Analog Electronics' for III semester students. Further, he suggested to include relevant use cases to help students to understand the significance and practical applications of the subject.

2. Include industry tools to show scenarios and simulations to show end-to-end flow of data in the course IOT for VII semester students. This would help students to understand the importance of the subject from the industry perspectives.
3. Introduce Generative-AI for electronics and Instrumentation students in higher semester as this technology is currently used to create new contents, such as code, configurations, or even entire instrument designs, based on input data or prompts.
4. Include the concepts of *Threat Modelling* and *MITRE ATT&CK* (**Adversarial Tactics, Techniques, and Common Knowledge)** in the course '*Digital Twins'* for VII semester students to help students to understand potential cybersecurity threats and mitigation strategies in digital twin environments.

Suggestions given on curriculum of Dept. of Industrial Engineering and Management

Dr. Rajan suggested the following:

1. Include the concepts of *Digital Presentation and Smart Facility Technologies* in the course 'Facility Planning and Design' for VII semester students. This would enhance students understanding of modern tools and practices used in the design and planning of industrial and commercial facilities.
2. Mentioned that the course AI and Expert system offered in the VII semester is not highly relevant to current industry needs. Therefore, he suggested to modify the course as *AI and Machine Learning* to align better with industry demands and emerging technologies.
3. Include the concept of Fault management in the course 'Industry 4.0' for VII semester students to help them to understand the detection, diagnosis, and resolution of faults in smart manufacturing and cyber-physical systems.
4. Use digital tools such as Primavera or Microsoft Project (MSP) to teach the course 'Project Management' for VII semester students to understand project planning, scheduling, and tracking project activities, including costs, resources, and potential delays.

Suggestions given on curriculum of Dept. of Computer Science and Engg.

Dr. Rajan suggested the following:

1. Redesign the course 'Cyber Security' offered in the VII semester by incorporating topics such as handling cyber-attacks, adversarial threats and attack vectors. It was suggested to refer to the textbook *'Security Engineering' by Ross Anderson* to provide students with a comprehensive understanding of modern security practices and real-world scenarios.
2. Include topics such as *Adversarial Learning, Generative AI, Prompt Engineering,* and relevant *Cybersecurity Aspects* and adversarial prompt engineering attack in the course 'Deep Learning' for VII semester students. This would help students to gain knowledge of emerging trends and vulnerabilities in AI systems as well as the skills to develop and defend robust deep learning models.
3. Shift the course *Natural Language Processing (NLP)* from the VII semester to a lower semester as it serves as a foundational course for advanced topics such as *Artificial Intelligence, Generative AI and Deep Learning.*

4. Introduce a course on *Robotic Process Automation (RPA) with Copilot* for CSE students. This course would help students to understand automation of repetitive tasks using RPA tools and integration with AI assistants like GitHub Copilot to align with current industry practices.
5. Introduce a course on *Knowledge Engineering* for CSE students. This course would help students to understand knowledge representation, reasoning and the development of intelligent systems.
6. Include the concept of *Sustainable AI* in the course '*Federated Learning'* for VII semester AI & ML students. This addition would help students to understand the environmental, ethical, and energy efficiency considerations in the design and deployment of distributed AI systems.

Suggestions given on curriculum of Dept. of Information Science and Engg.

Dr. Rajan suggested the following:

1. Revise the 'Software Testing' course for VII semester students to incorporate Static Testing, Dynamic Testing, APT (Advanced Persistent Threat), and AI-based Testing in place of traditional software testing topics.
2. Revise the course 'Advanced Data Structures' for VII semester students by incorporating emerging topics such as Vector Databases, Generative AI, and Authenticated Data Structures.

Suggestions given on curriculum of Dept. of Electronics and Telecommunication Engg

1. Dr. Rajan suggested to include the course 'AI for Networks' in the curriculum to help students to acquire the knowledge of applying Artificial Intelligence techniques in network management, optimization and security.
2. Dr. Rajan suggested to introduce the course 'Networks for AI' in the curriculum to provide students the foundational knowledge of network architectures, protocols, and infrastructure required to support AI applications and services.
3. Prof. S. V. Dinesh suggested to study our institute's existing telecom system as a case study in any course in the curriculum and provide solutions for its efficient management.

Suggestions given on curriculum of Dept. of Biotechnology

1. Prof. S V Dinesh suggested not to remove the concept membrane fabrication from the course 'Bio Sensors' offered to IV semester students and include practical sessions using Agriculture sensors and IoTs to make students to understand the importance of membrane fabrications. Dr. Rajan suggested to collaborate with industries to gain the knowledge on Bio sensors.
2. Dr. Rajan suggested to collaborate with faculty members from the CSE and ISE departments to carry out biotechnology-related real-time and industry-relevant projects.
3. Prof. S. V. Dinesh suggested to the Biotechnology and Chemical Engineering departments that Biomass management within our institute is an important practical area for both the

departments. Further, he suggested that they jointly study the system as a case study and propose efficient management solutions.

Suggestions given on curriculum of Dept. of Architecture

1. Dr. Rajan suggested to introduce a course **'Programmable Architecture'** in the curriculum. This course would enable students to understand the **adaptive and responsive architectural systems** that can **change form and behaviour** based on environmental conditions and user interactions.

Suggestions given on curriculum of Dept. of MBA

1. Dr. Rajan suggested to introduce the module 'Future of Talent Management for AI' in any of the management course in III or IV semester. This would help students to understand how AI is reshaping HR practices, workforce planning, employee engagement, performance management, AI-driven recruitment, talent analytics and reskilling strategies

Agenda 45.5: Approval of Board of Examiners of all the UG and PG programmes for the Academic Year 2025-26

Dean Academic presented the various Boards of Examiners for all the UG and PG programs for the academic year 2025-26. The Council approved the Board of Examiners of all the UG and PG programmes **(Please refer page numbers from 1141 to 1152 in Agenda Book).**

Agenda 45.6: Ratification of approval taken through online circulation for

i) **I–IV semesters Scheme of Teaching, Examination and Syllabus for 2024-26 batch of MBA, MCA & MTech programs**

ii) **VLSI Process Technology (III Sem. BE in EE, EC, EI & ET branch of students)**

iii) **Digital CMOS VLSI Design (IV Sem. BE in EE, EC, EI & ET branch of students)**

The Council ratified the approval sought through email circulation for the above (Circulated through emails on 25-11-2024).

Agenda 45.7: Presentation of VIII Semester Result Analysis for Academic Year 2024-25 and its approval

The Controller of Examinations presented result analysis of VIII Semester of UG Programs for the Academic Year 2024-25 for which approval was taken earlier through email circulation. The Council suggested to analyze subjectwise results in which performance is below 70% and look into the problems the students are facing and find out the remedies.

The Principal thanked all the members for their valuable suggestions & guidance and approving the syllabus for improving academic standards of the Institute. He also thanked the HoDs, BoS members and faculty members for their hard work in preparing the scheme and syllabus.

12/07/2025

Prof. S.V. DINESH
Principal and
Chairman, Academic Council