

**Minutes of the
65th Meeting of the Academic Council
held on
17th March 2022**



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)





Minutes of the 65th Meeting of the Academic Council

(17th March 2022 | 11.00 AM | Vellore Campus)

Members Present:

1. Dr. Rambabu Kodali, Vice-Chancellor, Chairperson
2. Dr. S. Narayanan, Pro-Vice Chancellor
3. Dr. V.S. Kanchana Bhaaskaran, Pro-Vice Chancellor
4. Mr. Lawrence Mohanraj, IBM India Pvt. Ltd, Chennai
5. Dr. M. Anthony Xavier, Dean Academics, Vellore Campus
6. Dr. A. Nayeemulla Khan, Dean Academics, Chennai Campus
7. Dr. R. Murugavel, Controller of Examination
8. Dr. N. Arunai Nambiraj, Dean, School of Advanced Sciences, Vellore Campus
9. Dr. R. Siva, Dean, School of Biosciences and Technology, Vellore Campus
10. Dr. A.S. Santhi, Dean, School of Civil Engineering, Vellore Campus
11. Dr. L. Muruganandam, Dean, School of Chemical Engineering, Vellore Campus
12. Dr. Ramesh Babu K, Dean, School of Computer Science and Engineering, Vellore Campus
13. Dr. Mathew M. Noel, Dean, School of Electrical Engineering, Vellore Campus
14. Dr. S. Sivanantham, Dean, School of Electronics Engineering, Vellore Campus
15. Dr. S. Sumathy, Dean, School of Information Technology, Vellore Campus
16. Dr. K. Devendranath Ramkumar, Dean, School of Mechanical Engineering, Vellore Campus
17. Dr. M. Manoharan, Dean, School of Social Sciences and Languages, Vellore Campus
18. Dr. S. Babu, Dean, VIT Agricultural Innovations and Advanced Learning, Vellore Campus
19. Dr. Saleem Ahmed, Dean, VIT School of Design, Vellore Campus
20. Dr. A. Madhumathi, Director, School of Architecture, Vellore Campus
21. Dr. C.D. Najju, Director, Students' Welfare, Vellore Campus
22. Dr. P. Arulmozhiarman, Dean, Academics Research, Vellore Campus
23. Dr. Suvojit Ganguly, Assistant Dean, School of Hotel and Tourism Management, Vellore Campus
24. Dr. V. Samuel Rajkumar, Director, Career Development Centre, Vellore Campus
25. Dr. G. Kalaichelvan, Director, UG Admissions, Vellore Campus
26. Dr. V. Ramasubramanian, Director, PG Admissions, Vellore Campus
27. Dr. P.C. Sabumon, Dean, Academic Research, Chennai Campus
28. Dr. S. Mahalakshmi, Dean, School of Advanced Sciences, Chennai Campus
29. Dr. R. Ganesan, Dean, School of Computer Sciences and Engineering, Chennai Campus
30. Dr. A. Peer Fathima, Dean, School of Electrical Engineering, Chennai Campus
31. Dr. A. Siva Subramanian, Dean, School of Electronics Engineering, Chennai Campus
32. Dr. M.S. Soundara Pandian, Dean, VIT School of Law, Chennai Campus
33. Dr. Sreekanth Dondapati, Dean, School of Mechanical Engineering, Chennai Campus
34. Dr. S.K. Sudarsanam, Dean, VIT Business School, Chennai Campus
35. Dr. S. Elavenil, Dean, School of Civil Engineering, Chennai Campus
36. Dr. Saradha Rajkumar, Dean, School of Social Sciences and Languages, Chennai Campus
37. Dr. V. Viswanathan, Deputy Controller of Examinations, Chennai Campus
38. Dr. V. Thanikaiselvan, Associate Professor, School of Electronics Engineering, Vellore Campus
39. Dr. A. Raja Annamalai, Associate Professor, Centre for Innovative Manufacturing Research, Vellore Campus
40. Dr. A. Selvakumar, HOD, VIT Fashion Institute of Technology, Chennai Campus, Special Invitee
41. Dr. K. Sathiyarayanan, Registrar, Member Secretary

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Leave of Absence:

1. Dr. N. Lalitha, Educational Consultant, Chennai
2. Dr. K. Giridhar, IIT Madras
3. Dr. K.V.S. Hari, IISc, Bangalore
4. Mr. Lakshminarayanan, *Cognizant Digital Engineering Practice, Chennai*
5. Shri. Jaji Vijayaraman, Valeo India Private Limited., Chennai
6. Mr. Arindam Sen, Bangalore, Alumni representative
7. Dr. G. Madhumitha, Assistant Professor, School of Advanced Sciences, Vellore Campus
8. Dr. Jagadish Mudiganti, Dean Academics, VIT-AP University, Special Invitee
9. Student Council Member

Item 65/1	Welcome by Vice Chancellor Vice Chancellor welcomed all the members of the Academic Council.
Item 65/2	Remarks by Chancellor The success of an institution depends on the capacity of the faculty members. The contribution of each faculty member is important for the growth of VIT. Along with teaching, all the faculty members should involve in publishing research papers. School Deans have to motivate the faculty members those who are lagging behind in terms of research. VIT performs well in research activities, but need to show improvement in terms of high-quality research publications and patents. VIT is to be a model institution in teaching learning process and research activities in India.
Item 65/3	To consider and confirm the Minutes of the 64th meeting of the Academic Council. (Annexure 1) Comments arising out of the minutes of the 64 th meeting of the Academic Council are none. The Academic Council confirmed the above minutes.
Item 65/4	To consider and ratify the approval of the Programme Elective Courses / University Elective Courses or NPTEL Courses as substitution for the credit requirement of the Science, Engineering and Technology (SET) Project course for the students of 2 years Post Graduate programmes (M.Tech., MCA, M.Des. and M.Sc.) of 2020 and 2021 batches and for the 5 years MSc Integrated Biotechnology students of 2017 and 2018 batches. The students of 2 years Post Graduate programmes (M.Tech., MCA, M.Des. and M.Sc.) of 2020 and 2021 batches and 5 years MSc Integrated Biotechnology students of 2017 and 2018 batches are to be considered eligible for award of the degree, if they otherwise satisfy the credit requirements as per their Curriculum and the credit requirements of Science, Engineering and Technology (SET) Project course(s) are met through additional Programme Elective Courses / University Elective Courses or NPTEL Courses. The Academic Council considered and approved the same with the condition, not to cancel the SET conference at any circumstances in future.
Item 65/5	To consider and approve the Academic Regulations for Semester Abroad Programme. (Annexure 2) The Academic Council considered and approved the same.


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Item 65/6	<p>To consider and approve the inclusion of twenty (20) NPTEL Courses Under University Elective Category. Total four hundred and fifty three (453) NPTEL Courses have been already approved in the 53rd meeting of the Academic Council held on 13th December 2018 [Item No. 53.2.2], 57th meeting of the Academic Council held on 5th December 2019 [Item No. 57.2.3], 58th meeting of the Academic Council held on 26th February 2020 [Item No.58.2.4] and 64th meeting of the Academic Council held on 16th December 2021 [Item No. 64/13].</p> <table border="1" data-bbox="327 392 1422 1153"> <thead> <tr> <th>Course Code</th> <th>Course Title</th> <th>Duration</th> <th>Credits</th> </tr> </thead> <tbody> <tr> <td>MOC2350</td> <td>Numerical Analysis</td> <td>15 weeks</td> <td>4 credits</td> </tr> <tr> <td>MOC2351</td> <td>Quantum Technology and Quantum Phenomena in Macroscopic Systems</td> <td>12 weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2352</td> <td>Electrochemical Impedance Spectroscopy</td> <td>12 weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2353</td> <td>Carbon Materials and Manufacturing</td> <td>12 weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2354</td> <td>Electronic Packaging and Manufacturing</td> <td>08 weeks</td> <td>2 credits</td> </tr> <tr> <td>MOC2355</td> <td>Finite Element Method</td> <td>12 weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2356</td> <td>Physics of Materials</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2357</td> <td>X-ray Crystallography and Diffraction</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2358</td> <td>Solar Photovoltaics Fundamentals, Technology and Applications</td> <td>08 weeks</td> <td>2 credits</td> </tr> <tr> <td>MOC2359</td> <td>Design of Photovoltaic Systems</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2360</td> <td>Fundamentals of Micro and Nanofabrication</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2361</td> <td>Biomedical Nanotechnology</td> <td>04 weeks</td> <td>1 credits</td> </tr> <tr> <td>MOC2362</td> <td>Design and Analysis of VLSI Subsystems</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2363</td> <td>Physics of Nanoscale Devices</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2364</td> <td>Photonic Integrated Circuit</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2365</td> <td>Technologies for Clean and Renewable Energy Production</td> <td>08 weeks</td> <td>2 credits</td> </tr> <tr> <td>MOC2366</td> <td>Elements of Solar Energy Conversion</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2367</td> <td>Physics of Renewable Energy Systems</td> <td>12 Weeks</td> <td>3 credits</td> </tr> <tr> <td>MOC2368</td> <td>Structural Analysis of Nanomaterials</td> <td>4 Weeks</td> <td>1 credits</td> </tr> <tr> <td>MOC2369</td> <td>Computational Approach to Materials Science and Engineering</td> <td>08 weeks</td> <td>2 credits</td> </tr> </tbody> </table> <p>The Academic Council considered and approved the same.</p>	Course Code	Course Title	Duration	Credits	MOC2350	Numerical Analysis	15 weeks	4 credits	MOC2351	Quantum Technology and Quantum Phenomena in Macroscopic Systems	12 weeks	3 credits	MOC2352	Electrochemical Impedance Spectroscopy	12 weeks	3 credits	MOC2353	Carbon Materials and Manufacturing	12 weeks	3 credits	MOC2354	Electronic Packaging and Manufacturing	08 weeks	2 credits	MOC2355	Finite Element Method	12 weeks	3 credits	MOC2356	Physics of Materials	12 Weeks	3 credits	MOC2357	X-ray Crystallography and Diffraction	12 Weeks	3 credits	MOC2358	Solar Photovoltaics Fundamentals, Technology and Applications	08 weeks	2 credits	MOC2359	Design of Photovoltaic Systems	12 Weeks	3 credits	MOC2360	Fundamentals of Micro and Nanofabrication	12 Weeks	3 credits	MOC2361	Biomedical Nanotechnology	04 weeks	1 credits	MOC2362	Design and Analysis of VLSI Subsystems	12 Weeks	3 credits	MOC2363	Physics of Nanoscale Devices	12 Weeks	3 credits	MOC2364	Photonic Integrated Circuit	12 Weeks	3 credits	MOC2365	Technologies for Clean and Renewable Energy Production	08 weeks	2 credits	MOC2366	Elements of Solar Energy Conversion	12 Weeks	3 credits	MOC2367	Physics of Renewable Energy Systems	12 Weeks	3 credits	MOC2368	Structural Analysis of Nanomaterials	4 Weeks	1 credits	MOC2369	Computational Approach to Materials Science and Engineering	08 weeks	2 credits
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Item 65/7	<p>To consider and approve the revised programme credit structure and curriculum of Integrated Master of Science in Biotechnology.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/26].</p> <p>However, requested to revisit the a) inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Integrated Master of Science in Biotechnology, b) the credit requirement for the exit options after third and fourth year.</p> <p>The revised programme credit structure and curriculum of Integrated Master of Science in Biotechnology is enclosed as Annexure 3.</p> <p style="text-align: right;"><i>(Annexure 3)</i></p> <p>The Academic Council suggested to revisit the need for Non-Graded Credit Requirement, and also the revised programme credit structure of Integrated Master of Science in Biotechnology.</p>																																																																																				
Item 65/8	<p>To consider and approve the revised programme credit structure and curriculum of Integrated Master of Science in Food Science and Technology.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/8].</p>																																																																																				

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	<p>However, requested to revisit the a) inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Integrated Master of Science in Food Science and Technology, b) the credit requirement for the exit options after third and fourth year.</p> <p>The revised programme credit structure and curriculum of Integrated Master of Science in Food Science and Technology is enclosed as Annexure 4. <i>(Annexure 4)</i></p> <p>The Academic Council suggested to revisit the need for Non-Graded Credit Requirement, and also the revised programme credit structure of Integrated Master of Science in Food Science and Technology.</p>
Item 65/9	<p>To consider and approve the revisited credits requirement for the exit options after third and fourth year of Integrated Master of Science in Physics.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/9].</p> <p>However, requested to revisit the credits requirement for the exit options after third and fourth year. Hence revisited the credits requirement for the exit options after third and fourth year of Integrated Master of Science in Physics. <i>(Annexure 5)</i></p> <p>The Academic Council suggested to revisit the need for Non-Graded Credit Requirement, and also the revised programme credit structure of Integrated Master of Science in Physics.</p>
Item 65/10	<p>To consider and approve the revisited credits requirement for the exit options after third and fourth year of Integrated Master of Science in Chemistry.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/10].</p> <p>However, requested to revisit the credits requirement for the exit options after third and fourth year. Hence revisited the credits requirement for the exit options after third and fourth year of Integrated Master of Science in Chemistry. <i>(Annexure 6)</i></p> <p>The Academic Council suggested to revisit the need for Non-Graded Credit Requirement, and also the revised programme credit structure of Integrated Master of Science in Chemistry.</p>
Item 65/11	<p>To consider and approve the revisited credits requirement for the exit options after third and fourth year of Integrated Master of Science in Mathematics.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/11].</p> <p>However, requested to revisit the credits requirement for the exit options after third and fourth year. Hence revisited the credits requirement for the exit options after third and fourth year of Integrated Master of Science in Mathematics. <i>(Annexure 7)</i></p> <p>The Academic Council suggested to revisit the need for Non-Graded Credit Requirement, and also the revised programme credit structure of Integrated Master of Science in Mathematics.</p>
Item 65/12	<p>To consider and approve the revised programme credit structure and curriculum of Integrated Master of Technology in Construction Technology and Management.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/13]. However, requested to revisit the inclusion of course on Workshop Practice in the curriculum of Integrated Master of Technology in Construction Technology and Management.</p>

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	<p>The revised programme credit structure and curriculum of Integrated Master of Technology in Construction Technology and Management is enclosed as Annexure 8.</p> <p style="text-align: right;"><i>(Annexure 8)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/13	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Biotechnology.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/26]. However, requested to revisit the inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Bachelor of Technology in Biotechnology.</p> <p>As per the minutes of the 64th meeting of the Academic Council held on 16th December 2021 [Item No. 64/42.2], the course Engineering Mechanics was moved from Foundation Core Courses category to Open Elective Courses category.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Biotechnology is enclosed as Annexure 9.</p> <p style="text-align: right;"><i>(Annexure 9)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/14	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Chemical Engineering.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/15]. However, requested to revisit the inclusion of course on Workshop Practice in the curriculum of Bachelor of Technology in Chemical Engineering.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Chemical Engineering is enclosed as Annexure 10.</p> <p style="text-align: right;"><i>(Annexure 10)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/15	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Civil Engineering.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/16]. However, requested to revisit the inclusion of course on Workshop Practice in the curriculum of Bachelor of Technology in Civil Engineering.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Civil Engineering is enclosed as Annexure 11.</p> <p style="text-align: right;"><i>(Annexure 11)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/16	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/17]. However, requested to revisit the inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Bachelor of Technology in Computer Science and Engineering.</p> <p>As per the minutes of the 64th meeting of the Academic Council held on 16th December 2021 [Item No. 64/42.2], the course Engineering Mechanics was moved from Foundation Core Courses category to Open Elective Courses category.</p>

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	<p>The revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering is enclosed as Annexure 12.</p> <p style="text-align: right;">(Annexure 12)</p> <p>The Academic Council considered and approved the same.</p>
Item 65/17	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Electronics and Instrumentation Engineering.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/18]. However, requested to revisit the inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Bachelor of Technology in Electronics and Instrumentation Engineering.</p> <p>As per the minutes of the 64th meeting of the Academic Council held on 16th December 2021 [Item No. 64/42.2], the course Engineering Mechanics was moved from Foundation Core Courses category to Open Elective Courses category.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Electronics and Instrumentation Engineering is enclosed as Annexure 13.</p> <p style="text-align: right;">(Annexure 13)</p> <p>The Academic Council considered and approved the same.</p>
Item 65/18	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Electrical and Electronics Engineering.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/19]. However, requested to revisit the inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Bachelor of Technology in Electrical and Electronics Engineering.</p> <p>As per the minutes of the 64th meeting of the Academic Council held on 16th December 2021 [Item No. 64/42.2], the course Engineering Mechanics was moved from Foundation Core Courses category to Open Elective Courses category.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Electrical and Electronics Engineering is enclosed as Annexure 14.</p> <p style="text-align: right;">(Annexure 14)</p> <p>The Academic Council considered and approved the same.</p>
Item 65/19	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Electronics and Communication Engineering.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/20]. However, requested to revisit the inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Bachelor of Technology in Electronics and Communication Engineering.</p> <p>As per the minutes of the 64th meeting of the Academic Council held on 16th December 2021 [Item No. 64/42.2], the course Engineering Mechanics was moved from Foundation Core Courses category to Open Elective Courses category.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Electronics and Communication Engineering is enclosed as Annexure 15.</p> <p style="text-align: right;">(Annexure 15)</p> <p>The Academic Council considered and approved the same.</p>

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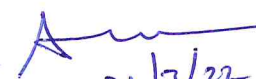
Item 65/20	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Electronics and Computer Engineering.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/21]. However, requested to revisit the inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Bachelor of Technology in Electronics and Computer Engineering.</p> <p>As per the minutes of the 64th meeting of the Academic Council held on 16th December 2021 [Item No. 64/42.2], the course Engineering Mechanics was moved from Foundation Core Courses category to Open Elective Courses category.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Electronics and Computer Engineering is enclosed as Annexure 16.</p> <p style="text-align: right;"><i>(Annexure 16)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/21	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Information Technology.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/23]. However, requested to revisit the inclusion of courses on Workshop Practice and Engineering Design Visualization in the curriculum of Bachelor of Technology in Information Technology.</p> <p>As per the minutes of the 64th meeting of the Academic Council held on 16th December 2021 [Item No. 64/42.2], the course Engineering Mechanics was moved from Foundation Core Courses category to Open Elective Courses category.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Information Technology is enclosed as Annexure 17.</p> <p style="text-align: right;"><i>(Annexure 17)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/22	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Mechanical Engineering.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/24]. However, requested to revisit the inclusion of course on Workshop Practice in the curriculum of Bachelor of Technology in Mechanical Engineering.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Mechanical Engineering is enclosed as Annexure 18.</p> <p style="text-align: right;"><i>(Annexure 18)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/23	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Mechatronics and Automation.</p> <p>The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/25]. However, requested to revisit the inclusion of course on Workshop Practice in the curriculum of Bachelor of Technology in Mechatronics and Automation.</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Mechatronics and Automation is enclosed as Annexure 19.</p> <p style="text-align: right;"><i>(Annexure 19)</i></p> <p>The Academic Council considered and approved the same.</p>

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Item 65/24	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Mechanical Engineering with Specialization in Automotive Engineering. The curriculum was approved in the 37th meeting of the Academic Council held on 16th June 2015 [Item No. 37.12].</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Mechanical Engineering with Specialization in Automotive Engineering is enclosed as Annexure 20.</p> <p style="text-align: right;"><i>(Annexure 20)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/25	<p>To consider and approve the programme credit structure and curriculum of Bachelor of Technology in Mechanical Engineering with Specialization in Manufacturing Engineering and also the closure of Bachelor of Technology in Production and Industrial Engineering from the Academic year 2021-22.</p> <p style="text-align: right;"><i>(Annexure 21)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/26	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering with Specialization in Bioinformatics.</p> <p>The curriculum was approved in the 37th meeting of the Academic Council held on 16th June 2015 [Item No. 37.5].</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering with Specialization in Bioinformatics is enclosed as Annexure 22.</p> <p style="text-align: right;"><i>(Annexure 22)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/27	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering with Specialization in Information Security.</p> <p>The curriculum was approved in the 37th meeting of the Academic Council held on 16th June 2015 [Item No. 37.6].</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering with Specialization in Information Security is enclosed as Annexure 23.</p> <p style="text-align: right;"><i>(Annexure 23)</i></p> <p>The Academic Council considered and approved the same.</p>
Item 65/28	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering with Specialization in Internet of Things.</p> <p>The curriculum was approved in the 55th meeting of the Academic Council held on 13th June 2019 [Item No. 55.5.2].</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering with Specialization in Internet of Things is enclosed as Annexure 24.</p> <p style="text-align: right;"><i>(Annexure 24)</i></p> <p>The Academic Council considered and approved the same.</p>

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Item 65/29	<p>To consider and approve the revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering with Specialization in Block Chain Technology.</p> <p>The curriculum was approved in the 59th meeting of the Academic Council held on 24th September 2020 [Item No. 59.13.1].</p> <p>The revised programme credit structure and curriculum of Bachelor of Technology in Computer Science and Engineering with Specialization in Block Chain Technology is enclosed as Annexure 25.</p> <p style="text-align: right;">(Annexure 25)</p> <p>The Academic Council considered and approved the same.</p>																																																																																																																																																																																													
Item 65/30	<p>To consider and approve the course contents for the following ten (10) Foundation Core courses, twenty Seven (27) Discipline Core courses, twenty five (25) Discipline Electives and six (6) Skill Enhancement Courses of Five year Integrated Master of Science in Biotechnology. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/26].</p> <table border="1" data-bbox="331 763 1430 1912"> <thead> <tr> <th colspan="7">Foundation Core Courses</th> </tr> <tr> <th>Course Code</th> <th>Course Title</th> <th>L</th> <th>T</th> <th>P</th> <th>C</th> <th>Prerequisite</th> </tr> </thead> <tbody> <tr> <td>TBIT208L</td> <td>Industry Standards and Guidelines</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>NIL</td> </tr> <tr> <td>TCSE101L</td> <td>Computer Programming : C</td> <td>2</td> <td>0</td> <td>0</td> <td>2</td> <td>NIL</td> </tr> <tr> <td>TCSE101P</td> <td>Computer Programming : C Lab</td> <td>0</td> <td>0</td> <td>2</td> <td>1</td> <td>NIL</td> </tr> <tr> <td>TCSE207L</td> <td>Computer Programming: Python</td> <td>2</td> <td>0</td> <td>0</td> <td>2</td> <td>NIL</td> </tr> <tr> <td>TCSE207P</td> <td>Computer Programming: Python Lab</td> <td>0</td> <td>0</td> <td>2</td> <td>1</td> <td>NIL</td> </tr> <tr> <td>TMAT201L</td> <td>Probability and Statistics</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>TMAT103L, TMAT103P</td> </tr> <tr> <td>TMAT201P</td> <td>Probability and Statistics Lab</td> <td>0</td> <td>0</td> <td>2</td> <td>1</td> <td>TMAT103L, TMAT103P</td> </tr> <tr> <td>TRES102L</td> <td>Research Methodology</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>NIL</td> </tr> <tr> <td>TSSC201L</td> <td>Critical Thinking</td> <td>2</td> <td>0</td> <td>0</td> <td>2</td> <td>NIL</td> </tr> <tr> <td>TSSC202L</td> <td>Intra and Interpersonal Skills</td> <td>2</td> <td>0</td> <td>0</td> <td>2</td> <td>NIL</td> </tr> <tr> <th colspan="7">Discipline Core Courses</th> </tr> <tr> <td>TBIT201L</td> <td>Genetics</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>NIL</td> </tr> <tr> <td>TBIT202L</td> <td>Microbiology</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>NIL</td> </tr> <tr> <td>TBIT202P</td> <td>Microbiology Lab</td> <td>0</td> <td>0</td> <td>4</td> <td>2</td> <td>NIL</td> </tr> <tr> <td>TBIT203L</td> <td>Genetic Engineering</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>TBIT103L, TBIT104L, TBIT105P</td> </tr> <tr> <td>TBIT203P</td> <td>Genetic Engineering Lab</td> <td>0</td> <td>0</td> <td>4</td> <td>2</td> <td>TBIT103L, TBIT104L, TBIT105P</td> </tr> <tr> <td>TBIT204L</td> <td>Food Nutrition and Health</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>NIL</td> </tr> <tr> <td>TBIT205L</td> <td>Human Anatomy and Physiology</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>NIL</td> </tr> <tr> <td>TBIT206L</td> <td>Fundamentals of Chemical Engineering</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>NIL</td> </tr> <tr> <td>TBIT207L</td> <td>Immunology</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>TBIT202L, TBIT202P</td> </tr> <tr> <td>TBIT207P</td> <td>Immunology Lab</td> <td>0</td> <td>0</td> <td>4</td> <td>2</td> <td>TBIT202L, TBIT202P</td> </tr> <tr> <td>TBIT301L</td> <td>Analytical Techniques</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>TBIT106L, TBIT106P</td> </tr> <tr> <td>TBIT301P</td> <td>Analytical Techniques Lab</td> <td>0</td> <td>0</td> <td>4</td> <td>2</td> <td>TBIT106L, TBIT106P</td> </tr> <tr> <td>TBIT302L</td> <td>Bioprocess Engineering</td> <td>3</td> <td>0</td> <td>0</td> <td>3</td> <td>TBIT107L, TBIT107P</td> </tr> <tr> <td>TBIT302P</td> <td>Bioprocess Engineering Lab</td> <td>0</td> <td>0</td> <td>4</td> <td>2</td> <td>TBIT107L, TBIT107P</td> </tr> </tbody> </table>	Foundation Core Courses							Course Code	Course Title	L	T	P	C	Prerequisite	TBIT208L	Industry Standards and Guidelines	3	0	0	3	NIL	TCSE101L	Computer Programming : C	2	0	0	2	NIL	TCSE101P	Computer Programming : C Lab	0	0	2	1	NIL	TCSE207L	Computer Programming: Python	2	0	0	2	NIL	TCSE207P	Computer Programming: Python Lab	0	0	2	1	NIL	TMAT201L	Probability and Statistics	3	0	0	3	TMAT103L, TMAT103P	TMAT201P	Probability and Statistics Lab	0	0	2	1	TMAT103L, TMAT103P	TRES102L	Research Methodology	3	0	0	3	NIL	TSSC201L	Critical Thinking	2	0	0	2	NIL	TSSC202L	Intra and Interpersonal Skills	2	0	0	2	NIL	Discipline Core Courses							TBIT201L	Genetics	3	0	0	3	NIL	TBIT202L	Microbiology	3	0	0	3	NIL	TBIT202P	Microbiology Lab	0	0	4	2	NIL	TBIT203L	Genetic Engineering	3	0	0	3	TBIT103L, TBIT104L, TBIT105P	TBIT203P	Genetic Engineering Lab	0	0	4	2	TBIT103L, TBIT104L, TBIT105P	TBIT204L	Food Nutrition and Health	3	0	0	3	NIL	TBIT205L	Human Anatomy and Physiology	3	0	0	3	NIL	TBIT206L	Fundamentals of Chemical Engineering	3	0	0	3	NIL	TBIT207L	Immunology	3	0	0	3	TBIT202L, TBIT202P	TBIT207P	Immunology Lab	0	0	4	2	TBIT202L, TBIT202P	TBIT301L	Analytical Techniques	3	0	0	3	TBIT106L, TBIT106P	TBIT301P	Analytical Techniques Lab	0	0	4	2	TBIT106L, TBIT106P	TBIT302L	Bioprocess Engineering	3	0	0	3	TBIT107L, TBIT107P	TBIT302P	Bioprocess Engineering Lab	0	0	4	2	TBIT107L, TBIT107P
Foundation Core Courses																																																																																																																																																																																														
Course Code	Course Title	L	T	P	C	Prerequisite																																																																																																																																																																																								
TBIT208L	Industry Standards and Guidelines	3	0	0	3	NIL																																																																																																																																																																																								
TCSE101L	Computer Programming : C	2	0	0	2	NIL																																																																																																																																																																																								
TCSE101P	Computer Programming : C Lab	0	0	2	1	NIL																																																																																																																																																																																								
TCSE207L	Computer Programming: Python	2	0	0	2	NIL																																																																																																																																																																																								
TCSE207P	Computer Programming: Python Lab	0	0	2	1	NIL																																																																																																																																																																																								
TMAT201L	Probability and Statistics	3	0	0	3	TMAT103L, TMAT103P																																																																																																																																																																																								
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TRES102L	Research Methodology	3	0	0	3	NIL																																																																																																																																																																																								
TSSC201L	Critical Thinking	2	0	0	2	NIL																																																																																																																																																																																								
TSSC202L	Intra and Interpersonal Skills	2	0	0	2	NIL																																																																																																																																																																																								
Discipline Core Courses																																																																																																																																																																																														
TBIT201L	Genetics	3	0	0	3	NIL																																																																																																																																																																																								
TBIT202L	Microbiology	3	0	0	3	NIL																																																																																																																																																																																								
TBIT202P	Microbiology Lab	0	0	4	2	NIL																																																																																																																																																																																								
TBIT203L	Genetic Engineering	3	0	0	3	TBIT103L, TBIT104L, TBIT105P																																																																																																																																																																																								
TBIT203P	Genetic Engineering Lab	0	0	4	2	TBIT103L, TBIT104L, TBIT105P																																																																																																																																																																																								
TBIT204L	Food Nutrition and Health	3	0	0	3	NIL																																																																																																																																																																																								
TBIT205L	Human Anatomy and Physiology	3	0	0	3	NIL																																																																																																																																																																																								
TBIT206L	Fundamentals of Chemical Engineering	3	0	0	3	NIL																																																																																																																																																																																								
TBIT207L	Immunology	3	0	0	3	TBIT202L, TBIT202P																																																																																																																																																																																								
TBIT207P	Immunology Lab	0	0	4	2	TBIT202L, TBIT202P																																																																																																																																																																																								
TBIT301L	Analytical Techniques	3	0	0	3	TBIT106L, TBIT106P																																																																																																																																																																																								
TBIT301P	Analytical Techniques Lab	0	0	4	2	TBIT106L, TBIT106P																																																																																																																																																																																								
TBIT302L	Bioprocess Engineering	3	0	0	3	TBIT107L, TBIT107P																																																																																																																																																																																								
TBIT302P	Bioprocess Engineering Lab	0	0	4	2	TBIT107L, TBIT107P																																																																																																																																																																																								

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TBIT303L	Fundamentals of Biostatistics	2	0	0	2	NIL
TBIT304L	Bioinformatics	3	0	0	3	TBIT101L
TBIT304P	Bioinformatics Lab	0	0	4	2	TBIT101L
TBIT305L	Downstream Processing	3	0	0	3	TBIT301L, TBIT301P
TBIT305P	Downstream Processing Lab	0	0	4	2	TBIT301L, TBIT301P
TBIT401L	Systems Biology	3	1	0	4	TBIT106L, TBIT106P
TBIT402L	Plant Biotechnology	3	0	0	3	TBIT103L, TBIT104L, TBIT105P
TBIT402P	Plant Biotechnology Lab	0	0	4	2	TBIT103L, TBIT104L, TBIT105P
TBIT403L	Biodiversity and Conservation Biology	3	0	0	3	NIL
TBIT405L	Animal Biotechnology	3	0	0	3	TBIT203L, TBIT203P
TBIT405P	Animal Biotechnology Lab	0	0	4	2	TBIT203L, TBIT203P
TBIT406L	Biological Databases	3	0	0	3	TBIT304L, TBIT304P
TBIT406P	Biological Databases Lab	0	0	4	2	TBIT304L, TBIT304P
Discipline Electives						
TBIT209L	Developmental Biology	3	0	0	3	TBIT103L, TBIT104L, TBIT105P
TBIT210L	Cancer Biology	3	0	0	3	TBIT103L, TBIT104L, TBIT105P
TBIT211L	Genomics	3	0	0	3	TBIT103L, TBIT104L, TBIT105P
TBIT212L	Proteomics	3	0	0	3	TBIT103L, TBIT104L, TBIT105P
TBIT213L	Food Biotechnology	3	0	0	3	TBIT202L, TBIT202P
TBIT214L	Forensic Science	3	0	0	3	TBIT103L, TBIT104L, TBIT105P
TBIT306L	Industrial Biotechnology	3	0	0	3	TBIT302L, TBIT302P
TBIT307L	Environmental Biotechnology	3	0	0	3	TBIT202L, TBIT202P
TBIT308L	Pharmaceutical Biotechnology	3	0	0	3	NIL
TBIT309L	Medical Biotechnology	3	0	0	3	TBIT106L, TBIT106P, TBIT103L, TBIT104L, TBIT105P
TBIT310L	Aquatic Biotechnology	3	0	0	3	TBIT106L, TBIT106P, TBIT103L, TBIT104L, TBIT105P
TBIT311L	Nanobiotechnology	3	0	0	3	TBIT301L, TBIT301P
TBIT390J	Study Project				3	NIL
TBIT391J	Technical Answers to Real Problems Project				3	NIL

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TBIT392J	Design Project				3	NIL
TBIT393J	Laboratory Project				3	NIL
TBIT395J	Computer Project				3	NIL
TBIT397J	Special Project				3	NIL
TBIT407L	Molecular Endocrinology	3	0	0	3	TBIT103L, TBIT104L, TBIT105P, TBIT106L, TBIT106P
TBIT408L	Gene Therapy	3	0	0	3	TBIT103L, TBIT104L, TBIT105P
TBIT409L	Vaccinology	3	0	0	3	TBIT207L TBIT207P
TBIT410L	Molecular Modelling and Drug Design	3	0	0	3	TBIT304L, TBIT304P
TBIT411L	Stem Cell Technology	3	0	0	3	TBIT103L, TBIT104L, TBIT105P
TBIT412L	Neurobiology	3	0	0	3	TBIT103L, TBIT104L, TBIT105P, TBIT106L, TBIT106P
TBIT413L	Epidemiology and Public Health	3	0	0	3	TBIT202L, TBIT202P
Skill Enhancement Electives						
TBIT312E	Plant Tissue Culture	1	0	2	2	TBIT103L, TBIT104L, TBIT105P
TBIT313E	Animal Cell Culture	1	0	2	2	TBIT103L, TBIT104L, TBIT105P
TBIT314E	Histopathology and Cytology	1	0	2	2	TBIT103L, TBIT104L, TBIT105P
TBIT414E	Cytogenetics and Karyotyping	1	0	2	2	TBIT201L, TBIT202P
TBIT415E	Animal Breeding and Handling	1	0	2	2	NIL
TBIT404E	Gene Editing	1	0	2	2	TBIT203L, TBIT203P

(Annexure 26)

The Academic Council considered and approved the same.

Item 65/31 To consider and approve the course contents for the following ten (10) Foundation Core courses, twenty Six (26) Discipline Core courses, seventeen (17) Discipline Electives and four (4) Skill Enhancement courses offered in Five Year Integrated Master of Science in Food Science and Technology. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/8].

Foundation Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
TBIT208L	Industry Standards and Guidelines	3	0	0	3	NIL
TCSE101L	Computer Programming : C	2	0	0	2	NIL
TCSE101P	Computer Programming : C Lab	0	0	2	1	NIL
TCSE207L	Computer Programming: Python	2	0	0	2	NIL
TCSE207P	Computer Programming: Python Lab	0	0	2	1	NIL

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TMAT201L	Probability and Statistics	3	0	0	3	TMAT103L, TMAT103P
TMAT201P	Probability and Statistics Lab	0	0	2	1	TMAT103L, TMAT103P
TRES102L	Research Methodology	3	0	0	3	NIL
TSSC201L	Critical Thinking	2	0	0	2	NIL
TSSC202L	Intra and Interpersonal Skills	2	0	0	2	NIL
Discipline Core Courses						
TFSI201L	Principles of Food Science	3	0	0	3	NIL
TFSI202L	Food Chemistry	3	0	0	3	TBIT106L, TBIT106P
TFSI203L	Food Microbiology	3	0	0	3	NIL
TFSI203P	Food Chemistry and Food Microbiology Lab	0	0	4	2	NIL
TFSI204L	Physiology and Nutrition	3	0	0	3	TBIT106L, TBIT106P
TFSI205L	Food Additives	3	0	0	3	TFSI201L
TFSI206L	Food Quality and Analysis	3	0	0	3	TFSI202L
TFSI207L	Food Preservation Technology	3	0	0	3	NIL
TFSI207P	Food Analysis and Preservation Lab	0	0	4	2	NIL
TFSI301L	Food Engineering	3	0	0	3	NIL
TFSI302L	Food Packaging	3	0	0	3	NIL
TFSI302P	Food Engineering and Packaging Lab	0	0	4	2	NIL
TFSI303L	Milk and Milk Products Technology	3	0	0	3	NIL
TFSI304L	Nutraceuticals and Functional Foods	3	0	0	3	TFSI204L
TFSI305L	Food Toxicology and Safety	3	0	0	3	NIL
TFSI305P	Food Toxicology and Safety Lab	0	0	4	2	NIL
TFSI306L	Animal Products Technology	3	0	0	3	TFSI201L
TFSI306P	Animal and Milk Products Lab	0	0	4	2	TFSI201L
TFSI401L	Food Laws and Regulations	3	0	0	3	NIL
TFSI402L	Food Equipment Design and Automation	3	0	0	3	TBIT107L, TBIT107P
TFSI403L	Baking and Confectionary Technology	3	0	0	3	NIL
TFSI403P	Baking and Confectionary Lab	0	0	4	2	NIL
TFSI404L	Food Process Technology	3	0	0	3	NIL
TFSI405L	Production Technology of Spices and Plantation Crops	3	0	0	3	NIL
TFSI406L	Grain Science and Technology	3	0	0	3	NIL
TFSI406P	Grain, Spices and Plantation Products Lab	0	0	4	2	NIL
Discipline Electives						
TFSI208L	Food Adulteration	3	0	0	3	NIL
TFSI307L	Fruit and Vegetable Processing Technology	3	0	0	3	NIL
TFSI308L	Nutrition and Dietetics	3	0	0	3	TFSI204L
TFSI309L	Industrial Enzymology	3	0	0	3	TBIT106L, TBIT106P
TFSI310L	Beverage Processing Technology	3	0	0	3	NIL
TFSI390J	Student Project				3	NIL
TFSI391J	Technical Answers to Real Problems Project				3	NIL
TFSI392J	Design Project				3	NIL
TFSI393J	Laboratory Project				3	NIL
TFSI395J	Computer Project				3	NIL
TFSI397J	Special Project				3	NIL
TFSI407L	Crop Production Concepts and Practices	3	0	0	3	NIL
TFSI408L	Food Fermentation and Synbiotic Technology	3	0	0	3	NIL
TFSI409L	Food Nanotechnology	3	0	0	3	NIL
TFSI410L	Food Forensics	3	0	0	3	TFSI202L
TFSI411L	Food Rheology	3	0	0	3	NIL
TFSI412L	Technology of Fats and Oils	3	0	0	3	TFSI202L
Skill Enhancement Courses						
TFSI311E	Value Added Food Products	1	0	2	2	NIL
TFSI312E	Mushroom Farming	1	0	2	2	NIL

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TFSI413E	Beekeeping and Honey Processing	1	0	2	2	NIL
TFSI414E	Biofortification of Foods	1	0	2	2	NIL

(Annexure 27)

The Academic Council considered and approved the same.

Item 65/32

To consider and approve the course content for the following three (3) Foundation Core Courses, eleven (11) Discipline Core courses, fourteen (14) Discipline Electives and one (1) Skill Enhancement Elective course offered in Five Year Integrated Master of Science in Physics. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/9].

Foundation Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
TRES101L	Research Methodology	3	0	0	3	NIL
TSSC201L	Critical Thinking	2	0	0	2	NIL
TSSC202L	Intra and Interpersonal Skills	2	0	0	2	NIL
Discipline Core Courses						
TPHY201L	Mechanics	3	1	0	4	NIL
TPHY201P	Mechanics Lab	0	0	4	2	NIL
TPHY203L	Solid State Physics	3	1	0	4	TPHY103L, TPHY103P, TMAT104L
TPHY204P	Materials Science Lab	0	0	4	2	NIL
TPHY205L	Heat and Thermodynamics	3	0	0	3	NIL
TPHY301L	Mathematical Physics	3	1	0	4	TMAT104L
TPHY302L	Electricity and Magnetism	3	1	0	4	NIL
TPHY303L	Analog and Digital Electronics	3	0	0	3	NIL
TPHY304P	Electronics Lab	0	0	4	2	NIL
TPHY306L	Optics and Spectroscopy	3	1	0	4	TPHY102L, TPHY102P
TPHY402L	Principles of Quantum Mechanics	3	1	0	4	NIL
Discipline Electives						
TPHY206L	Properties of Matter	3	1	0	4	NIL
TPHY207L	Sound and Acoustics	3	1	0	4	TPHY102L, TPHY102P
TPHY307L	Semiconductor Device Physics	3	0	0	3	TPHY203L
TPHY308L	Physics of Nanoscale	3	0	0	3	TPHY203L
TPHY309L	Physics and Technology of Thin Films	3	0	0	3	TPHY203L
TPHY310L	Physics of Superconductors	3	0	0	3	TPHY203L
TPHY390J	Study Project				3	NIL
TPHY392J	Design Project				3	NIL
TPHY393J	Laboratory Project				3	NIL
TPHY395J	Computer Project				3	NIL
TPHY397J	Special Project				3	NIL
TPHY411L	Nuclear and Particle Physics	3	1	0	4	NIL
TPHY412L	Microprocessor and Microcontroller	3	0	0	3	TPHY303L
TPHY413L	Electronic Instrumentation	3	0	0	3	TPHY303L
Skill Enhancement Elective						
TEEE201P	Electrical Workshop	0	0	4	2	NIL

(Annexure 28)

The Academic Council considered and approved the same.

Item 65/33

To consider and approve the course content for the following three (3) Foundation Core Courses, fifteen (15) Discipline Core courses, fourteen (14) Discipline Electives, two (2) Open Electives and one (1) Skill Enhancement Elective course offered in Five Year Integrated

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Master of Science in Chemistry. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/10].

Foundation Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
TRES101L	Research Methodology	3	0	0	3	NIL
TSSC201L	Critical Thinking	2	0	0	2	NIL
TSSC202L	Intra and Interpersonal Skills	2	0	0	2	NIL
Discipline Core Courses						
TCHY203L	Organic Chemistry	4	0	0	4	NIL
TCHY204P	Systematic qualitative and quantitative analysis of simple organic molecules	0	0	4	2	NIL
TCHY205E	Lab Safety Training	1	0	2	2	NIL
TCHY207L	Physical Chemistry	4	0	0	4	NIL
TCHY207P	Physical Chemistry Lab	0	0	4	2	NIL
TCHY208L	Inorganic Chemistry	4	0	0	4	NIL
TCHY209P	Inorganic Quantitative Analysis Lab	0	0	4	2	NIL
TCHY301L	Transition and Inner Transition Elements	4	0	0	4	NIL
TCHY302L	Chemistry of Heterocyclic and Natural Products	4	0	0	4	NIL
TCHY303L	Instrumental Methods in Chemical Analysis	3	0	0	3	NIL
TCHY303P	Instrumental Methods of Analysis Lab	0	0	4	2	NIL
TCHY304P	Organic Compounds Synthesis and Extraction Lab	0	0	4	2	NIL
TCHY305L	Chemical Kinetics, Catalysis and Surface Chemistry	4	0	0	4	NIL
TCHY305P	Kinetics and Catalysis Lab	0	0	4	2	NIL
TCHY306P	Inorganic Synthesis Lab	0	0	4	2	NIL
Discipline Electives						
TCHY206L	Green Chemistry	3	0	0	3	NIL
TCHY210L	Stereochemistry and Spectroscopy	3	1	0	4	NIL
TCHY307L	States of Matter and Colloids	3	1	0	4	NIL
TCHY308L	Coordination and Organometallic Chemistry	3	1	0	4	NIL
TCHY309L	Industrial Organic Chemistry	3	0	0	3	NIL
TCHY310L	Energy Storage Devices	3	0	0	3	NIL
TCHY311L	Separation Techniques	3	0	0	3	NIL
TCHY312L	Food Chemistry	3	0	0	3	NIL
TCHY315L	Materials of Industrial Importance	3	0	0	3	NIL
TCHY390J	Study Project				3	NIL
TCHY392J	Design Project				3	NIL
TCHY393J	Laboratory Project				3	NIL
TCHY395J	Computer Project				3	NIL
TCHY397J	Special Project				3	NIL
Open Electives						
TCHY313L	Nanomaterials	3	0	0	3	NIL
TCHY314L	Dyes and Pigments	3	0	0	3	NIL
Skill Enhancement Elective						
TCHY201P	Analytical Instrumentation	0	0	4	2	NIL

(Annexure 29)

The Academic Council considered and approved the same.

Item 65/34

To consider and approve the course contents for the following three (3) Foundation Core Courses, twelve (12) Discipline Core Courses and seventeen (17) Discipline Electives offered in Five Year Integrated Master of Science in Mathematics. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/11].

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Foundation Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
TRES101L	Research Methodology	3	0	0	3	NIL
TSSC201L	Critical Thinking	2	0	0	2	NIL
TSSC202L	Intra and Interpersonal Skills	2	0	0	2	NIL
Discipline Core Courses						
TMAT201L	Probability and Statistics	3	0	0	3	TMAT103L, TMAT103P
TMAT201P	Probability and Statistics Lab	0	0	2	1	TMAT103L, TMAT103P
TMAT202L	Linear Algebra	3	1	0	4	NIL
TMAT203L	Real Analysis	3	1	0	4	TMAT103L, TMAT103P
TMAT204L	Ordinary Differential Equations	3	1	0	4	TMAT202L
TMAT205L	Complex Analysis	3	1	0	4	NIL
TMAT301L	Numerical Analysis	3	0	0	3	TMAT104L
TMAT301P	Numerical Analysis Lab	0	0	2	1	TMAT104L
TMAT302L	Abstract Algebra	3	1	0	4	NIL
TMAT303L	Discrete Mathematical Structures	3	1	0	4	NIL
TMAT304L	Topology	3	1	0	4	TMAT203L
TMAT305L	Operations Research	3	1	0	4	NIL
Discipline Electives						
TCSE204L	Data Structures	3	1	0	4	NIL
TCSE205L	Database Management	3	1	0	4	NIL
TMAT306L	Number Theory	3	0	0	3	NIL
TMAT307L	Fuzzy Set Theory and its Applications	3	0	0	3	NIL
TMAT308L	Mathematical Statistics	3	1	0	4	NIL
TMAT309L	Engineering Optimization	3	1	0	4	NIL
TMAT310L	Tensors and Differential Geometry	3	0	0	3	NIL
TMAT311L	Classical Mechanics	3	1	0	4	NIL
TMAT312L	Mathematical Ecology	3	0	0	3	NIL
TMAT313L	Mathematical Finance	3	0	0	3	NIL
TMAT314L	Fluid Dynamics	3	1	0	4	NIL
TMAT315L	Difference Equations and its Applications	3	0	0	3	NIL
TMAT390J	Study Project				3	NIL
TMAT392J	Design Project				3	NIL
TMAT393J	Laboratory Project				3	NIL
TMAT395J	Computer Project				3	NIL
TMAT397J	Special Project				3	NIL

(Annexure 30)

The Academic Council considered and approved the same.

Item 65/35

To consider and approve the course contents for the following twenty three (23) Discipline Core courses, Five (5) Discipline-Linked Engineering Sciences courses and twenty two (22) Discipline Electives and three (3) Projects and Internship courses offered in Integrated Master of Technology in Construction Technology and Management.. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/13].

Discipline Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
ICLE204L	Surveying	3	0	0	3	NIL
ICLE204P	Surveying Lab	0	0	2	1	NIL
ICLE205L	Environmental Engineering	3	0	0	3	NIL
ICLE205P	Environmental Engineering Lab	0	0	2	1	NIL
ICLE206E	Building Planning and Drawing	1	0	2	2	IMEE102P
ICLE207L	Soil Mechanics	3	0	0	3	IMEE201L
ICLE207P	Soil Mechanics Lab	0	0	2	1	IMEE201L
ICLE208L	Structural Analysis	2	1	0	3	ICLE203L,

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							ICLE203P
ICLE209L	Engineering Geology	2	0	0	2		NIL
ICLE301L	Concrete Technology	3	0	0	3		ICLE201L
ICLE301P	Concrete Technology Lab	0	0	2	1		ICLE201L
ICLE302L	Hydraulics and Hydraulic Machines	3	0	0	3		ICLE202L, ICLE202P
ICLE302P	Hydraulics and Hydraulic Machines Lab	0	0	2	1		ICLE202L, ICLE202P
ICLE303L	Foundation Engineering	2	1	0	3		ICLE207L, ICLE207P
ICLE304L	Design of Reinforced Concrete Structures	3	0	0	3		ICLE208L
ICLE304P	Reinforced Concrete Structures Lab	0	0	2	1		ICLE208L
ICLE305L	Transportation Engineering	2	1	0	3		ICLE204L, ICLE204P
ICLE306L	Water Resources Engineering	3	0	0	3		ICLE202L, ICLE202P
ICLE306P	Water Resources Engineering Lab	0	0	2	1		ICLE202L, ICLE202P
ICLE307L	Construction Practices and Management	3	0	0	3		NIL
ICLE308L	Design of Steel Structures	3	0	0	3		ICLE208L
ICLE308P	Steel Structures Lab	0	0	2	1		ICLE208L
ICLE309L	Estimating and Costing	2	0	0	2		ICLE206E
Discipline-Linked Engineering Sciences							
ICLE201L	Construction Materials	2	0	0	2		NIL
ICLE202L	Fluid Mechanics	3	0	0	3		NIL
ICLE202P	Fluid Mechanics Lab	0	0	2	1		NIL
ICLE203L	Mechanics of Solids	3	0	0	3		IMEE201L
ICLE203P	Mechanics of Solids Lab	0	0	2	1		IMEE201L
Discipline Electives							
ICLE210L	AI in Civil Engineering	3	0	0	3		NIL
ICLE211L	Urban Planning and Development	3	0	0	3		NIL
ICLE212L	Natural Disaster Mitigation and Management	3	0	0	3		NIL
ICLE213E	Remote Sensing and GIS	2	0	2	3		NIL
ICLE310L	Environmental Impact Assessment	3	0	0	3		ICLE205L, ICLE205P
ICLE311L	Industrial Waste Management	3	0	0	3		ICLE205L, ICLE205P
ICLE312L	Air and Noise Pollution Control	3	0	0	3		ICLE205L, ICLE205P
ICLE313L	Solid Waste Management	3	0	0	3		ICLE205L, ICLE205P
ICLE314L	Geotechnical Earthquake Engineering	3	0	0	3		ICLE207L, ICLE207P
ICLE315L	Groundwater Engineering	3	0	0	3		ICLE202L, ICLE202P
ICLE316L	Rock Engineering	3	0	0	3		ICLE207L, ICLE207P
ICLE391J	Technical Answers to Real Problems Project				3		NIL
ICLE392J	Design Project				3		NIL
ICLE393J	Laboratory Project				3		NIL
ICLE394J	Product Development Project				3		NIL
ICLE395J	Computer Project				3		NIL
ICLE396J	Reading Course				3		NIL
ICLE397J	Special Project				3		NIL
ICLE398J	Simulation Project				3		NIL
ICLE401L	Traffic Engineering	3	0	0	3		ICLE305L
ICLE402L	Pre-stressed Concrete and Industrial Structures	3	0	0	3		ICLE304L, ICLE304P
ICLE403L	Open Channel Hydraulics	3	0	0	3		ICLE202L, ICLE202P

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Projects and Internship						
ICLE 399J	Summer Industrial Internship				1	NIL
ICLE 497J	Project - I				4	NIL
ICLE 498J	Project - II / Internship				20	NIL

(Annexure 31)

The Academic Council considered and approved the same.

Item 65/36

To consider and approve the course contents for the following twenty one (21) Discipline Core courses, six (6) Discipline-Linked Engineering Sciences courses and thirty eight (38) Discipline Electives and three (3) Projects and Internship courses offered in Bachelor of Technology in Biotechnology. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/14].

Discipline Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
BBIT202L	Biochemistry	3	0	0	3	NIL
BBIT202P	Biochemistry Lab	0	0	2	1	NIL
BBIT203L	Microbiology	3	0	0	3	NIL
BBIT203P	Microbiology Lab	0	0	2	1	NIL
BBIT204L	Cell Biology and Genetics	3	0	0	3	NIL
BBIT204P	Cell Biology and Genetics Lab	0	0	2	1	NIL
BBIT206L	Analytical Techniques in Biotechnology	3	0	0	3	BBIT202L, BBIT202P
BBIT206P	Analytical Techniques in Biotechnology Lab	0	0	2	1	BBIT202L, BBIT202P
BBIT207L	Molecular Biology	3	0	0	3	BBIT202L, BBIT202P, BBIT204L, BBIT204P
BBIT207P	Molecular Biology Lab	0	0	2	1	BBIT202L, BBIT202P, BBIT204L, BBIT204P
BBIT302L	Genetic Engineering	3	0	0	3	BBIT207L, BBIT207P
BBIT302P	Genetic Engineering Lab	0	0	2	1	BBIT207L, BBIT207P
BBIT303L	Genomics and Proteomics	3	0	0	3	BBIT202L, BBIT202P, BBIT204L, BBIT204P
BBIT304L	Biochemical Engineering	2	1	0	3	BBIT201L, BBIT201P
BBIT305L	Immunology	3	0	0	3	BBIT203L, BBIT203P, BBIT207L, BBIT207P
BBIT305P	Immunology Lab	0	0	2	1	BBIT203L, BBIT203P, BBIT207L, BBIT207P
BBIT306L	Animal Biotechnology	3	0	0	3	BBIT302L, BBIT302P
BBIT307L	Plant Biotechnology	3	0	0	3	BBIT207L, BBIT207P
BBIT308L	Industrial Biotechnology	3	0	0	3	BBIT203L, BBIT203P

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BBIT309L	Downstream Processing	3	0	0	3	BBIT201L, BBIT201P
BBIT309P	Downstream Processing Lab	0	0	2	1	BBIT201L, BBIT201P
Discipline-Linked Engineering Sciences						
BBIT201L	Principles of Chemical Engineering	3	0	0	3	NIL
BBIT201P	Chemical Engineering Lab	0	0	2	1	NIL
BBIT205L	Bioinformatics	2	0	0	2	BBIT202L, BBIT202P
BBIT205P	Bioinformatics Lab	0	0	2	1	BBIT202L, BBIT202P
BBIT301L	Principles of Bioprocess Engineering	3	0	0	3	BBIT201L, BBIT201P
BBIT301P	Bioprocess Engineering Lab	0	0	2	1	BBIT201L, BBIT201P
Discipline Electives						
BBIT310L	AI in Biology	3	0	0	3	NIL
BBIT311L	Biobusiness	3	0	0	3	NIL
BBIT312L	Pharmaceutical Biotechnology	3	0	0	3	BBIT202L, BBIT202P
BBIT313L	Regenerative Medicine	3	0	0	3	BBIT204L, BBIT204P
BBIT314L	Stem Cell Technology	3	0	0	3	BBIT204L, BBIT204P, BBIT207L, BBIT207P
BBIT315L	Environmental Biotechnology	3	0	0	3	BBIT203L, BBIT203P
BBIT316L	Nanobiotechnology	3	0	0	3	BBIT206L, BBIT206P
BBIT317L	Tissue Engineering	3	0	0	3	NIL
BBIT318L	Forensic Science and Technology	3	0	0	3	BBIT207L, BBIT207P
BBIT319L	Food Process Engineering	3	0	0	3	BBIT202L, BBIT202P
BBIT320L	Medical Diagnostics	3	0	0	3	BBIT207L, BBIT207P, BBIT305L, BBIT305P
BBIT321L	Food Biotechnology	3	0	0	3	BBIT203L, BBIT203P
BBIT322L	Cancer Biology and Informatics	3	0	0	3	BBIT205L, BBIT205P, BBIT207L, BBIT207P
BBIT323L	Protein Engineering and Design	3	0	0	3	BBIT207L, BBIT207P
BBIT391J	Technical Answers to Real Problems Project				3	NIL
BBIT392J	Design Project				3	NIL
BBIT393J	Laboratory Project				3	NIL
BBIT394J	Product Development Project				3	NIL
BBIT395J	Computer Project				3	NIL
BBIT396J	Reading Course				3	NIL
BBIT397J	Special Project				3	NIL
BBIT398J	Simulation Project				3	NIL
BBIT401L	Molecular Modelling and Drug Design	3	0	0	3	BBIT205L, BBIT205P
BBIT402L	Neurobiology and Cognitive Science	3	0	0	3	BBIT202L, BBIT202P, BBIT204L, BBIT204P

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BBIT403L	Industrial Enzymology	3	0	0	3	BBIT202L, BBIT202P
BBIT404L	Emerging and Re-emerging Infectious Diseases	3	0	0	3	BBIT203L, BBIT203P
BBIT405L	Biological Data Analysis and Simulation	3	0	0	3	NIL
BBIT406L	Computational Biology	3	0	0	3	NIL
BBIT407L	Biomaterials	3	0	0	3	NIL
BBIT408L	Anatomy and Physiology	3	0	0	3	NIL
BBIT409L	Clinical Data Management	3	0	0	3	NIL
BBIT410L	Pharmacoinformatics	3	0	0	3	BBIT205L, BBIT205P, BBIT207L, BBIT207P
BBIT411L	Preclinical Drug Discovery and Development	3	0	0	3	NIL
BBIT412L	Heat and Mass Transfer	3	0	0	3	BBIT201L, BBIT201P
BBIT413P	Applied Biology Lab	0	0	2	1	NIL
BBIT414L	Bioinspired Design	3	0	0	3	NIL
BBIT415L	Food, Nutrition and Health	3	0	0	3	NIL
BBIT416L	Systems Biology	3	0	0	3	BBIT202L, BBIT202P
Projects and Internship						
BBIT399J	Summer Industrial Internship				1	NIL
BBIT497J	Project - I				3	NIL
BBIT498J	Project - II / Internship				5	NIL

(Annexure 32)

The Academic Council considered and approved the same.

Item 65/37

To consider and approve the course contents for the following twenty one (21) Discipline Core courses, Four (4) Discipline-Linked Engineering Sciences courses and thirty (30) Discipline Electives and three (3) Projects and Internship courses offered in Bachelor of Technology in Chemical Engineering. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/15].

Discipline Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
BCHE202L	Chemical Engineering Thermodynamics	3	1	0	4	NIL
BCHE203L	Chemical Process Calculations	3	1	0	4	NIL
BCHE205L	Momentum Transfer	3	0	0	3	NIL
BCHE205P	Momentum Transfer Lab	0	0	2	1	NIL
BCHE207L	Mass Transfer I	2	1	0	3	BCHE202L
BCHE208L	Heat Transfer	3	0	0	3	BMAT102L
BCHE208P	Heat Transfer Lab	0	0	2	1	BMAT102L
BCHE301L	Mechanical Operations	3	0	0	3	NIL
BCHE301P	Mechanical Operations Lab	0	0	2	1	NIL
BCHE302L	Mass Transfer II	3	0	0	3	BCHE207L
BCHE302P	Mass Transfer Lab	0	0	2	1	BCHE207L
BCHE303L	Chemical Reaction Engineering I	3	0	0	3	BCHE202L
BCHE303P	Chemical Reaction Engineering Lab	0	0	2	1	BCHE202L
BCHE304L	Chemical Process Technology and Economics	3	1	0	4	BCHE203L
BCHE305L	Process Dynamics and Control	3	0	0	3	BMAT102L
BCHE305P	Process Dynamics and Control Lab	0	0	2	1	BMAT102L
BCHE306L	Chemical Reaction Engineering II	2	1	0	3	BCHE303L, BCHE303P
BCHE307L	Process Modelling and Simulation	2	0	0	2	BMAT201L
BCHE307P	Process Modelling and Simulation Lab	0	0	2	1	BMAT201L
BCHE308L	Chemical Process Equipment Design	3	0	0	3	BCHE302L, BCHE302P

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BCHE308P	Chemical Process Equipment Design Lab	0	0	2	1	BCHE302L, BCHE302P
Discipline-Linked Engineering Sciences						
BCHE201L	Computational Methods in Chemical Engineering	3	0	0	3	NIL
BCHE201P	Computational Methods in Chemical Engineering Lab	0	0	2	1	NIL
BCHE204L	Transport Phenomena	3	1	0	4	NIL
BCHE206L	Materials Science and Engineering	3	0	0	3	BCHE201L, BCHE201P
Discipline Electives						
BCHE309L	Membrane Separation Processes	3	0	0	3	NIL
BCHE310L	Polymer Technology	3	0	0	3	NIL
BCHE311L	Process Utilities and Pipeline Design	3	0	0	3	NIL
BCHE312L	Chemical Process Optimization	3	0	0	3	BCHE208L, BCHE208P
BCHE313L	Environmental Pollution Control	3	0	0	3	NIL
BCHE314L	Fuels and Combustion	3	0	0	3	NIL
BCHE315L	Biochemical Engineering	3	0	0	3	BCHE303L, BCHE303P
BCHE316L	Pharmaceutical Technology	3	0	0	3	NIL
BCHE317L	Petroleum Refining Technology	3	0	0	3	NIL
BCHE318L	Safety and Hazard Analysis	3	0	0	3	NIL
BCHE319E	Process Plant Design and Simulation	2	0	2	3	BCHE202L
BCHE320L	Chemical Product Design	3	0	0	3	NIL
BCHE321L	Natural Gas Engineering	3	0	0	3	NIL
BCHE322L	Nanoscience and Nanotechnology	3	0	0	3	NIL
BCHE323L	Fertilizer Technology	3	0	0	3	NIL
BCHE324L	Fermentation Technology	3	0	0	3	NIL
BCHE391J	Technical Answers to Real Problems Project				3	NIL
BCHE392J	Design Project				3	NIL
BCHE393J	Laboratory Project				3	NIL
BCHE394J	Product Development Project				3	NIL
BCHE395J	Computer Project				3	NIL
BCHE396J	Reading Course				3	NIL
BCHE397J	Special Project				3	NIL
BCHE398J	Simulation Project				3	NIL
BCHE401L	Petrochemical Technology	3	0	0	3	NIL
BCHE402L	Food Process Engineering	3	0	0	3	NIL
BCHE403L	Process Intensification	3	0	0	3	BCHE208L, BCHE208P
BCHE404L	Colloids and Interfacial Science	3	0	0	3	NIL
BCHE405L	Fluidization Engineering	3	0	0	3	NIL
BCHE406L	AI in Chemical Engineering	3	0	0	3	NIL
Projects and Internship						
BCHE399J	Summer Industrial Internship				1	NIL
BCHE497J	Project - I				3	NIL
BCHE498J	Project - II / Internship				5	NIL
<i>(Annexure 33)</i>						
The Academic Council considered and approved the same.						
Item 65/38	To consider and approve the course contents for the following twenty three (23) Discipline Core courses, Five (5) Discipline-Linked Engineering Sciences courses and twenty two (22) Discipline Electives and three (3) Projects and Internship courses offered in Bachelor of Technology in Civil Engineering. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/16].					

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Discipline Core Courses							
Course Code	Course Title	L	T	P	C	Prerequisite	
BCLE204L	Surveying	3	0	0	3	NIL	
BCLE204P	Surveying Lab	0	0	2	1	NIL	
BCLE205L	Environmental Engineering	3	0	0	3	NIL	
BCLE205P	Environmental Engineering Lab	0	0	2	1	NIL	
BCLE206E	Building Planning and Drawing	1	0	2	2	BMEE102P	
BCLE207L	Soil Mechanics	3	0	0	3	BMEE201L	
BCLE207P	Soil Mechanics Lab	0	0	2	1	BMEE201L	
BCLE208L	Structural Analysis	2	1	0	3	BCLE203L, BCLE203P	
BCLE209L	Engineering Geology	2	0	0	2	NIL	
BCLE301L	Concrete Technology	3	0	0	3	BCLE201L	
BCLE301P	Concrete Technology Lab	0	0	2	1	BCLE201L	
BCLE302L	Hydraulics and Hydraulic Machines	3	0	0	3	BCLE202L, BCLE202P	
BCLE302P	Hydraulics and Hydraulic Machines Lab	0	0	2	1	BCLE202L, BCLE202P	
BCLE303L	Foundation Engineering	2	1	0	3	BCLE207L, BCLE207P	
BCLE304L	Design of Reinforced Concrete Structures	3	0	0	3	BCLE208L	
BCLE304P	Reinforced Concrete Structures Lab	0	0	2	1	BCLE208L	
BCLE305L	Transportation Engineering	2	1	0	3	BCLE204L, BCLE204P	
BCLE306L	Water Resources Engineering	3	0	0	3	BCLE202L, BCLE202P	
BCLE306P	Water Resources Engineering Lab	0	0	2	1	BCLE202L, BCLE202P	
BCLE307L	Construction Practices and Management	3	0	0	3	NIL	
BCLE308L	Design of Steel Structures	3	0	0	3	BCLE208L	
BCLE308P	Steel Structures Lab	0	0	2	1	BCLE208L	
BCLE309L	Estimating and Costing	2	0	0	2	BCLE206E	
Discipline-Linked Engineering Sciences							
BCLE201L	Construction Materials	2	0	0	2	NIL	
BCLE202L	Fluid Mechanics	3	0	0	3	NIL	
BCLE202P	Fluid Mechanics Lab	0	0	2	1	NIL	
BCLE203L	Mechanics of Solids	3	0	0	3	BMEE201L	
BCLE203P	Mechanics of Solids Lab	0	0	2	1	BMEE201L	
Discipline Electives							
BCLE210L	AI in Civil Engineering	3	0	0	3	NIL	
BCLE211L	Urban Planning and Development	3	0	0	3	NIL	
BCLE212L	Natural Disaster Mitigation and Management	3	0	0	3	NIL	
BCLE213E	Remote Sensing and GIS	2	0	2	3	NIL	
BCLE310L	Environmental Impact Assessment	3	0	0	3	BCLE205L, BCLE205P	
BCLE311L	Industrial Waste Management	3	0	0	3	BCLE205L, BCLE205P	
BCLE312L	Air and Noise Pollution Control	3	0	0	3	BCLE205L, BCLE205P	
BCLE313L	Solid Waste Management	3	0	0	3	BCLE205L, BCLE205P	
BCLE314L	Geotechnical Earthquake Engineering	3	0	0	3	BCLE207L, BCLE207P	
BCLE315L	Groundwater Engineering	3	0	0	3	BCLE202L, BCLE202P	
BCLE316L	Rock Engineering	3	0	0	3	BCLE207L, BCLE207P	
BCLE391J	Technical Answers to Real Problems Project				3	NIL	
BCLE392J	Design Project				3	NIL	
BCLE393J	Laboratory Project				3	NIL	

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BCLE394J	Product Development Project				3	NIL
BCLE395J	Computer Project				3	NIL
BCLE396J	Reading Course				3	NIL
BCLE397J	Special Project				3	NIL
BCLE398J	Simulation Project				3	NIL
BCLE401L	Traffic Engineering	3	0	0	3	BCLE305L
BCLE402L	Pre-stressed Concrete and Industrial Structures	3	0	0	3	BCLE304L, BCLE304P
BCLE403L	Open Channel Hydraulics	3	0	0	3	BCLE202L, BCLE202P
Projects and Internship						
BCLE399J	Summer Industrial Internship				1	NIL
BCLE497J	Project - I				3	NIL
BCLE498J	Project - II / Internship				5	NIL

(Annexure 34)

The Academic Council considered and approved the same.

Item 65/39

To consider and approve the course contents for the following twenty (20) Discipline Core courses and thirty eight (38) Discipline Electives, three (3) Projects and Internship courses offered in Bachelor of Technology in Computer Science and Engineering. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/17].

Discipline Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
BCSE202L	Data Structures and Algorithms	3	0	0	3	NIL
BCSE202P	Data Structures and Algorithms Lab	0	0	2	1	NIL
BCSE204L	Design and Analysis of Algorithms	3	0	0	3	NIL
BCSE204P	Design and Analysis of Algorithms Lab	0	0	2	1	NIL
BCSE205L	Computer Architecture and Organization	3	0	0	3	NIL
BCSE301L	Software Engineering	3	0	0	3	NIL
BCSE301P	Software Engineering Lab	0	0	2	1	NIL
BCSE302L	Database Systems	3	0	0	3	NIL
BCSE302P	Database Systems Lab	0	0	2	1	NIL
BCSE303L	Operating Systems	3	0	0	3	NIL
BCSE303P	Operating Systems Lab	0	0	2	1	NIL
BCSE304L	Theory of Computation	3	0	0	3	NIL
BCSE305L	Embedded Systems	3	0	0	3	NIL
BCSE306L	Artificial Intelligence	3	0	0	3	NIL
BCSE307L	Compiler Design	3	0	0	3	NIL
BCSE307P	Compiler Design Lab	0	0	2	1	NIL
BCSE308L	Computer Networks	3	0	0	3	NIL
BCSE308P	Computer Networks Lab	0	0	2	1	NIL
BCSE309L	Cryptography and Network Security	3	0	0	3	NIL
BCSE309P	Cryptography and Network Security Lab	0	0	2	1	NIL
Discipline Electives						
BEEE303L	Control Systems	3	0	0	3	BEEE101L, BEEE101P, BMAT102L
BEEE303P	Control Systems Lab	0	0	2	1	BEEE101L, BEEE101P, BMAT102L
BCSE310L	IoT Architectures and Protocols	3	0	0	3	NIL
BCSE311L	Sensors and Actuator Devices	2	0	0	2	NIL
BCSE311P	Sensors and Actuator Devices Lab	0	0	2	1	NIL
BCSE312L	Programming for IoT Boards	2	0	0	2	NIL
BCSE312P	Programming for IoT Boards Lab	0	0	2	1	NIL
BCSE313L	Fundamentals of Fog and Edge Computing	3	0	0	3	NIL

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BCSE314L	Privacy and Security in IoT	3	0	0	3	NIL
BCSE315L	Wearable Computing	3	0	0	3	NIL
BCSE316L	Design of Smart Cities	3	0	0	3	NIL
BCSE317L	Information Security	3	0	0	3	NIL
BCSE318L	Data Privacy	3	0	0	3	NIL
BCSE319L	Penetration Testing and Vulnerability Analysis	2	0	0	2	NIL
BCSE319P	Penetration Testing and Vulnerability Analysis Lab	0	0	2	1	NIL
BCSE320L	Web Application Security	3	0	0	3	NIL
BCSE321L	Malware Analysis	2	0	0	2	NIL
BCSE321P	Malware Analysis Lab	0	0	2	1	NIL
BCSE322L	Digital Forensics	2	0	0	2	NIL
BCSE322P	Digital Forensics Lab	0	0	2	1	NIL
BCSE323L	Digital Watermarking and Steganography	3	0	0	3	NIL
BCSE324L	Blockchain Technology	3	0	0	3	NIL
BCSE325L	Bitcoin Technology	3	0	0	3	NIL
BCSE326L	Blockchain Architecture Design	3	0	0	3	NIL
BCSE327L	Smart Contracts	2	0	0	2	NIL
BCSE327P	Smart Contracts Lab	0	0	2	1	NIL
BCSE328L	Cryptocurrency Technologies	3	0	0	3	NIL
BCSE329L	Blockchain and Distributed Ledger Technology	2	0	0	2	NIL
BCSE329P	Blockchain and Distributed Ledger Technology Lab	0	0	2	1	NIL
BCSE330L	Public Key Infrastructure and Trust Management	3	0	0	3	NIL
BCSE391J	Technical Answers to Real Problems Project				3	NIL
BCSE392J	Design Project				3	NIL
BCSE393J	Laboratory Project				3	NIL
BCSE394J	Product Development Project				3	NIL
BCSE395J	Computer Project				3	NIL
BCSE396J	Reading Course				3	NIL
BCSE397J	Special Project				3	NIL
BCSE398J	Simulation Project				3	NIL
Projects and Internship						
BCSE399J	Summer Industrial Internship				1	NIL
BCSE497J	Project - I				3	NIL
BCSE498J	Project - II / Internship				5	NIL

(Annexure 35)

The Academic Council considered and approved the same.

Item 65/40	<p>To consider and approve the course contents for the following ten (10) Discipline Electives offered in Bachelor of Technology in Computer Science and Engineering with Specialization in Bioinformatics.</p>					
Discipline Electives						
Course Code	Course Title	L	T	P	C	Prerequisite
BBIT207L	Molecular Biology	3	0	0	3	NIL
BBIT207P	Molecular Biology Lab	0	0	2	1	NIL
BBIT208L	Biochemistry	3	0	0	3	NIL
BBIT324L	Cell Biology and Genetics	3	0	0	3	NIL
BBIT327L	Data Analytics in Bioinformatics	3	0	0	3	NIL

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BBIT401L	Molecular Modelling and Drug Design	3	0	0	3	NIL
BBIT417L	Analytical Bioinformatics	3	0	0	3	NIL
BBIT417P	Analytical Bioinformatics Lab	0	0	2	1	NIL
BBIT418L	Biological Databases	3	0	0	3	NIL
BBIT418P	Biological Databases Lab	0	0	2	1	NIL

(Annexure 36)

The Academic Council considered and approved the same.

Item 65/41 To consider and approve the course contents for the following nine (9) Discipline Electives offered in Bachelor of Technology in Computer Science and Engineering with Specialization in Blockchain Technology.

Discipline Electives						
Course Code	Course Title	L	T	P	C	Prerequisite
BCSE324L	Foundations of Blockchain Technology	3	0	0	3	NIL
BCSE325L	Introduction to Bitcoin	3	0	0	3	NIL
BCSE326L	Blockchain Architecture Design	3	0	0	3	NIL
BCSE327L	Smart Contracts	2	0	0	2	NIL
BCSE327P	Smart Contracts Lab	0	0	2	1	NIL
BCSE328L	Cryptocurrency Technologies	3	0	0	3	NIL
BCSE329L	Blockchain and Distributed Ledger Technology	2	0	0	2	NIL
BCSE329P	Blockchain and Distributed Ledger Technology Lab	0	0	2	1	NIL
BCSE330L	Public Key Infrastructure and Trust Management	3	0	0	3	NIL

(Annexure 37)

The Academic Council considered and approved the same.

Item 65/42 To consider and approve the course contents for the following ten (10) Discipline Electives offered in Bachelor of Technology in Computer Science and Engineering with Specialization in Information Security.

Discipline Electives						
Course Code	Course Title	L	T	P	C	Prerequisite
BCSE317L	Information Security	3	0	0	3	NIL
BCSE318L	Data Privacy	3	0	0	3	NIL
BCSE319L	Penetration Testing and Vulnerability Analysis	2	0	0	2	NIL
BCSE319P	Penetration Testing and Vulnerability Analysis Lab	0	0	2	1	NIL
BCSE320L	Web Application Security	3	0	0	3	NIL
BCSE321L	Malware Analysis	2	0	0	2	NIL
BCSE321P	Malware Analysis Lab	0	0	2	1	NIL
BCSE322L	Digital Forensics	2	0	0	2	NIL
BCSE322P	Digital Forensics Lab	0	0	2	1	NIL
BCSE323L	Digital Watermarking and Steganography	3	0	0	3	NIL

(Annexure 38)

The Academic Council considered and approved the same.

Item 65/43 To consider and approve the course contents for the following nine (9) Discipline Electives offered in Bachelor of Technology in Computer Science and Engineering with Specialization in Internet of Things.

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Discipline Electives							
Course Code	Course Title	L	T	P	C	Prerequisite	
BCSE310L	IoT Architectures and Protocols	3	0	0	3	NIL	
BCSE311L	Sensors and Actuator Devices	2	0	0	2	NIL	
BCSE311P	Sensors and Actuator Devices Lab	0	0	2	1	NIL	
BCSE312L	Programming for IoT Boards	2	0	0	2	NIL	
BCSE312P	Programming for IoT Boards Lab	0	0	2	1	NIL	
BCSE313L	Fundamentals of Fog and Edge Computing	3	0	0	3	NIL	
BCSE314L	Privacy and Security in IoT	3	0	0	3	NIL	
BCSE315L	Wearable Computing	3	0	0	3	NIL	
BCSE316L	Design of Smart Cities	3	0	0	3	NIL	

(Annexure 39)

The Academic Council considered and approved the same.

Item 65/44

To consider and approve the course contents for the following twenty four (24) Discipline Core courses, eight (8) Discipline Electives and three (3) Projects and Internship courses offered in Bachelor of Technology in Electrical and Electronics Engineering. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/19].

Discipline Core Courses							
Course Code	Course Title	L	T	P	C	Prerequisite	
BEEE204L	Signals and Systems	2	1	0	3	BMAT102L	
BEEE205L	Electronic Devices and Circuits	2	0	0	2	BECE101L, BECE101P	
BEEE205P	Electronic Devices and Circuits Lab	0	0	2	1	BECE101L, BECE101P	
BEEE206L	Digital Electronics	3	0	0	3	BECE101L, BECE101P	
BEEE206P	Digital Electronics Lab	0	0	2	1	BECE101L, BECE101P	
BEEE207L	Electrical Machines	3	0	0	3	BEEE101L, BEEE101P, BEEE202L	
BEEE207P	Electrical Machines Lab	0	0	2	1	BEEE101L, BEEE101P, BEEE202L	
BEEE208L	Analog Electronics	3	0	0	3	BEEE205L, BEEE205P	
BEEE208P	Analog Electronics Lab	0	0	2	1	BEEE205L, BEEE205P	
BEEE301L	Power Electronics	3	0	0	3	BEEE203L, BEEE205L, BEEE205P	
BEEE302L	Digital Signal Processing	3	0	0	3	BEEE204L	
BEEE302P	Digital Signal Processing Lab	0	0	2	1	BEEE204L	
BEEE303L	Control Systems	3	0	0	3	BEEE101L, BEEE101P, BMAT102L	
BEEE303P	Control Systems Lab	0	0	2	1	BEEE101L, BEEE101P, BMAT102L	
BEEE304L	Power Systems Engineering	3	1	0	4	BEEE203L	
BEEE305L	Measurements and Instrumentation	2	0	0	2	BEEE203L	
BEEE305P	Measurements and Instrumentation Lab	0	0	2	1	BEEE203L	
BEEE306L	Power Systems Analysis	3	0	0	3	BEEE304L	
BEEE306P	Power Systems Analysis Lab	0	0	2	1	BEEE304L	

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BEEE307L	Electric Drives	3	0	0	3	BEEE207L, BEEE207P, BEEE301L
BEEE307P	Power Electronics and Drives Lab	0	0	2	1	BEEE207L, BEEE207P, BEEE301L
BEEE308L	Communication Systems	3	0	0	3	BEEE204L, BEEE208L, BEEE208P
BEEE309L	Microprocessors and Microcontrollers	3	0	0	3	BEEE206L, BEEE206P
BEEE309P	Microprocessors and Microcontrollers Lab	0	0	2	1	BEEE206L, BEEE206P
Discipline Electives						
BEEE391J	Technical Answers to Real Problems Project				3	NIL
BEEE392J	Design Project				3	NIL
BEEE393J	Laboratory Project				3	NIL
BEEE394J	Product Development Project				3	NIL
BEEE395J	Computer Project				3	NIL
BEEE396J	Reading Course				3	NIL
BEEE397J	Special Project				3	NIL
BEEE398J	Simulation Project				3	NIL
Projects and Internship						
BEEE399J	Summer Industrial Internship				1	NIL
BEEE497J	Project - I				3	NIL
BEEE498J	Project - II / Internship				5	NIL

(Annexure 40)

The Academic Council considered and approved the same.

Item 65/45

To consider and approve the course contents for the following twenty four (24) Discipline Core courses, eight (8) Discipline Electives and three (3) Projects and Internship courses offered in Bachelor of Technology in Electronics and Instrumentation Engineering. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/18].

Discipline Core Courses						
Course Code	Course Title	L	T	P	C	Prerequisite
BEEE204L	Signals and Systems	2	1	0	3	BMAT102L
BEEE205L	Electronic Devices and Circuits	2	0	0	2	BECE101L, BECE101P
BEEE205P	Electronic Devices and Circuits Lab	0	0	2	1	BECE101L, BECE101P
BEEE206L	Digital Electronics	3	0	0	3	BECE101L, BECE101P
BEEE206P	Digital Electronics Lab	0	0	2	1	BECE101L, BECE101P
BEEE208L	Analog Electronics	3	0	0	3	BEEE205L, BEEE205P
BEEE208P	Analog Electronics Lab	0	0	2	1	BEEE205L, BEEE205P
BEEE302L	Digital Signal Processing	3	0	0	3	BEEE204L
BEEE302P	Digital Signal Processing Lab	0	0	2	1	BEEE204L
BEEE303L	Control Systems	3	0	0	3	BEEE101L, BEEE101P, BMAT102L
BEEE303P	Control Systems Lab	0	0	2	1	BEEE101L, BEEE101P, BMAT102L

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	BEEE308L	Communication Systems	3	0	0	3	BEEE204L, BEEE208L, BEEE208P
	BEEE309L	Microprocessors and Microcontrollers	3	0	0	3	BEEE206L, BEEE206P
	BEEE309P	Microprocessors and Microcontrollers Lab	0	0	2	1	BEEE206L, BEEE206P
	BEIE201L	Sensors and Signal Conditioning	3	0	0	3	BEEE208L, BEEE208P
	BEIE201P	Sensors and Signal Conditioning Lab	0	0	2	1	BEEE208L, BEEE208P
	BEIE301L	Biomedical Instrumentation	3	0	0	3	NIL
	BEIE302L	Electrical and Electronics Measurement	3	0	0	3	BEIE201L, BEIE201P
	BEIE302P	Electrical and Electronics Measurement Lab	0	0	2	1	BEIE201L, BEIE201P
	BEIE303L	Process Dynamics and Control	3	0	0	3	BEIE201L, BEIE201P, BEEE303L, BEEE303P
	BEIE303P	Process Dynamics and Control Lab	0	0	2	1	BEIE201L, BEIE201P, BEEE303L, BEEE303P
	BEIE304L	Industrial Instrumentation	3	0	0	3	BEIE201L, BEIE201P
	BEIE305L	Industrial Automation	3	0	0	3	BEIE201L, BEIE201P, BEEE303L, BEEE303P
	BEIE305P	Industrial Automation Lab	0	0	2	1	BEIE201L, BEIE201P, BEEE303L, BEEE303P
Discipline Electives							
	BEIE391J	Technical Answers to Real Problems Project				3	NIL
	BEIE392J	Design Project				3	NIL
	BEIE393J	Laboratory Project				3	NIL
	BEIE394J	Product Development Project				3	NIL
	BEIE395J	Computer Project				3	NIL
	BEIE396J	Reading Course				3	NIL
	BEIE397J	Special Project				3	NIL
	BEIE398J	Simulation Project				3	NIL
Projects and Internship							
	BEIE399J	Summer Industrial Internship				1	NIL
	BEIE497J	Project - I				3	NIL
	BEIE498J	Project - II / Internship				5	NIL
(Annexure 41)							
The Academic Council considered and approved the same.							
Item 65/46	To consider and approve the course contents for the following twenty three (23) Discipline Core courses, six (6) Discipline-Linked Engineering Sciences courses, thirty eight (38) Discipline Electives and three (3) Projects and Internships offered in Bachelor of Technology in Mechanical Engineering. The curriculum was approved in the 62nd meeting of the Academic Council held on 15th July 2021 [Item No. 62/24].						
Discipline Core Courses							
	Course Code	Course Title	L	T	P	C	Prerequisite

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BMEE202L	Mechanics of Solids	3	0	0	3	BMEE201L
BMEE202P	Mechanics of Solids Lab	0	0	2	1	BMEE201L
BMEE203L	Engineering Thermodynamics	2	1	0	3	NIL
BMEE204L	Fluid Mechanics and Machines	3	0	0	3	NIL
BMEE204P	Fluid Mechanics and Machines Lab	0	0	2	1	NIL
BMEE206P	Machine Drawing Lab	0	0	4	2	BMEE102P
BMEE207L	Kinematics and Dynamics of Machines	3	0	0	3	BMEE201L
BMEE207P	Kinematics and Dynamics of Machines Lab	0	0	2	1	BMEE201L
BMEE210L	Mechatronics and Measurement Systems	3	0	0	3	NIL
BMEE210P	Mechatronics and Measurement Systems Lab	0	0	2	1	NIL
BMEE301L	Design of Machine Elements	3	1	0	4	BMEE202L, BMEE202P
BMEE302L	Metal Casting and Welding	3	0	0	3	BMEE209L, BMEE209P
BMEE302P	Metal Casting and Welding Lab	0	0	2	1	BMEE209L, BMEE209P
BMEE303L	Thermal Engineering Systems	3	0	0	3	BMEE203L
BMEE303P	Thermal Engineering Systems Lab	0	0	2	1	BMEE203L
BMEE304L	Metal Forming and Machining	3	0	0	3	BMEE209L, BMEE209P
BMEE304P	Metal Forming and Machining Lab	0	0	2	1	BMEE209L, BMEE209P
BMEE306L	Computer Aided Design and Finite Element Analysis	3	0	0	3	BMEE202L, BMEE202P
BMEE306P	Computer Aided Design and Finite Element Analysis Lab	0	0	2	1	BMEE202L, BMEE202P
BMEE401L	Computer Integrated Manufacturing	3	0	0	3	NIL
BMEE401P	Computer Integrated Manufacturing Lab	0	0	2	1	NIL
BMEE402L	Heat and Mass Transfer	3	0	0	3	NIL
BMEE402P	Heat and Mass Transfer Lab	0	0	2	1	NIL
Discipline-Linked Engineering Sciences						
BMEE209L	Materials Science and Engineering	3	0	0	3	NIL
BMEE209P	Materials Science and Engineering Lab	0	0	2	1	NIL
BMEE211L	Engineering Optimization	2	1	0	3	NIL
BMEE308L	Control Systems	2	0	0	2	NIL
BMEE308P	Microcontrollers and Interfacing Lab	0	0	2	1	NIL
BMEE407L	Artificial Intelligence	2	1	0	3	BMAT202L, BMAT202P
Discipline Electives						
BMEE205E	Renewable Energy Systems	2	0	2	3	NIL
BMAT206L	Numerical Analysis	3	0	0	3	BMAT101L, BMAT102P, BMAT102L
BMEE208L	Industrial Engineering	3	0	0	3	NIL
BMEE212L	Quality Control and Improvement	3	0	0	3	BMAT202L, BMAT202P
BMEE305L	Manufacturing Planning and Control	3	0	0	3	NIL
BMEE307L	Product Design and Development	3	0	0	3	NIL
BMEE309L	Lean Manufacturing	3	0	0	3	NIL
BMEE310L	Supply Chain Management	3	0	0	3	NIL
BMEE311L	Welding Engineering	3	0	0	3	BMEE302L, BMEE302P
BMEE312L	Engineering Tribology	3	0	0	3	BMEE201L, BMEE204L, BMEE204P
BMEE313E	Non-destructive Testing	3	0	2	4	BMEE302L, BMEE302P, BMEE304L, BMEE304P

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BMEE314E	Mechanical Vibrations and Acoustics	3	0	2	4	BMEE207L, BMEE207P
BMEE315L	Micro-Electromechanical Systems	3	0	0	3	BMEE201L, BMEE209L, BMEE209P
BMEE316E	Industrial Robotics	3	0	2	4	BMEE207L, BMEE207P
BMEE317L	Mechatronic Systems Design	3	0	0	3	BMEE210L, BMEE210P
BMEE318E	Fluid Power Systems	3	0	2	4	BMEE204L, BMEE204P
BMEE319E	Advanced Materials Characterization Methods	3	0	2	4	BMEE209L, BMEE209P
BMEE321L	Composite Materials	3	0	0	3	BMEE202L, BMEE202P
BMEE322L	Engineering Failure Analysis	3	0	0	3	BMEE202L, BMEE202P
BMEE323L	Gas Dynamics	3	0	0	3	NIL
BMEE324E	Turbomachines	2	0	2	3	NIL
BMEE325L	Internal Combustion Engines	3	0	0	3	BMEE303L, BMEE303P
BMEE326L	Power Plant Engineering	3	0	0	3	NIL
BMEE320L	Refrigeration and Air-conditioning	3	0	0	3	BMEE303L, BMEE303P
BMEE391J	Technical Answers to Real Problems Project				3	NIL
BMEE392J	Design Project				3	NIL
BMEE393J	Laboratory Project				3	NIL
BMEE394J	Product Development Project				3	NIL
BMEE395J	Computer Project				3	NIL
BMEE396J	Reading Course				3	NIL
BMEE397J	Special Project				3	NIL
BMEE398J	Simulation Project				3	NIL
BMEE403L	Design of Jigs, Fixtures and Press Tools	3	0	0	3	NIL
BMEE404L	Design of Transmission Systems	2	1	0	3	NIL
BMEE405L	Industrial Automation	3	0	0	3	NIL
BMEE406E	Advanced Manufacturing Processes	3	0	2	4	BMEE302L, BMEE302P, BMEE304L, BMEE304P
BMEE408E	Additive Manufacturing	3	0	2	4	NIL
BMEE409E	Computational Fluid Dynamics	2	0	2	3	NIL
Projects and Internship						
BMEE399J	Summer Industrial Internship				1	NIL
BMEE497J	Project - I				3	NIL
BMEE498J	Project - II / Internship				5	NIL

(Annexure 42)

The Academic Council considered and approved the same.

Item 65/47 To consider and approve the course contents for the following nine (9) Discipline Electives offered in Bachelor of Technology in Mechanical Engineering with Specialization in Manufacturing Engineering.

Discipline Electives						
Course Code	Course Title	L	T	P	C	Prerequisite
BMEE403L	Design of Jigs, Fixtures and Press Tools	3	0	0	3	NIL
BMEE307L	Product Design and Development	3	0	0	3	NIL

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BMEE406E	Advanced Manufacturing Processes	3	0	2	4	BMEE302L, BMEE302P, BMEE304L, BMEE304P
BMEE305L	Manufacturing Planning and Control	3	0	0	3	NIL
BMEE212L	Quality Control and Improvement	3	0	0	3	BMAT202L, BMAT202P
BMEE319E	Advanced Materials Characterization Methods	3	0	2	4	BMEE209L, BMEE209P
BMEE310L	Supply Chain Management	3	0	0	3	NIL
BMEE316E	Industrial Robotics	3	0	2	4	BMEE207L, BMEE207P
BMEE309L	Lean Manufacturing	3	0	0	3	NIL

(Annexure 43)

The Academic Council considered and approved the same.

Item 65/48

To consider and approve the course contents for the following one (1) Non-Graded core Requirement course offered in Bachelor of Technology in Biotechnology, Chemical Engineering, Civil Engineering, Computer Science and Engineering and with Specializations, Electronics and Instrumentation, Electrical and Electronics, Electronics and Communication Engineering and with Specialization, Information Technology, Mechanical Engineering and with Specializations, Mechatronics and Automation, Fashion Technology and Five Year Integrated Master of Technology in Construction Technology and Management. The curriculum was approved in 62nd meeting of the Academic council held on 15th July 2021.

Non-graded Core Requirement

Course Code	Course Title	L	T	P	C	Prerequisite
BCHY102N	Environmental Sciences	0	0	0	2	NIL

(Annexure 44)

The Academic Council considered and approved the same.

Item 65/49

To consider and approve the course content for the following one (1) Discipline-Linked Engineering Sciences course offered in Bachelor of Technology in Computer Science and Engineering and with Specialization(s) and Bachelor of Technology in Information Technology. The curriculum was approved in 62nd meeting of the Academic council held on 15th July 2021 [Item No. 62/17 & 62/23].

Discipline-Linked Engineering Sciences

Course Code	Course Title	L	T	P	C	Prerequisite
BMAT205L	Discrete Mathematics and Graph Theory	3	1	0	4	NIL

(Annexure 45)

The Academic Council considered and approved the same.

Item 65/50

To consider and approve the new online academic programme and curriculum of Master of Science in Data Science offered by VIT Online Learning Institute (VITOL) and also the course contents for the following five (5) Discipline Core courses.

Course Code	Course Title	L	T	P	C
OLMDS501	Linear Algebra	3	1	0	4
OLMDS502	Probability and Distribution Models	3	1	0	4
OLMDS505	Exploratory Data Analysis	2	1	0	3

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	OLMDS506	Data Base Management Systems	3	1	0	4		
	OLMDS510	Python Programming	2	2	0	4		
	(Annexure 46)							
	The Academic Council considered and approved the same.							
Item 65/51	To consider and approve the course content for the following one (1) Programme Elective course offered in Bachelor of Technology in Computer Science and Engineering with Specialization in Artificial Intelligence and Machine learning. The curriculum was approved in the 55th meeting of the Academic Council held on 13th June 2019 [Item.No.55.10.4].							
	Course Code	Course Title	L	T	P	J	C	Prerequisite
	MAT4001	Probability and Statistics for Artificial Intelligence	3	0	2	0	4	NIL
	(Annexure 47)							
	The Academic Council considered and approved the same.							
Item 65/52	To consider and approve the course content for the following one (1) Skill Enhancement course offered in Bachelor of Commerce (Honours).The curriculum was approved in the 63rd meeting of the Academic Council held on 23rd September 2021 [Item No. 63/21].							
	Course Code	Course Title	L	T	P	C	Prerequisite	
	UHUM151L	Intra and Interpersonal Skills	2	0	0	2	NIL	
	(Annexure 48)							
	The Academic Council considered and approved the same.							
Item 65/53	To consider and ratify the following six (6) new Extra-Curricular Activity courses. Sixty seven (67) Extra-Curricular Activity courses have been already approved in the meeting of the 45th Academic Council held on 15th June 2017 [Item. No. 45.6] and 64th meeting of the Academic Council held on 16th December 2021 [Item.No.64/31].							
	Extra-Curricular Activity Courses							
	Course Code	Course Title						
	EXC1224	Humanoid Club						
	EXC1225	VIT IAEMP (Indian Association of Energy Management Professionals) Student Chapter						
	EXC1226	Biosphere Club						
	EXC1227	Girl Up						
	EXC1228	ResourceX						
	EXC1229	PlaceXP						
	(Annexure 49)							
	The Academic Council considered and approved the same.							
Item 65/54	To consider and approve the revised formulation of Central Library Advisory Committee and also it is a Standing Committee of the Academic Council.							
	(Annexure 50)							
	The Academic Council considered and approved the same.							

Mr. A. 21/3/22

Item 65/55	<p>To consider and ratify the addendum to the changes in academic regulations as applicable to VITSOL vide 58.11.1., “J component as MC/CL forming part of the continuous assessment”.</p> <p>All courses with a project component (‘J’) in the credit structure to be now considered as having a tutorial component ‘T’ in the corresponding courses with retrospective effect.</p> <p>The Academic Council considered and approved the same.</p>
Item 65/56	<p>Vote of thanks</p> <p>The meeting ended with vote of thanks by the Registrar.</p>

M. Anthony Xavier
21/3/22

Dr. M. Anthony Xavier
Dean, Academics
Vellore Institute of Technology
Dr. M. Anthony Xavier
Dean (Academics)

Vellore Institute of Technology (VIT)
(Deemed to be University under section 3 of UGC Act, 1956)
Vellore- 632 014, Tamil Nadu, India

S. K. Sathiyarayanan
22/3/22

Dr. K. Sathiyarayanan
Secretary, Academic Council
Registrar, Vellore Institute of Technology

REGISTRAR
Vellore Institute of Technology (VIT)
(Deemed to be University under section 3 of UGC Act, 1956)
Vellore-632 014, Tamil Nadu, India

R. Rambabu Kodali
22/3/22

Dr. Rambabu Kodali
Chairperson, Academic Council
Vice Chancellor, Vellore Institute of Technology

Vice Chancellor
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