

# NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

## MINUTES OF THE 100<sup>th</sup> MEETING OF THE SENATE

held on 23<sup>rd</sup> April 2025 at 4.30 p.m. in Senate Hall, Administrative Block - A of the Institute

### Attendance Report

| S.No | Name                     | Designation                | Category            | Attendance |
|------|--------------------------|----------------------------|---------------------|------------|
| 1    | Dr. Prasad Krishna       | Director                   | Director & Chairman | ✓          |
| 2    | Dr. A.V. Babu            | Dean (Academic)            | Professor           | ✓          |
| 3    | Dr. Ravi Varma M K       | Dean (IACR)                | Professor           | ✓          |
| 4    | Dr. A Shaija             | Dean (P&D)                 | Professor           | ✓          |
| 5    | Dr. N Sandhyarani        | Dean (R & C)               | Professor           | ✓          |
| 6    | Dr. M S Sunitha          | Dean (FW)                  | Professor           | ✓          |
| 7    | Dr. Satyananda Panda     | Dean (SW)                  | Professor           | ✓          |
| 8    | Dr. M V L R Anjaneyulu   | Professor (HAG), CED       | Professor           | ✓          |
| 9    | Dr. T.M. Madhavan Pillai | Professor (HAG) & HoD, CED | Professor           | ✓          |
| 10   | Dr. Santosh G. Thampi    | Professor (HAG), CED       | Professor           | ✓          |
| 11   | Dr. Unnikrishnan G.      | Professor (HAG), CHY       | Professor           |            |
| 12   | Dr. Sathidevi P S        | Professor (HAG), ECED      | Professor           | ✓          |
| 13   | Dr. Ashok S              | Professor (HAG), EED       | Professor           | ✓          |
| 14   | Dr. Jeevamma Jacob       | Professor (HAG), EED       | Professor           | ✓          |
| 15   | Dr. Jose Mathew          | Professor (HAG), MED       | Professor           | ✓          |
| 16   | Dr. R Sridharan          | Professor (HAG), MED       | Professor           |            |
| 17   | Dr. Chandrashekar K      | Professor (HAG), PHY       | Professor           | ✓          |
| 18   | Dr. Sobhan C.B           | Professor (HAG), MSED      | Professor           |            |
| 19   | Dr. M L Joy              | Professor & HoD, MED       | Professor           | ✓          |
| 20   | Dr. P P Anil Kumar       | Professor, DAP             | Professor           | ✓          |
| 21   | Dr. A.K. Kasthurba       | Professor, DAP             | Professor           |            |
| 22   | Dr. Naseer M A           | Professor, DAP             | Professor           | ✓          |
| 23   | Dr. M D Anaul Kabir      | Professor, BSED            | Professor           | ✓          |
| 24   | Dr. A. Santhiagu         | Professor, BSED            | Professor           |            |
| 25   | Dr. Rajanikant G K       | Professor, BSED            | Professor           | ✓          |
| 26   | Dr. Rathinasamy K        | Professor, BSED            | Professor           | ✓          |
| 27   | Dr. Suchitra T. V.       | Professor, BSED            | Professor           |            |
| 28   | Dr. Lity Alen Varghese   | Professor, CHED            | Professor           | ✓          |
| 29   | Dr. Shiny Joseph         | Professor, CHED            | Professor           | ✓          |

| S.No | Name                      | Designation           | Category    | Attendance |
|------|---------------------------|-----------------------|-------------|------------|
| 30   | Dr. V Sivasubramanian     | Professor, CHED       | Professor   | ✓          |
| 31   | Dr. Lisa Sreejith         | Professor, CHY        | Professor   | ✓          |
| 32   | Dr A Sujith               | Professor, CHY        | Professor   | ✓          |
| 33   | Dr. Lakshmi C             | Professor, CHY        | Professor   | ✓          |
| 34   | Dr. Parameshwaran P       | Professor & HoD, CHY  | Professor   | ✓          |
| 35   | Dr. Krishnamurthy K       | Professor, CED        | Professor   | ✓          |
| 36   | Dr. Mohammed Ameen        | Professor, CED        | Professor   |            |
| 37   | Dr. Praveen Nagarajan     | Professor, CED        | Professor   | ✓          |
| 38   | Dr. Sajith A.S.           | Professor, CED        | Professor   | ✓          |
| 39   | Dr. K A Abdul Nazeer      | Professor, CSED       | Professor   | ✓          |
| 40   | Dr. Madhu Kumar S D       | Professor, CSED       | Professor   | ✓          |
| 41   | Dr. K. Murali Krishnan    | Professor, CSED       | Professor   | ✓          |
| 42   | Dr. Priya Chandran        | Professor (HAG), CSED | Professor   | ✓          |
| 43   | Dr. Deepthi P P           | Professor, ECED       | Professor   | ✓          |
| 44   | Dr. Sameer S M            | Professor, ECED       | Professor   |            |
| 45   | Dr. Sreelekha G           | Professor & HoD, ECED | Professor   | ✓          |
| 46   | Dr. Jagadanand G          | Professor, EED        | Professor   | ✓          |
| 47   | Dr. Rijil Ramchand        | Professor, EED        | Professor   |            |
| 48   | Dr.Sunitha K.             | Professor, EED        | Professor   | ✓          |
| 49   | Dr. Preetha P             | Professor, EED        | Professor   | ✓          |
| 50   | Dr. Mukti Barai           | Professor, EED        | Professor   | ✓          |
| 51   | Dr. Sindhu T K            | Professor & HoD, EED  | Professor   | ✓          |
| 52   | Dr. Soney Varghese        | Professor, MSED       | Professor   | ✓          |
| 53   | Dr. Sajith V              | Professor, MSED       | Professor   | ✓          |
| 54   | Dr. Sunil Jacob John      | Professor, MAT        | Professor   | ✓          |
| 55   | Dr. Chithra A.V.          | Professor, MAT        | Professor   | ✓          |
| 56   | Dr. Madhusudanan Pillai V | Professor, MED        | Professor   | ✓          |
| 57   | Dr. Biju T Kuzhiveli      | Professor, MED        | Professor   | ✓          |
| 58   | Dr. Manu R                | Professor, MED        | Professor   | ✓          |
| 59   | Dr. T. Radharamanan       | Professor, MED        | Professor   | ✓          |
| 60   | Dr. Raghu C               | Professor, PHY        | Professor   | ✓          |
| 61   | Dr. Aji A. Anappara       | Professor, PHY        | Professor   | ✓          |
| 62   | Dr. Suresh Babu T.K       | Professor, HAS        | Professor   | ✓          |
| 63   | Dr. Andrew Thangaraj      | IIT Madras            | Ext. member | ✓          |
| 64   | Prof. Leena Abraham       | TISS, Mumbai          | Ext.member  | ✓          |

| S.No | Name                       | Designation                  | Category         | Attendance |
|------|----------------------------|------------------------------|------------------|------------|
| 65   | Prof. Rajan M P            | IISER, Trivandrum            | Ext. member      | ✓          |
| 66   | Dr. Mohammed Firoz C.      | Assoc. Professor & HoD, DAP  | Invitee          | ✓          |
| 67   | Dr. Malladi V Pavan Kumar  | Assoc. Professor & HoD, CHED | Invitee          | ✓          |
| 68   | Dr. Subashini R            | Assoc. Professor & HoD, CSED | Invitee          | ✓          |
| 69   | Dr. Sunil Mathew           | Assoc. Professor & HoD MAT   | Invitee          | ✓          |
| 70   | Dr. Geetha Gopinath        | Asst. Professor & HoD, DED   | Invitee          | ✓          |
| 71   | Dr. Vari Sivaji Reddy      | Assoc. Professor & HoD PHY   | Invitee          |            |
| 72   | Dr. Sunitha S.             | Assoc. Professor & HoD, HAS  | Invitee          | ✓          |
| 73   | Dr. Nithya M.              | Asst. Professor & HoD, DMS   | Invitee          | ✓          |
| 74   | Dr. Hanas T                | Assoc Professor & HoD, MSED  | Invitee          | ✓          |
| 75   | Dr. Baiju G. Nair          | Assoc. Professor & HoD, BSED | Invitee          | ✓          |
| 76   | Dr. Gopi Krishna S.        | Associate Dean (Academic)    | Invitee          | ✓          |
| 77   | Dr. Mija S.J.              | Associate Dean (Academic)    | Invitee          | ✓          |
| 78   | Dr. Vineesh Ravi           | Associate Dean (Academic)    | Invitee          | ✓          |
| 79   | Cdr (Dr.) Shamasundara M S | Registrar                    | Member Secretary | ✓          |

The Secretary welcomed the members present to the 100th meeting of the Senate of the National Institute of Technology Calicut and the Chairman called the meeting to order at 4.30 PM. The Chairman-Senate placed on record the excellent service rendered by Prof. Saly George, Senate Member and Professor-HAG, Department of Electrical Engineering, and Prof. M.J. Jacob, Senate Member and Professor, Department of Mathematics, who were superannuated from the services of the Institute. The Chairman, Senate welcomed the invitees to the Senate who have assumed the role of HoDs: Dr. Hanas T., Assoc. Professor, Department of Material Science and Engineering, and Dr. Sunil Mathew, Assoc. Professor, Department of Mathematics.

#### **S100.1: Passing of the Minutes of the 99<sup>th</sup> meeting of the Senate**

##### **Decision:**

The minutes of the [99<sup>th</sup>](#) meeting of the Senate held on 05th December 2024 at 3.00 p.m were presented for approval. A few corrections were suggested in the minutes by Prof. Manu R relating to the decision circulated on agenda item *S99.6 (c), Ratification of the report submitted by the Sub-Committee constituted to formulate guidelines to govern the composition and proceedings of the disciplinary committees at the Department as well as at the Institute level, specifically concerning reported cases of violations of code of conduct by the students*. The Senate accepted the suggestions and resolved to approve the minutes of the *99<sup>th</sup>* meeting of the Senate incorporating the suggestions, which are available [here](#).

## Recommendations of the 69th meetings of the Board of Academic Council

### S100.2: Consideration of the proposal for incorporating minor modifications to the 2023 curriculum of 12 PG programmes

#### Background:

The curriculum and syllabi of the M.Tech/M.Plan/M.Sc/MBA programmes were revised in 2023. The first batch corresponding to the revised curriculum will be graduating in 2025. Meanwhile, several comments/suggestions were received in the office of Dean (Academic) from relevant stakeholders regarding the 2023 curriculum/syllabi. The matter was discussed with the competent authority. Subsequently, the departments were requested to review the M.Tech/M.Plan/M.Sc/MBA programme curricula for any minor modifications. The departments were informed that these modifications may include changes to the syllabi of the courses, adjustments to core and elective courses, alterations to course credits, or the inclusion of seminars, provided that the total minimum credits to be earned for completing the programme and the general credit framework proposed by the 2023 PG curriculum revision committee remain unchanged. The suggestions received from the departments were consolidated, and it was decided to forward these suggestions to the 2023 PG curriculum revision committee chaired by Dr Manu R. (Professor, MED). The committee was authorized to study the suggestions received from the departments considering the general framework proposed by the 2023 PG curriculum revision committee and submit a proposal for the consideration of the BoAC.

The detailed proposal submitted by the committee, both the previous and revised curriculum are available in [S100.2](#). Major recommendations of the committee are listed below.

To include the changes proposed by the departments for 12 PG programmes, the committee suggested the following:

- 1) For M. Tech programmes - The distribution of credits among various curriculum components and the credits per semester shall be modified as given in the following tables.

| <b>Recommended Credits per Course Category (M Tech programmes)</b> |                        |                              |
|--|------------------------|------------------------------|
| <b>Course Category</b>   | <b>2023 Curriculum</b> | <b>Proposed modification</b> |
| Programme core + programme elective                                | 38                     | 35 - 38                      |
| Institute Electives Basket   | 02                     | 02 (No change)               |
| Projects   | 35                     | 35 - 38                      |
| Total credits  | 75                     | 75 (No change)               |

| <b>Recommended Credits for Project Phase I-IV (M.Tech programmes)</b> |                        |                              |
|---|------------------------|------------------------------|
| <b>Project Phase</b>  | <b>2023 Curriculum</b> | <b>Proposed modification</b> |
| I   | 2                      | 2 - 3                        |
| II  | 3                      | 3 - 5                        |
| III   | 15                     | 15 - 17                      |
| IV  | 15                     | 15 - 17                      |
| Total credits   | 35                     | 35 - 38                      |

| <b>Recommended Credits per Semester (M Tech programmes)</b> |                 |                       |
|---|-----------------|-----------------------|
| Semester  | 2023 Curriculum | Proposed modification |
| I   | 19 - 21         | 18 - 23               |
| II  | 19 - 21         | 18 - 23               |
| III   | 18 - 21         | 18–21 (No change)     |
| IV  | 15 - 18         | 15–18 (No change)     |
| Total   | 75              | 75                    |

- 2) For MSc programmes - The distribution of credits as per the 2023 curriculum shall be continued.
- 3) For MBA programme - The committee recommended that the total credit requirement may be brought down to 75–80. More seminar/GD/internship/project/other related activity based courses are to be included, and the weightage for this category is to be increased. Further, there cannot be any open elective course (as proposed by DMS) for the MBA programmes. Additionally, activity points (as proposed by DMS) are not permissible for PG programmes. In the proposed curriculum for the MBA, there are theory courses of 2 credits, 3 credits, and 4 credits. This needs to be normalized, and the credits for all theory courses (programme core and electives) shall be 3 or 4 only.

With these modifications in the curriculum structure, the minor changes proposed in the curricula of the following 12 PG programmes are recommended by the committee.

1. M. Tech Chemical Engineering
2. M. Tech Artificial Intelligence and Data Analytics
3. M. Tech Information Security
4. M. Tech Computer Science and Engineering
5. M. Tech Instrumentation and Control Systems
6. M. Tech Telecommunication
7. M. Tech Signal Processing
8. M. Tech Microelectronics and VLSI Design
9. M. Tech Electronics Design and Technology
10. MBA
11. MSc. Chemistry
12. MSc. Physics

The recommendations of the committee were discussed in detail in the 69th meeting of the BoAC held on 12th March 2025. BoAC decided to recommend the modified curriculum structure proposed by the committee and the minor modifications suggested in the curricula of the 12 PG programmes to the Senate for approval. BoAC decided to seek the approval of the Senate regarding the proposed changes to the 12 PG programmes, including the MBA programme.

**The proposal is put up for the consideration and approval of the Senate.**

**Decision:**

The Senate discussed the agenda item in detail and decided to approve the modifications suggested for the 12 PG programmes, including the MBA programme. The revised curriculum structure and related details for the 12 PG programmes are available in [Annexure 1](#).

**S100.3: Consideration of the report submitted by the committee constituted to formulate the curriculum framework and other details for offering Executive M.Tech./Executive MBA programmes**

In the 68th meeting of the BoAC held on 12 November 2024, Dean (Academic) presented a proposal to offer Executive M. Tech. programmes (EMTech) in our institute for the benefit of working professionals from reputed industries/R&D labs/Academic institutions. Additionally, the Department of Management Studies had proposed to launch an Executive MBA (EMBA) programme for working professionals. Meanwhile, the 99th meeting of the Senate had in principle approved the proposal. Subsequently, the proposal was approved in the 71st meeting of the BoG as well. In the 68th meeting of the BoAC, where the original proposal for offering EMTech. and EMBA programmes was presented, there was a suggestion that a committee shall be entrusted to formulate the programme structure and other guidelines for EMTech and EMBA programmes. In line with this, the competent authority had approved the constitution of a committee chaired by Dr Manu R (Professor, MED) to prepare a proposal for the consideration of the BoAC and the Senate. The proposal was submitted for the consideration of the 69th meeting of the BoAC. The BoAC suggested the following modifications to the guidelines, which are given below:

**Fees structure:**

Theory course: Rs. 12,500/- per credit

Project work: Rs. 7,500/- per credit if the project work is undertaken in industries/R&D labs. The fee shall be 12500/- per credit, if the project work is undertaken at NIT Calicut

**Programme duration:**

EMBA: Minimum two years, maximum four years, excluding the period of temporary discontinuation sanctioned by competent authority. Coursework may be extended over the four-year period.

EMTech: Minimum two years, maximum five years, excluding the period of temporary discontinuation sanctioned by competent authority. Coursework is to be completed within the first three years.

**Eligibility for EMBA programme-** A bachelor's degree or its equivalent in any discipline with a minimum of 55% aggregate marks or an equivalent CGPA (GEN/OBC) and 50% aggregate marks or an equivalent CGPA (SC/ST/PWD). Open to all professionals (including industry and self-employed) with a minimum experience of 6 months.

**Eligibility for EMTech programme-** Academic eligibility requirements are the same as those of other regular M. Tech. programmes run by the departments (except the requirements for GATE). A minimum of one year of experience after successful completion of graduation as of the deadline for submitting the application. The modified proposal recommended by the BoAC to the Senate is available here. [S100.3](#)

**The proposal is put up for the consideration and approval of the Senate.**

**Decision:**

The Senate discussed the proposals for offering Executive M.Tech. (EMTech)/Executive MBA (EMBA) programmes. The Senate opined that the minimum credit requirements for EMTech and EMBA programmes shall be the same as those of other regular M. Tech. and MBA programmes offered in the institute. Further, there was a suggestion that the eligibility requirements in terms of qualification as well as experience shall be the same for MTech and MBA programmes. Accordingly, the Senate entrusted the committee headed by Prof Manu R. to reframe the proposals after comparing the programme structure against similar programmes offered by IISc/IITs/IIMs/NITs. It was also decided that the revised report submitted by the committee shall be circulated among the Senate members for approval so that the institute can start offering the executive programmes in the next academic year (i.e., Monsoon 2025) itself.

**S100.4: Consideration of the report submitted by the committee constituted to formulate the curriculum framework for integrated BS-MS degree programmes**

**Background:**

Based on the discussions in the 66th meeting of the BoAC regarding the guidelines for multiple entry and multiple exit options, there was a proposal to offer a 5-year Integrated BS-MS Degree program in alignment with NEP 2020 by the Departments of Chemistry, Mathematics, and Physics. Subsequently, the competent authority had approved the constitution of a committee chaired by Dr. Sunil Jacob John (Professor, MAT) to prepare a proposal for the consideration of the BoAC and the Senate. It may be noted that the 99th meeting of the Senate had already approved the proposal for offering Integrated BS-MS degree programme by the Departments of Chemistry, Mathematics & Physics. Subsequently, the 71st meeting of the BoG of NIT Calicut, held on 11th December 2024, had also approved the proposal, subject to final approval by the MoE and MoF.

Meanwhile, the Department of Bioscience and Engineering (BSED) had expressed interest in offering the Integrated BS-MS programme in Biological Sciences. The committee headed by Prof. Sunil Jacob John was entrusted to prepare the curriculum structure for the proposed Integrated BS-MS programme by the Departments of Chemistry, Mathematics, Physics & Bioscience and Engineering. The report submitted by the committee was presented

in the 69th meeting of the BoAC. BoAC discussed the proposal and resolved to recommend the committee report for the consideration of the Senate with minor modifications. The BoAC also decided to seek the approval of the Senate to offer an integrated BS-MS programme in Biological Sciences, as this proposal was not considered in the 99th meeting of the Senate.

The modified proposal incorporating suggestions from the BoAC is attached here [S100.4](#)

**The curriculum structure and other details corresponding to the proposed Integrated BS-MS programme by the Departments of Chemistry, Mathematics, Physics & Bioscience and Engineering, as recommended by the BoAC are put up for the consideration and approval of the Senate.**

**Decision:**

The Senate discussed the proposal in detail and resolved to approve the proposals submitted by the committee for offering Integrated BS-MS programme by the Departments of Chemistry, Mathematics, Physics & Bioscience and Engineering. However, the Senate decided that the admissions to the integrated BS-MS programme shall be done based on the rank secured by the prospective candidates in the IISER Aptitude Test (IAT). The modified proposal approved by the Senate is available in [Annexure 2](#).

**S100.5: Consideration of the proposal for new programme from the Department of Electrical Engineering - Executive M Tech in Sustainable Electrical Energy**

**Background:**

The Department of Electrical Engineering has proposed a new Executive M Tech programme in Sustainable Electrical Energy. The DCC of the department has approved the programme. The proposal was discussed in the 69th meeting of the BoAC. The BoAC has recommended the proposal with minor modifications. The modified proposal after incorporating suggestions by the BoAC is attached here. [S100.5](#)

**The proposal is put up for the consideration and approval of the Senate.**

**Decision:**

The Senate resolved to approve the proposal submitted by the Department of Electrical Engineering to offer a new Executive M Tech programme in Sustainable Electrical Energy.

However, the Senate decided that the Department of Electrical Engineering shall modify the proposal according to the decision of item **S.100.3**. It was also decided that the revised

proposal shall be circulated among the Senate members for approval so that the Department can offer the new executive programme in Sustainable Electrical Energy during the next academic year (i.e., Monsoon 2025) itself.

**S100.6: Consideration of the proposal from Dean (IACR):**

**a) Proposal for credit transfer policy from reputed Foreign Higher Educational Institutes for exchange students**

**b) Dual degree doctoral program with University of Central Florida (UCF)**

**Background:**

a) There are several occasions where the undergraduate, postgraduate, and PhD students of the National Institute of Technology Calicut (NITC) spend part of their respective studies in a Foreign Higher Educational Institute (FHEI). This draft proposal is to define such studies in an FHEI where they can earn credits towards their degree in NITC as a “Study Abroad” program as prevailed in many universities. Studying abroad can have many benefits, including personal growth (learn independence, gaining a new study perspective and see the world differently and learn to think more broadly, developing life skills, and becoming self-sufficient), Career opportunities (boost in resume, better employability), Make new friends, Build your network, Experience a different culture, Learn a new language, and more. The International Relations Office is committed to assisting students in identifying study-abroad programs that align with their academic and personal goals. The framework for credit transfer policy under such “study abroad” programme was discussed in 69th meeting of the BoAC. The details are available at [S100.6\(a\)](#)

b) The proposal for a framework for academic collaboration with Foreign Higher Educational Institutes (FHEI) was approved in the 99th meeting of the Senate. Based on this, the draft proposal for the dual degree doctoral program between CHED, NIT Calicut, and the University of Central Florida (UCF), USA, has been made. The minutes from the CHED DCC are given in [S100.6\(b\)](#). It is also proposed that this may later be extended to MED PhD students, subject to approval from their DCC, and the inclusion of any additional courses they may propose at that time, provided these courses are agreed upon by their UCF counterpart. This agreement is student-specific, meaning that it is not mandatory for a fixed number of students to be admitted to the program each year. The primary objective of this collaboration is to offer students at NIT Calicut, or those graduating from the institute, the opportunity to pursue graduate education at UCF.

**The 69th meeting of the BoAC recommended the proposals submitted by the Dean (IACR) and decided to forward the proposal for the consideration of the Senate.**

**The proposals are put up for the consideration and approval of the Senate**

**Decision:**

- (a) The Senate approved the proposal submitted by the Dean (IACR) for the “Study Abroad” program, which enables undergraduate, postgraduate, and Ph.D. students of NIT Calicut to earn credits for the courses completed at FHEIs. It was further decided that the request for credit transfer submitted by each student shall be scrutinized and recommended by the respective DUGC or DPGC, as the case may be, and the Head of the Department and final approval will be accorded by the Dean (Academic). The final approved version of the proposal is given in [Annexure 3](#).
- (b) The Senate approved the draft proposal for the dual degree doctoral program between the Department of Chemical Engineering, NIT Calicut, and the University of Central Florida (UCF), USA. It was also noted that the program may be extended to Ph.D. students from the Department of Mechanical Engineering, subject to DCC approval and mutual agreement on additional course requirements with the UCF counterpart. The final approved version of the proposal is given in [Annexure 4](#).

**S100.7: Approval of Vision and Mission Statement of Department of Education****Background:**

As part of the ongoing efforts of the Department of Education, NITC to align the objectives with the institution’s broader academic goals, it is essential that the Vision and Mission statement be reviewed and endorsed. This will ensure clarity, consistency, and strategic direction for faculty, students, and stakeholders of the Department of Education. [The proposed vision and mission](#) statements are as given below.

## Vision Statement

Achieve excellence and professionalism in teacher education in a dynamic educational ecosystem by nurturing prospective teachers who can drive innovation, inclusivity, research and lifelong learning.

## Mission Statement

- To equip and empower learners holistically with advanced pedagogical knowledge, professional competencies, skills, and values.
- To promote a culture of empathy, respect, and integrity through education and character development.
- To cultivate a spirit of lifelong learning, develop research abilities, and a reflective approach among learners to meet the evolving needs of society.
- To foster a collaborative and participatory culture that encourages respect for equity, diversity and inclusion and empowers prospective teachers to effectively engage and support diverse learners.
- To integrate advanced digital tools and innovative methodologies in curricular transactions and classroom practices, so as to equip learners to become globally competent.

The Vision and Mission Statements of the Department of Education were placed in the 69th meeting of the BoAC, where the members suggested that comments/approval needs to be taken from the DAB before placing it in the next meeting of the Senate.

**The Vision and Mission Statements of the Department of Education are put up for the consideration and approval of the Senate**

**Decision:**

The Senate decided to approve the proposal with slight modifications. The modified Vision and Mission statements are as follows:

**Vision Statement**

Achieve excellence and professionalism in teacher education in a dynamic educational ecosystem by nurturing prospective teachers who can drive innovation, inclusivity, research, and lifelong learning.

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**Mission Statement**

- To equip and empower learners holistically with advanced pedagogical knowledge, professional competencies, skills and values.
- To promote a culture of empathy, respect, and integrity through education and critical reflection.
- To cultivate a spirit of lifelong learning, develop research abilities, and a reflective approach among learners to meet the evolving needs of society.
- To foster a collaborative and participatory culture that encourages respect for equity, diversity and inclusion and empowers prospective teachers to effectively engage and support diverse learners.
- To integrate advanced digital tools and innovative methodologies in curricular transactions and classroom practices, so as to equip learners to become globally competent.

**S100.8: Consideration of the proposal for new elective courses from Departments and Centers**

- a) Department of Bioscience and Engineering - UG elective BT3035E  
Antibody Engineering**
- b) Department of Chemical Engineering - UG elective CH3035E  
Introduction to Industry 4.0**
- c) Department of Computer Science and Engineering - UG elective CS4060E  
Machine Learning Models**
- d) Department of Electronics and Communication Engineering - UG elective  
EC3089E Introduction to Quantum Computing**

- e) **Department of Physics - UG elective PH3135E Nuclear Technology and PG elective PH7347E Nuclear Reaction Dynamics**
- f) **Center for Indian Knowledge System - UG electives IK2002E Indian Knowledge Systems in Environmental Conservation and IK3007E Introduction to Traditional Indian Architecture**
- g) **Center for Sustainable Technologies - UG elective ST3001E: Fundamentals of Sustainable Engineering**
- h) **Department of Mechanical Engineering - UG electives ME3341E Applied Corrosion Engineering and Materials Protection, ME3342E Biomaterials Engineering: From Structure to Function, and ME3343E Mechanical Behaviour and Testing of Engineering Materials**

### **Background:**

- a) The Department of Bioscience and Engineering has proposed to include the UG elective course BT3035E Antibody Engineering in the 2023 curriculum. The course is approved by the DCC. The DCC minutes and the syllabus of the course is attached in [S100.8 \(a\)](#)
- b) The Department of Chemical Engineering has proposed to include the UG elective course CH3035E Introduction to Industry 4.0 in the 2023 curriculum. The course is approved by the DCC. The DCC minutes and the syllabus of the course is attached in [S100.8 \(b\)](#)
- c) The Department of Computer Science and Engineering has proposed to include the UG elective course CS4060E Machine Learning Models in the 2023 curriculum. The course is approved by the DCC. The DCC minutes and the syllabus of the course is attached in [S100.8 \(c\)](#)
- d) The Department of Electronics and Communication Engineering has proposed to include the UG elective course EC3089E Introduction to Quantum Computing in the 2023 curriculum. The course is approved by the DCC. The DCC minutes and the syllabus of the course is attached in [S100.8 \(d\)](#)
- e) The Department of Physics has proposed to include one UG elective, PH3135E Nuclear Technology and one PG elective, PH7347E Nuclear Reaction Dynamics courses in the 2023 curriculum. The courses are approved by the DCC. The DCC minutes and the syllabi of the courses are attached in [S100.8 \(e\)](#)
- f) The Center for Indian Knowledge System has proposed to include the UG elective courses UG electives IK2002E Indian Knowledge Systems in Environmental Conservation and IK3007E Introduction to Traditional Indian Architecture in the 2023 curriculum. The course is approved by the DCC. The DCC minutes and the syllabi of the courses are attached in [S100.8 \(f\)](#)
- g) The Center for Sustainable Technologies has proposed to include the UG elective course ST3001E: Fundamentals of Sustainable Engineering in the 2023 curriculum.

The course is approved by the DCC. The DCC minutes and the syllabus of the course is attached in [S100.8 \(g\)](#)

- h) The Department of Mechanical Engineering has proposed to include the following 3 UG elective courses in the approved curriculum of B. Tech. Mechanical Engineering:
- (1) ME3341E Applied Corrosion Engineering and Materials Protection
  - (2) ME3342E Biomaterials Engineering: From Structure to Function
  - (3) ME3343E Mechanical Behaviour and Testing of Engineering Materials

The DCC of the department has approved the courses. The DCC minutes and the syllabi are available here: [S100.8 \(h\)](#)

The proposals were placed in the 69th meeting of the BoAC. A few modifications were suggested by the members of the BoAC. After detailed deliberations, BoAC had recommended and forwarded the proposals for offering new courses by the Department/Centres to the Senate for approval.

### **The proposal for new elective courses is put up for the consideration and approval of the Senate**

#### **Decision:**

The above details were placed as a tabled agenda item in the Senate. It was resolved to approve the elective courses (a), and (c)-(h) and their detailed syllabi, which are given in [Annexure 5](#). The decision regarding the elective course proposed by CHED, i.e., CH3035E Introduction to Industry 4.0, was deferred, as the proposed course content is based on Industry 4.0. The Senate opined that the focus of this course must shift toward Industry 5.0 to align with current trends and future directions. The department is requested to revise the proposal accordingly for reconsideration. Further, it was resolved that the title of the course ME3341E Applied Corrosion Engineering and Materials Protection proposed by MED shall be changed to ME3341E Applied Corrosion Engineering.

#### **S100.9: Consideration of the proposal to modify the syllabi**

##### **a) Department of Chemistry:**

- 1) **CY6301E Basic concepts of inorganic chemistry and main group elements (PC)**
- 2) **CY6302E Basic concepts of organic chemistry (PC)**
- 3) **CY6391E Inorganic chemistry laboratory (PC)**
- 4) **CY6311E Chemistry of coordination compounds (PC)**
- 5) **CY6312E Chemistry of multiple bonds and rearrangement reactions (PC)**
- 6) **CY7301E Organometallic and bioinorganic chemistry (PC)**
- 7) **CY7302E Synthetic methodologies in organic chemistry (PC)**
- 8) **CY7360E Applied coordination chemistry (PC)**
- 9) **CY7363E Heterocyclic chemistry (DE)**

**10) CY7304E Solid state and materials chemistry (DE)**

**b) Department of Computer Science and Engineering:**

**CS6304E Machine Learning**

**c) Department of Electrical Engineering:**

**1) EE6492E Industrial Power Lab 1**

**2) EE6493E Industrial Power Lab 2**

**3) Course code of Project Phase IV in the M. Tech Power Systems 2023 Curriculum to EE7293E instead of EE7293D**

**Background:**

(a) The Department of Chemistry has proposed to slightly modify the syllabus of the following courses.

1. CY6301E Basic concepts of inorganic chemistry and main group elements (PC)
2. CY6302E Basic concepts of organic chemistry (PC)
3. CY6391E Inorganic chemistry laboratory (PC)
4. CY6311E Chemistry of coordination compounds (PC)
5. CY6312E Chemistry of multiple bonds and rearrangement reactions (PC)
6. CY7301E Organometallic and bioinorganic chemistry (PC)
7. CY7302E Synthetic methodologies in organic chemistry (PC)
8. CY7360E Applied coordination chemistry (PC)
9. CY7363E Heterocyclic chemistry (DE)
10. CY7304E Solid state and materials chemistry (DE)

The proposed modifications of the syllabi were approved by the DCC. The modified syllabus of the course and DCC minutes are appended in [S100.9 \(a\)](#)

(b) The Department of Computer Science and Engineering has proposed to modify the syllabus of CS6304E Machine Learning. The proposed modifications of the syllabus were approved by the DCC. The modified syllabus of the course and DCC minutes are appended in [S100.9 \(b\)](#)

(c) The Department of Electrical Engineering has proposed to modify the syllabus of EE6492E Industrial Power Lab 1 and EE6493E Industrial Power Lab 2. The proposed modifications of the syllabi were approved by the DCC. The modified syllabus of the course and DCC minutes are appended in [S100.9 \(c\)](#)

It has been noticed that there is an inadvertent error in the course code for Project Phase IV in the 2023 curriculum of the M Tech programme run by the Department of Electrical Engineering . Upon being informed, the EED has requested a correction, changing the code from EE7293D to EE7293E. This request is documented in [S100.9 \(c\)](#).

**The proposals are put up for the consideration and approval of the Senate**

**Decision:**

The Senate approved the proposed modifications in the course syllabi submitted by various departments as outlined above. Further, the proposal to correct the course code of M Tech Project Phase IV in the 2023 curriculum of the M Tech programme run by the Department of Electrical Engineering from EE7293D to EE7293E was also approved.

**S100.10: Proposals from the Department of Chemical Engineering**

**a) Consideration of the proposal from the Department of Chemical Engineering to include the following program electives (PEs) available in the B.Tech Chemical Engineering 2023 curriculum in the digital automation (DA) basket as well.**

**1) CH2027E Mathematical Methods in Chemical Engineering**

**2) CH4032E Process Optimization**

**3) CH4037E Chemical Process Simulation**

**b) Change the course codes of HM elective-1, HM elective-2 and HM elective-3 from MSxxxxE to XXxxxxE in the 2023 curriculum**

**c) Addition of three courses offered by the Chemical Engineering Department as Humanities electives (HM category)**

**1) CH2025E Human Resource Management**

**2) CH3021E Operations Research**

**3) CH4025E New Enterprises Creation and Management**

**Background:**

a) The Department of Chemical Engineering has proposed to add the following program electives (PEs) available in the B.Tech Chemical Engineering 2023 curriculum to the digital automation (DA) basket as well.

(i) CH2027E Mathematical Methods in Chemical Engineering

(ii) CH4032E Process Optimization

(iii) CH4037E Chemical Process Simulation

The proposal is approved by the DCC and DCC minutes are appended in [S100.10 \(a\)](#)

As per the report submitted by the 2023 UG Curriculum revision committee, the courses in the DA basket target imparting the knowledge necessary for the students to become successful professionals in this era of digital transformations. A total of six credits are to be earned from this basket, and the courses will be offered by the concerned Departments running the B. Tech. programmes.

- b) The Department of Chemical Engineering has proposed to change the course codes of HM elective-1, HM elective-2, and HM elective-3 from MSxxxxE to XXxxxxE. This change is necessary due to the large number of students enrolling in the course. With approximately 240 students opting for the elective, it is not feasible to accommodate all of them under the courses offered exclusively by the Humanities, Arts, and Social Sciences Department. Reassigning the course code to XXxxxxE will provide greater flexibility in offering multiple sections or alternate courses under different departments, ensuring that all students have the opportunity to fulfill their elective requirements without overburdening a single department.

As per the report submitted by the 2023 UG Curriculum revision committee, the courses in the HM basket are expected to be offered by SOMS or by other departments under the mutual agreement with the Department running the B. Tech. programme. A total of nine credits are to be earned from this basket. In the 2023 curriculum for B Tech Chemical Engineering, the courses that are to be offered under HM Basket are included with codes MSxxxxE. This makes it mandatory for the B Tech Chemical Engineering students to credit HM Basket courses from SOMS/HAS alone. Since there will be approximately 240 students belonging to B. Tech Chemical Engineering at a time opting for this HM basket courses, it is recommended that provision shall be made for CHED students to credit such courses from any of the offering departments. In view of this, CHED has proposed that the course code of the HM Basket courses included in the B Tech Chemical Engineering curriculum be changed from MSxxxxE to XXxxxxE, where XX represents the code corresponding to the offering department.

- c) The Department of Chemical Engineering has proposed to add three courses already included in the B. Tech Chemical Engineering curriculum in the PE category as Humanities electives (HM category) as well. These courses align well with the broader objectives of Humanities electives by enhancing students' understanding of management, decision-making, and entrepreneurship, which are valuable across disciplines. Their inclusion will help accommodate more students while maintaining academic diversity and flexibility. The proposal is to add the following courses offered by the Chemical Engineering Department as Humanities electives (HM category):

1. CH2025E - Human Resource Management (HRM)
2. CH3021E Operations Research (OR)
3. CH4025E New Enterprises Creation and Management

Detailed proposals are available in [S100.10\(c\)](#).

The above proposals were placed in the 69th meeting of the BoAC. It was decided to recommend these proposals for the consideration of the Senate.

**The proposals are put up for the consideration and approval of the Senate**

**Decision:**

The Senate approved the above proposals submitted by the Department of Chemical Engineering.

**S100.11: Proposals from MED**

**i) Minor modifications in the structure of the Minor Programme on Unmanned Aerial Systems and Technologies**

**ii) Proposal to allow M.Tech/M.Sc students to choose PG level courses offered by other departments as electives.**

**Background:**

(i) Converting compulsory course to elective course in Minor - Unmanned Aerial Systems

The present minor program in **Unmanned Aerial Systems** has two compulsory courses. It is proposed to move the compulsory course ME3252E AEROMECHANICS OF UNMANNED AERIAL SYSTEMS to elective course category in the minor programme. This proposed change will help the students enrolled for this minor programme from other branches like EED, ECED, and CSED with the flexibility to choose courses of their choice from the minor curriculum.

The proposal is attached here [S100.11 \(i\)](#).

(ii) Proposal to allow M.Tech/M.Sc students to choose PG level courses offered by other departments as electives.

HOD-MED had submitted a request through DCC of MED to include the following clause about electives in the PG curriculum and syllabi (applicable from 2023 admission onwards) for the students to choose electives listed outside the programme curriculum.

“For electives, students may choose any M. Tech. level course offered in the Institute with the approval from the Programme Coordinator and Head of the Department”.

The matter was discussed in the 69th meeting of the BoAC. The BoAC resolved to recommend the proposal to the Senate for approval. Additionally, the BoAC recommended that the below-mentioned clause be added to the curriculum of all the M. Tech programmes offered by the institute.

*For electives, students may credit any M. Tech. level course offered in the Institute with the approval from the Programme Coordinator and Head of the Department. The consent of the Course Faculty also needs to be obtained.*

**The proposal approved by BoAC is attached here [S100.11](#).**

**The proposals are put up for the consideration and approval of the Senate**

**Decision:**

(i) The Senate deferred the item and recommended obtaining the opinion of IIT Kanpur and other stakeholders before a final decision is made.

(ii) The Senate approved the proposal and recommended that the above clause be incorporated in the curriculum of all M.Tech and M.Sc programmes, effective from the 2023 admissions onwards.

**S100.12: i) Certificate/PG Diploma programmes: Nomenclature for Programme code, course code, and Roll No.**

**ii) Format of the certificates to be awarded to NITC students when they exit the programme under Multiple Entry Multiple Exit scheme. Background:**

**Background:**

(i) The Senate has recently approved the proposal for offering PG Certificate and PG Diploma programmes by the Departments/Centres. Accordingly, there is a need to fix the nomenclature for the programme/ Course codes, and Roll no of the student. The proposed nomenclature is given below.

|                       | <b>Certificate Program</b> | <b>PG Diploma</b> |
|-----------------------|----------------------------|-------------------|
| <b>Programme code</b> | CXX51                      | DXX51             |
| <b>Course code</b>    | XX5101E                    | XX5101E           |
| <b>Roll no.</b>       | C250001XX                  | D250001XX         |

Here C stands for certificate programme, D stands for diploma programme, and XX stands for department/centre.

(ii) As the Institute plans to start new programmes such as PG Certificate, PG Diploma, and Executive M.Tech./MBA, and the introduction of the Multiple Entry Exit scheme for regular UG/PG programmes, the format of the certificates to be issued need to be framed. Therefore, appropriate certificate formats have been proposed to ensure consistency and clarity in awarding qualifications. The proposed certificate formats approved by BoAC are attached here. [S100.12](#)

**The proposals are put up for the consideration and approval of the Senate.**

**Decision:**

- (i) The Senate resolved to approve the nomenclature for the programme/Course codes, and Roll no of the student as recommended by the BoAC
- (ii) Regarding the certificate formats recommended by the BoAC, a few modifications were suggested by the Senate. The final approved formats for the certificates are given in [Annexure 6](#).

**On the milestone occasion of its 100th meeting, the Senate placed on record its appreciation for the tireless service of all the former Deans (Academic) of NIT Calicut in shaping the academic framework and regulations of the institute. The meeting concluded at 6.30 PM with thanks to the Chairman and Senate members.**

**Registrar & Secretary**