

Minutes of the 17th Meeting of the Academic Council of NMAMIT, Nitte

on 4 September 2021 at 10.00 A.M.

through online platform (Google Meet)

Members Present:

1. Dr. Niranjana N. Chiplunkar, Principal and Chairman of A.C.
2. Dr. Abdul Sharief, Professor & Dean, School of Engineering, Presidency University, Itgalpur Rajanakunte, Yelahanka, Bengaluru -- VTU Nominee
3. Dr. S. K. Prasad, Professor & Head of Civil Engg., Vidyavardhaka College of Engineering, Mysuru – VTU Nominee
4. Dr. Rohini Nagapadma, Former Principal, The National Institute of Engineering, Mysuru – VTU Nominee
5. Dr. Mattur C. Narasimhan, Professor, Civil Engg Dept. NITK, Surathkal – External Member
6. Dr. K. C. Chandrasekaran, Professor, Dept. of CSE, NITK Surathkal – External Member
7. Mr. Ramachandra Acharya, Chief Technology Officer, Global Delight Technologies, Udupi -- External Member
8. Dr. A. N. Parameswaran – Director, Industry Institute Interaction
9. Dr. Shrinivasa Rao B. R. – Vice Principal & Controller of Examination
10. Dr. K. Sankaran - Director, MBA
11. Dr. Shashikanth Karinka - HoD, Mechanical
12. Dr. C. Vaman Rao - HoD, Biotechnology
13. Dr. Karthik Pai B. H. - HoD, ISE
14. Dr. Jyothi Shetty - HoD, CSE
15. Dr. Nagesh Prabhu - HoD, E&E
16. Dr. Arun Kumar Bhat - HoD, Civil
17. Dr. KV SSSS Sairam - HoD, E&C
18. Dr. Udaya Kumar Shenoy - HoD, CCE
19. Dr. Sharada Udaya Shenoy- HoD, AI & ML
20. Dr. Muralidhara - Incharge, Robotics & Artificial Intelligence
21. Dr. Surendra Shetty - HoD, MCA
22. Dr. Shobha R. Prabhu - HoD, Physics
23. Dr. Shivaprasad Shetty - HoD, Chemistry
24. Dr. Kumudakshi - HoD, Mathematics
25. Prof. Rashmi Hegde - HoD, Humanities
26. Dr. Narasimha Bailkeri - 1st year Co-ordinator
27. Prof. Vinay B. R. - Professor & EDC In-charge
28. Dr. Radhakrishna Sharma - Professor, MBA
29. Dr. I. R. Mithanthaya - Vice Principal & Secretary AC

MINUTES

Dr. I. R. Mithanthaya, Secretary of the Academic council and The Dean Academics started the meeting with a note of welcome to all VTU nominees, External and internal members to the 17th Academic Council meeting and briefly discussed the agenda for the meeting. Member Secretary requested Principal Dr. Niranjan N. Chiplunkar for his opening remarks.

Dr. Niranjan N. Chiplunkar, Chairman of A.C. in his opening remarks, welcomed all the members and he said recently the Institute conducted Department wise Board of Studies Meeting, Joint BoS meeting, and also Special Joint BoS meeting to discuss the implementation of New Education Policy in Engineering Programme.

Vice Principal thanked Principal for his opening remarks.

A.C.17.1: As per agenda, Dr. I. R. Mithanthaya read all the resolutions of previous Academic council meeting held on 12 September 2020. He said that the approved Scheme & Syllabi of B.E, MCA & M.Tech were followed, the scheme and Syllabi of new Engg. Programme Artificial Intelligence & Machine Learning and Computer Communication Engineering are wetted through the BoS, Kannada courses are converted as credit-based subject in the 2nd year, 36 Open Electives were offered for the VIII semester students, some arrangements have been done for the slow learners by taking the special causes through online mode, Industry 4.0 courses (Artificial Intelligence, Machine Learning, IoT, Architecting with Google Compute Engine & Robotics Process Automation Design & Development etc.) are introduced, moodle LMS was effectively used for Lab records and few open access tools (Wireshark, Rstudio, Xilinx) are used. He also said that every department offered Coursera / NPTEL courses in the place of the core elective courses.

Academic Council members approved the minutes of 16th Academic Council Meeting.

A.C.17.2: Vice Principal & Dean (Academics) sought approval for the Ratification / modification made in the scheme and syllabi of B.E, M.Tech and MCA.

Member Secretary said that every department has undergone the Board of Studies meeting during June/July 2021 through online mode. As per the suggestions given by the BoS members, modifications are incorporated in the syllabus of both UG and PG courses. Each Department HoD's briefed about the changes / modifications incorporated in the syllabus.

1. Dr. Shobha R. Prabhu, HoD, Dept. of Physics informed that in Unit-III, **Statistical Distribution** - 1 hour portion has been included and in Nordheim's rule 1 hour is removed. In Unit-IV 3 hours' portion is rearranged in order to have exact flow. She also said that no changes has been made in "Engineering Physics Laboratory" (21PH109).
2. Dr. Shivaprasad Shetty, HoD of Chemistry Department said that the syllabus of "**Engineering Chemistry**" (21CY110) has been approved with minor changes. In unit - I, Synthesis, properties and applications of Polythene has been included and in Unit -V, An application of polymers in sensor systems are included. No changes are made in "Engineering Chemistry laboratory" (21CY117).
3. Prof. Rashmi Hegde, HoD of Humanities Department said that the Dept. BoS meeting was conducted on 15 July 2021. She mentioned that minor modifications were made in Unit 1 of the course **Enhancing Self Competence (20HU311)**; Self-Management and Self-Motivation concepts were added to unit 1 and in Unit 4 Cultural Etiquette was introduced in place of Etiquette. Secondly, some modifications were made in the subject "**Functional English & Communication Skills**" (19ENGDIP501) offered to the Lateral Entry students, in Unit 3 Speaking Skills is in place of Professional Communication Skills. As per VTU norms Samskrutika / Balake Kannada (19HU312) is allotted one

credit. The major highlight is a new course offered from this academic year namely “**Introduction to German Language**” as an Open Elective subject. The course is facilitated by Dr. Shashikanth Karinka, Head, Dept. of Mechanical Engg., NMAMIT, Nitte. The subject “**Engineering Management**” (18HU701) has been accredited with 3 credits instead of earlier 4 credits in view of the 175 credits curriculum requirement of the Information Science Branch.

4. Dr. Kumudakshi, HoD - Mathematics said that during the BoS meeting major modifications done on Civil Engineering Mathematics subjects. **In 20CV301 & 20CV401** Numerical Methods topic is shifted to IV semester (20CV401) of present syllabus (Basic Statistics of IV semester topic is removed) and Vector Calculus is introduced) In Mechanical, E&C and EE branch (**20ME401/20EC401/20EE401**) to have continuity in Unit I- Finite differences and interpolation topics are included. The title of “**Discrete Mathematics**” which is offering for CS, IS, AIML & CCE branch is changed to “Discrete Mathematical Structures”. **In Matdip301 & Matdip401, 5 units** are reduced to **3 units** and **In Matdip301** vector calculus and Finite differences are removed, these topics are replaced by Matrices.
5. During the discussion on modification in the syllabus of Biotechnology Engineering, HoD - Dr. Vaman Rao said that the major changes has been happened regarding the non credit course “Environmental Studies” that is going to be taken by Biotechnology Dept. from this academic year, earlier it was taken by Dept. of Civil Engg. The code of the subject 20CV113 has been changed to 20BT113. The schemes of 2nd year to 4th year, the credit will be 175 credits for all the schemes. There is no major change in 19BT Scheme for 2nd year and 20BT scheme for 3rd year. Some minor changes are made in “**Immunology**” (18BT701) course content is revised. The Unit 1 Immunodiagnostic Techniques topics match with the topics in Immunology practicals, hence it is deleted from the theory syllabus. It is suggested to conduct immunodiagnostic techniques topics as tutorial topics in the lab. Unit 2 and Unit 3 are revised and expanded as Unit 1, Unit 2 and Unit 3 to provide in depth

understanding on Basic Immunological Molecular Mechanisms, mechanisms of action and consequences. In **(18BT703) “Immunology Lab”** course content is revised. The topics on Immunodiagnostic techniques from Immunology theory course is included as Tutorial component. It is suggested to conduct these topics as video lecture-based self-study material on relevant topics as pre-lab materials. With this there will be proper synchronization of theory topics with practical’s performed by the students.

6. Dr. Arun Kumar Bhat, HOD of Civil Engg. Department said that in this academic year we have added a new software based elective stream which focuses on Civil Engineering software based training. In this stream 8 new courses were proposed. Out of which, this year we are offering 2 courses **“CAD in Civil Engg.”** & **“PROJECT PLANNING USING M S PROJECT”** for final year. Electives like Python Programming, Java programming, Fundamentals of machine learning, Application of RS & GIS for Water resources management, Software Advances in Pavement Design and 3D BIM - AUTODESK REVIT are also added in the same stream. In the current academic year around 22 students are taken Python Programming as elective. We have added 2 Coursera subjects (18CVM101) **“Project Management”** (20CVM102) & **“Building Information Modeling”**. In addition to this, he said that one more elective **“Business Management”** which will be taught about the Taxes including GST and which will be useful for entrepreneurs of Civil Department.

Dr. S K Prasad expressed his happiness about adding Software’s related subjects, Project Based Learning’s and subjects like Business Management. He said that as per VTU new education Policy it is biggest challenge for us to reduce from 83 credits of core subjects to 43 credits.

He asked about how the Dept. has been planned for reducing the credits?

For his question HOD, Civil Engg replied that the plan for the first year is ready and remaining is yet to be finalized.

7. During the discussion on modification in the syllabus of Computer Science & Engineering HoD, Dr. Jyothi Shetty said, we have proposed new scheme for VII & VIII semester students of 2018-22 batch. In VII semester scheme we includes 2 core subjects includes **“Compiler Designing and Softer Testing”** and Lab, 2 elective subjects and 1 open elective. It also includes seminar and Project Phase- I and in VIII semester scheme includes 1 elective and open elective and along with Project Phase – II. The subject of coursera subjects are introduced as moco electives i.e., **“Introduction to Tensor Flow for Artificial Intelligence”** for VI semester “Natural Language Processing” subject will be offered for the VII semester students. **To meet the current industry needs more NODE topics is included** in other programming elective subjects. We shifted the **“Data Communication subject”** from III semester to IV semester in order to balance the credits and to regulate the load on students in III semester. **Increased the credits of python programming lab from 1.5 credits to 2.5 credits and software engineering from 4 credits to 3 credits.** During BoS meeting of M.Tech in CSE, entire syllabus of **“Big Data Analytics”** subjects is revised to keep more depth and to meet the current emerging trends.

Dr. K. C. Chandrasekaran, Professor, CSE, NITK advised the HoD’s to eliminate the “Compiler Design” in VII semester and it can be introduced as an elective and suggested to introduce some other subjects like **“Business Intelligence”** in place of that.

Mr. Ramachandra Acharya also shared his opinion that instead of “Complier Design” subject in VII semester, “Cloud Computing” can

also be introduced so that students can know more about the recent technology.

Principal said that the inputs given by Dr. Chandrasekaran and Mr. Ramachandra Acharya will be taken into consideration while drafting the syllabus of next Academic year.

8. Dr. Nagesh Prabhu, HoD of Electrical & Electronics Engineering said that this year we had offered **2 value added courses “Introduction to MAT Lab” for Engineering Students and “Introduction to Power System Simulation”**. In old scheme 2017-21 batch, we have not incorporated any changes. In 2018-22 scheme we had introduced 2 coursera courses **“Sensors and Sensor Circuit Design” and “Motors and Motor Control Circuits”** in place of any one department elective. 3 new elective courses are added. In 2019-23 scheme only minor changes has been incorporated. In 2020-24 batch the course content of few courses have been reorganized and textbooks and reference books are revised. In 2021-25 batch, the content of “Basic Electrical Engg.” & “Basic Electrical Engg. Laboratory” will be offered in I / II semester approved without any changes. As per VTU NEP’s we have made some minor changes in Basic Electrical Engg. subjects and prepared the syllabus of 3 credits with 3 lecture hours.

Dr. Rohini Nagapadma suggested to introduce “Project Based Learning’s in almost all the subjects, Video Series in Laboratories, and introducing more coursera subjects. She said that this will definitely help the students a lot and students will be benefited.

Dr. Nagesh Prabhu replied the project based learning is introduced in all numerical oriented subjects and where the software’s like MATLAB and any other simulation software’s which can be used in our departments and preparation of videos for various lab experiments has done and also instructions were given for the students for making use

of lab videos and when they come here for offline lab classes it will be easy for them to understand better.

Principal said that NMAMIT has subscribed the licenses of MAT Lab for all the students and faculty members. All students /faculty can access entire tools of MATLAB. So, we are also trying to make this matlab as part of many courses as possible so that by doing some projects using this MATLAB tool box relevant to that subjects so they can learn in depth.

9. During the discussion on modification on syllabus of Electronics & Communication Engg. HoD, Dr. KV SSSS Sairam said that minor changes have been incorporated in the subject of “Control Systems”, “VLSI Design” and “Cryptography”. Syllabi for the following final year courses proposed for 175 credit system were approved “Power Electronics”, “Computer Networks Lab” and “Power Electronics Lab”. He said there is no change made in syllabus of M.Tech in VLSI Design and Embedded Systems.

10. During the discussion on modification in the syllabus of Information Science & Engg. Dr. Karthik Pai HoD said that for 2018-22 batch we are added Security lab course of 1 credit, **“Web Technologies”** is added as Open Electives in VII Semester and **“Introduction to Python Programming”** Open Elective in VIII Semester. Coursera course **“Front-end JavaScript Angular Framework”** added as an elective in Seventh Semester. 2019-23 batch **“Microcontroller & Embedded Systems”** theory and lab course is added in place of Microprocessors & Interfacing theory and lab. 8 new electives replaced with new electives to keep in line with industry 4.0. In 2020-24 batch only we have done changes in tutorial and self study regarding of **“Discrete Mathematical Structures”** and **“Data Structures”**. We also added one Value added courses **“Total Quality Management”**.

Dr. Niranjan N Chiplunkar said in the current academic year 2021-22, we will be working with 3 different schemes like 200 credits is

in the final year, 175 credits in 3rd and 2nd year and 160 credits for first year. So that this time we have not made major changes in the scheme and syllabus of the department.

11. During the discussion on modification on syllabus of Mechanical Engg., HoD, Dr. Shashikantha Karinka said that Elective – I in V semester includes Business Analytics using Python, which incorporates inclusion of some of the very important topics of Operations Research and Total Quality Management along with Artificial Intelligence which would otherwise not be covered for that batch of students due to reduction of credits from 200 to 175. We introduced Problem Based Learning (PBL) concepts in a few courses and included Virtual lab experiments in some of the courses and introduction of URE (Undergraduate Research Experience) from III semester as a Value-Added Course for quick learners. The department also introduced MATLAB and some coursera courses subjects. We also introduced Open Electives in VII & VIII semester. In M.Tech Courses we have not made much changes.

Dr. Abdul Sharief appreciated the syllabus of Mechanical Engg. and he said that it is very well designed and everything is covered. He also suggested to introduce “Python & Innovative Projects” like Aurdino & Raspberry in the First-year syllabus itself. Dr. Shashikanth Karinka replied that we have Python Programming in 5th semester and as per your suggestions we will try to introduce it in earlier semester (may be in III or IV semester).

12. During the presentation and discussion on the scheme and syllabus of Computer and Communication Engineering, HoD, Dr. Udaya Kumar K Shenoy informed that NMAMIT started BE in Computer and Communication Engineering in the last academic year and this year the first batch of students are enter in the department. In the BOS meeting scheme and syllabus of III & IV semester was presented and most of the subjects are kept in line with scheme of Computer Science and Information Science Engineering to provide foundation courses in CS Stream. More focus on departmental specialization is given from V

semester onwards. BOS external members suggested to move the Operating Systems subject to the V semester and suggested to introduce Software Engineer in the IV semester itself. Dr. Shenoy informed that the object oriented concepts will be introduced with the Python programming instead of C++ or Java. However, C++ and Java are still considered as the essential part of placement activities of CS stream the department will offer lab based compulsory programming audit courses to all the CCE students on C++ and Java in the III and IV semester respectively.

Mr. Ramachandra welcomed the decision to drop “Java and C++” as core subjects. He appreciated teaching Object Oriented Programming with Python and mentioned that this is the need of hour today. He also suggested to CS and IS branches to consider the same in coming years and to introduce MATLAB. Dr. Udaya Kumar Shenoy stated that the VI and VII semester Simulation lab and Wireless Networks lab will use MATLAB for network analysis.

13. During the discussion on modification on syllabus of Artificial Intelligence & Machine Learning Engg., HoD, Dr. Sharada Udaya Shenoy said that in the current academic year our first batch students of AIML is entering our department. For the 2nd year we have adopted subjects from Computer Science & Engg. except one subjects related to AIML **“DATA Science”** is added. In a “Data Science” syllabus we have added the Introduction of Data Science along with the XL & R Programming. As per the suggestion received by the BoS External members we revised the **“Python”** syllabus to suit with the Industry needs. As per the demand from the Industry **“C++”** we have planned it to include it as audit or bridge course somewhere in the IV semester.

14. Dr. Surendra Shetty, HoD of MCA said that minor changes were made as per the suggestions given by the external members. One major

component is that as per the new VTU norms and guidelines an **“Internship”** is newly added in the IV semester with course code 20MCA401 with 3 credits. The credits of the “Major Project” component with course code 20MCA402 in the IV semester is changed to 21. More content pertaining related to Artificial intelligence to be added to Unit 1 of the course “Artificial Intelligence and Machine Learning “ with course code 21MCA301.

Academic Council members approved these modifications.

A.C.17.3: Dr. I. R. Mithanthaya said that before the regular BoS Meeting of all the departments, we had conducted Joint BoS meeting to finalize the first year subjects, which was conducted on 25 June 2021. He briefly read the minutes of the Joint BoS Meeting i.e, Fixation of Dates of BoS meeting of all the Departments, small changes / modification in the first year subjects, finalizing the open electives to be offered in the VII & VIII semester, adding NCC related subject “NCC-NAVY” Ocean of Opportunities as a credit based elective subject, proposal for having same subjects for 2nd year CSE/ISE/AIML/CCE, revaluation of CIE only for noncredit subjects and he sought the approval of Academic Council members for the same.

Academic Council members approved the Minutes of Joint BoS meeting.

A.C.17.4: Dr. I. R. Mithanthaya said that we had an interaction with honorable Vice Chancellor of VTU, Dr. Karisiddappa on 13 August about the implementation of New Education Policy. Based on that we had conducted HoD’s meeting and Special Joint BoS meeting on 25 August 2021 and prepared a draft scheme of I and II semester, which is of 160 credits for 2021-25 batch in line with draft report received from VTU, Belgavi. He also said that we introduced Technical English - I in first semester and Technical English – II in second semester, added Ability Enhancement courses and at the end of the II semester, students has

to undergo 3 weeks of summer internship like Model Making using wood/metal/plastic/pipes etc. or Electrical / Electronic hobby projects. The major issue is reducing the credits of the main subjects.

Dr. Niranjan N Chiplunkar, Principal said that as per the draft received from VTU both I & II semester we have introduced 2 basic science core courses and 2 Engineering Core courses along with Technical English and Ability Enhancement Courses i.e, Biology for Engineers in one of the semester and Engineering Workshop Practice in another semester. Humanities Department faculties are rewriting the entire syllabus, course content and also the Textbooks for this Technical English I & II in line with VTU syllabus. Even though the Internship at the end of the II semester we have planned to introduce this Internship component slowly right from the beginning of I semester itself. We would like to identify a group of students (may be 5-10) with one faculty mentor, irrespective of which department that students belong to and the faculty have to initially indicate what kind of internship is being offered to this group of students. Once all the ideas from faculty members are finalized, we will evaluate and scrutinize this. Then the group of students must undergo that particular type of internship under the supervision of that faculty. At the end of the first year, they must have the protocol / model and during the vacation they must prepare the report and submit it in beginning of III semester because the credits for this Summer Internship will be given in the III semester.

Dr. Chandrashekar said Introducing Internship concept for 1st year students is really good and it cannot be possible during the 1st year vacation and if it is implemented from the beginning the students will definitely do a good job.

Dr. Rohini Nagapadma suggested that, since you are very actively using a Moodle platform, you can go into collaborating learning

especially for this internship, you can farm students into groups, divide the task among the students, and they can update in the moodle platform, so the supervisor has also come to know what was happening. This collaborating learning will also helps group learning, hence students will also enjoy the vacation.

In view of collaborative learning Dr. I. R. Mithanthaya said Dept. of Biotechnology is already using this type of interaction with their students.

A.C.17.5: Vice Principal sought approval for the open electives offered in VII & VIII semester. He presented the list of open electives and said that for 2018-22 scheme we have offered 2 open elective groups for VII & VIII semester. This year we clubbed both General Open Electives and Open electives and made Group-I in VII semester and Group-II in VIII semester. In VII semester we had offered total 22 open electives and 1092 students are opted.

A.C members approved the list of Open Electives.

A.C.17.6 Vice Principal & Dean (Aca.) sought approval for the new Engineering Programme: Robotics and Artificial Intelligence. He presented the detailed scheme and syllabus of the programme. Dr. Muralidhara K incharge of Robotics and Artificial Intelligence Engg. Programme and gave the brief details of scheme and syllabi of this to the members.

Academic Council members approved the Scheme and Syllabi of New Engineering Programme: Robotics and Artificial Intelligence.

A.C.17.7: Member Secretary said all the Departments had offered 10 value added courses in last summer vacation. More than 500 students had attended these courses in the last semester and we have given course completion

certificate based on the performance of the test and also, we have received a good number of feedbacks from the students.

A.C members approved the list of value added courses.

A.C.17.8: Member Secretary presented the list of Coursera courses offered by all the Department's during the last academic year and he said that around 150 students are taken these courses.

Dr. Nagesh Prabhu, Co-ordinator of Coursera courses said, NMAMIT, Nitte had about 250 Coursera licenses and out of these licenses at any time frame only 250 can log in / register. Whereas under 1 license 3 coursera courses can be registered by any registrant (either he can be a student or faculty member). So that 250 licenses maximum 750 courses can be registered in one calendar year. While allocating the coursera courses under different departments it should be at par with the any elective offered by the Department. Some of the Departments have identified a single coursera course and offered it as a programme elective. Students would long in to coursera and undergo the recorded videos and completes all the assignments. After scoring the final grades coursera completion certificates issued and that is taken as a continuous internal evaluation. All the progress of the students are being monitored by a coursera coordinator assigning the subjects allotted by the departments. About 163 students are opted the Coursera courses and completed successfully. In view of giving more value to the coursera course we have decided to conduct Semester End Examination. Students will get 3 credits for this coursera course only after scoring in CIE and clearing the Semester End Examination.

Dr. Narasimhan asked is the coursera courses has taken as platform for the Mooc courses?

Principal replied that we have a very active NPTEL centre and recently we have been awarded A+ grade. More than 768 students completed NPTEL courses of minimum 2 credits.

Dr. Nagesh Prabhu said VTU has started a programme B.E degree honours, the students must earn 20 credits in addition to the 175 credits. VTU suggest only NPTEL courses and they have provided the list of such NPTEL courses which is approved by the Board of Studies of VTU. We have passed this to the students and large number of students have registered for this Honours programme and they have successfully completed. All those students who have completed NPTEL courses with 20 credits they will be awarded B.E Degree Honours at the end of 4 year.

Dr. I. R. Mithanthaya said that we already started NPTEL courses in place of Core elective but only thing is that it should match with credits and also it should be wetted through the Departments.

A.C.17.9: Vice Principal sought approval for the list of students eligible for Graduation Certificates. He said that this year totally 1101 students are eligible for the graduation certificate and also, he presented the result of Undergraduate & Post graduate of ODD semester (I, III & V semester) examinations held on April 2021.

Academic council members approved the list of eligible students for Graduation Certificate and approved the results of UG & PG.

Member Secretary presented the list of Gold Medal and Silver Medal winner of UG & PG, those who have scored highest CGPA in semester end examination.

Principal said, students have successfully completed VIII semester examination of both UG & PG in offline mode and results are

announced and most of the placed students are already joined the company. Based on their CGPA they have been graded and toppers will get Gold medal during the forthcoming graduation day 2020-21.

The Academic Council members approved the list.

A.C.17.10: Dr. Niranjan N Chiplunkar invited all the Academic Council members for the forthcoming Institutions Graduation Day on 24 September 2021 (Friday, 10.00 am to 11.00 am) through online mode.

Meeting ended with vote of thanks by member secretary.

Dr. I. R. Mithanthaya
Secretary, Academic Council

Dr. Niranjan N. Chiplunkar
Chairman, Academic Council