

**THIAGARAJAR COLLEGE OF ENGINEERING: MADURAI 625 015**  
(An Autonomous Institution Affiliated to Anna University)

**Minutes of the Meeting of the Forty Eighth Academic Council**

The Forty Eighth meeting of Academic Council was held on 19<sup>th</sup> July 2014, Saturday at 10.30 AM in the Conference Hall at Guest House under the Chairmanship of Dr.V.Abhaikumar, Principal. The following members were present.

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|---------------------------------|--|
| 1. Dr.D.K.Subramanian           | Former Professor, Indian Institute of Science, Bengaluru |
| 2. Dr.N.Vedachalam              | ISRO Distinguished Professor, ISRO, Trivandrum           |
| 3. Dr. M.Alagar                 | Professor of Chemical Engg., AC Tech. AU, Chennai        |
| 4. Mr.A.M.Rafeek                | Special Officer, CDC, DTE, Chennai                       |
| 5. Dr.R.Vasudevan               | Dean, Co-curricular and Extracurricular Activities       |
| 6. Dr.V.Mohan                   | Dean, Planning and Administration                        |
| 7. Dr.N.Jawahar                 | Dean, Research and Development                           |
| 8. Dr.C.Muruganantham           | Head, Department of Mechanical Engineering               |
| 9. Dr.S.Raju                    | Head, Department of Electronics and Commn. Engg.         |
| 10. Dr.N.Kamaraj                | Head, Dept. of Electrical & Electronics Engineering.     |
| 11. Dr.S.Mercy Shalinie         | Head, Dept. of Computer Science & Engineering            |
| 12. Dr.S.Muthuramalingam        | Head, Dept. of Information Technology                    |
| 13. Dr.Jinu Loueshidha Kitchley | Head, Dept. of Architecture                              |
| 14. Dr.S.Parthasarathy          | Head, Dept. of Computer Applications                     |
| 15. Dr.K.Radha                  | Head, Dept of Chemistry                                  |
| 16. Dr.R.Vasuki                 | Head, Dept. of Physics                                   |
| 17. Dr.T. Velrajan              | Professor, Dept. of Civil Engineering                    |
| 18. Dr. PL.K.Palaniappan        | Associate Professor, Dept. of Mechanical Engineering     |
| 19. Dr.S.Charlesraja            | Assistant Professor, Dept. of Elect. & Electronics Engg. |
| 20. Dr.S.Kanthamani             | Associate Professor, Dept. of Electronics & Commn. Engg. |
| 21. Mrs.B.Subbulakshmi          | Assistant Professor, Dept. of Computer Science and Engg. |
| 22. Mrs.K.V.Uma                 | Assistant Professor, Dept. of Information Technology     |
| 23. Dr. S.Vijayalakshmi         | Asst. Professor, Dept. of Computer Applications          |
| 24. Mrs.R.Shanthi Priya         | Asst. Professor, Dept. of Architecture                   |
| 25. Dr. G.Jothilakshmi          | Associate Professor, Dept of Mathematics                 |
| 26. Dr.S.Rajathi                | Associate Professor, Department of Physics               |
| 27. Dr.M.Palaninatha Raja       | Registrar - Ex-Officio Secretary                         |

**Members of Pedagogy Group**

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|--------------------------------|--|
| 1. Dr.S.J Thiruvengadam        | Professor, Dept. of Electronics and Communication Engg.  |
| 2. Dr.G.Chitra                 | Associate Professor, Department of Civil Engineering     |
| 3. Dr.S.Saravana Perumaal      | Asst. Professor, Department of Mechanical Engineering    |
| 4. Dr.S.Padmavathi             | Associate Professor, Dept. of Computer Science and Engg. |
| 5. Mr.B.Ashok Kumar            | Asst. Professor, Department of EEE                       |
| 6. Mrs.C.Jeyamala              | Asst. Professor, Department of Information Technology    |
| 7. Mr.A.L.Subramanian          | Asst. Professor, Department of Physics                   |
| 8. Mr.S.Rajkumar               | Asst. Professor, Department of Chemistry                 |
| 9. Ms.D.Anitha                 | Asst. Professor, Department of Computer Applications     |
| 10. Mrs.M.Sivananda Saraswathy | Asst. Professor, Department of Mathematics               |

The following members had expressed their inability to attend the meeting due to their pre-occupation.

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|------------------------|---|
| 1. Dr.P.V.Vaidyanathan | Former Vice-Chancellor, Annamalai University      |
| 2. Dr.R.Rudramurthy    | Principal, PSG College of Technology, Coimbatore  |
| 3. Dr.Alok Nath De     | Senior Vice President and CTO, Samsung, Bengaluru |
| 4. Dr.K.Arunachalam    | Head, Dept of Civil Engineering                   |
| 5. Dr.M.Kottaisami     | Professor, Department of Chemistry                |

**The Agenda for the meeting:**

- To consider the business brought forward by the Boards of Studies and by the Standing Committee of the Academic Council.
- To discuss any other matter pertaining to the academic activities of the college.

**48:01** To confirm the minutes of the 47<sup>th</sup> meeting of the Academic Council held on 1<sup>st</sup> March 2014.

*Resolved to confirm the minutes of the 47<sup>th</sup> academic council held on 1<sup>st</sup> March 2014 as there were no comments on the minutes.*

**48:02** To review the action taken on the Minutes of the 47<sup>th</sup> meeting held on 1<sup>st</sup> March 2014.

*The Chairman presented the Action Taken Report on the suggestions made during the 47<sup>th</sup> academic Council meeting. The Council resolved to ratify the actions taken as presented and accepted the time requested for implementation of few suggestions. .*

**48:03** To consider and ratify the recommendations of Board of Studies of Electrical and Electronics Engineering to implement the subjects of study, scheme of examinations, syllabi for the core and elective subjects of VII and VIII Semesters B.E (Electrical and Electronics Engineering) Degree Programme as given in **Annexure-A** (Page No.1 to 41).

*Resolved to approve and ratify the implementation of the syllabi for the subjects of study, scheme of examinations, syllabi for the core and elective subjects of VII and VIII Semesters B.E (Electrical and Electronics Engineering) Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2011-2012 onwards.

**48:04** To consider and ratify the recommendations of Board of Studies of Electrical and Electronics Engineering to introduce the new elective subject 'CNES - State Estimation' of M.E. Control and Instrumentation Engineering Degree Programme as given in **Annexure - B**(Page No.42 to 46).

*Resolved to approve and ratify the introduction of the new elective subject 'CNES - State Estimation' of M.E. Control and Instrumentation Engineering Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-2015 onwards.



- 48:05** To consider the recommendations of Board of Studies of Electrical and Electronics Engineering to introduce an One Credit Course on 'EIK - Industrial Safety' of B.E. Electrical and Electronics Engineering Programme as given in **Annexure – C** (Page No.47 to49).

*Resolved to approve the introduction of One Credit Course on 'EIK - Industrial Safety' of B.E. Electrical and Electronics Engineering Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2011-2012 onwards.

- 48:06** To consider the recommendations of Board of Studies of Computer Science and Engineering to introduce new elective subject 'CCN - Storage Infrastructure Management' of B.E. Computer Science and Engineering degree programme as given in **Annexure –D** (Page No 50 to59).

*Resolved to approve the introduction of new elective subject 'CCN - Storage Infrastructure Management' of B.E. Computer Science and Engineering degree programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2012-13 onwards.

- 48:07** To consider the recommendations of Board of Studies of Computer Science and Engineering to introduce the one credit courses 'CIJ - Practical Approaches to Networking' and 'CIK - Introduction to Microsoft Active Directory Domain Services' for B.E. Computer Science and Engineering degree programme as given in **Annexure –E** (Page No 60 to 72).

*Resolved to approve the introduction of one credit courses 'CIJ - Practical Approaches to Networking' and 'CIK - Introduction to Microsoft Active Directory Domain Services' for B.E. Computer Science and Engineering degree programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2012-13 onwards.

- 48:08** To consider the recommendations of Board of Studies of Information Technology to introduce the subjects of study, scheme of examinations, syllabi for the core subjects of I Semester M.E (Computer Science and Information Security) Degree Programme as given in **Annexure–F**(Page No.73 to 115)

*Resolved to approve the introduction of the subjects of study, scheme of examinations, syllabi for the core subjects of I Semester M.E (Computer Science and Information Security) Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-2015 onwards.

- 48:09** To consider the recommendations of Board of Studies of Information Technology to introduce the following Elective subjects for B.Tech. Information Technology Degree programme as given in **Annexure – G** (Page No. 116 to 140).

TCW	Software Quality Assurance
TCX	Advanced Java Programming
TCY	Service Oriented Architecture
TCZ	Cloud Computing
TCI	Big Data Technologies

*Resolved to approve the introduction of these elective subjects for B.Tech. Information Technology Degree programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2011-2012 onwards.

- 48:10** To consider the recommendations of Board of Studies of Information Technology to introduce General Elective courses 'TGC - Software Engineering' and 'TGD - Object Oriented Programming with C++' for B.E. Degree programmes as given in **Annexure –H** (Page No 141 to 152).

*Resolved to approve the introduction of General Elective courses 'TGC - Software Engineering' and 'TGD - Object Oriented Programming with C++' for B.E. Degree programmes as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2012-13 onwards.

- 48:11** To consider and ratify the recommendations of Board of Studies of Mechanical Engineering to introduce General Elective course 'GGF - System Approach for Engineers' for B.E./B.Tech. Degree Programmes as given in **Annexure –J** (Page No.153 to 158).

*Resolved to approve and ratify the introduction of General Elective course 'GGF- System Approach for Engineers' for B.E./B.Tech. Degree Programmes as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2011-12 onwards.

- 48:12** To consider and approve the recommendations of Board of Studies of Mechanical Engineering to introduce one credit courses 'G1M - Gas Turbine Engines' and 'G1N - Non-destructive Testing' for B.E. Mechanical Engineering degree programme as given in **Annexure –K** (Page No 159 to 165).

*Resolved to approve the introduction of one credit courses 'G1M - Gas Turbine Engines' and 'G1N - Non-destructive Testing' for B.E. Mechanical Engineering degree programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2011-12 onwards.



- 48:13** To consider the recommendations of Board of Studies of Electronics and Communication Engineering to introduce new elective course '*DCV- Bio-Medical Instrumentation*' for B.E. Electronics and Communication Engineering Degree Programme as given in **Annexure –L** (Page No.166 to 170).

*Resolved to approve the introduction of new elective course 'DCV- Bio-Medical Instrumentation' for B.E. Electronics and Communication Engineering Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2011-12 onwards.

- 48:14** To consider the recommendations of Board of Studies of Electronics and Communication Engineering to introduce new elective course '*WT2H - Physical Layer Security*' for M.E. Wireless Technologies Degree Programme as given in **Annexure –M** (Page No.171 to 175).

*Resolved to approve the introduction of new elective course 'WT2H- Physical Layer Security' for M.E. Wireless Technologies Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:15** To consider the recommendations of Board of Studies of Electronics and Communication Engineering to introduce new Elective courses '*N3K - Solid State Device Modeling and Simulation*', '*N2Q - Nano Scale Transistors*' and '*N2P - Nano MOSFET Modeling*' for M.E. Communication Systems Degree Programme as given in **Annexure –N**(Page No.176 to 192).

*Resolved to approve the introduction of new elective courses 'N3K- Solid State Device Modeling and Simulation', 'N2Q - Nano Scale Transistors' and 'N2P - Nano MOSFET Modeling' for M.E. Communication Systems Degree Programme as presented in the academic council.*

This comes into effect from the even semester of the academic year 2014-15 onwards.

- 48:16** To consider the recommendations of Board of Studies of Civil Engineering to introduce one credit courses '*B1E - Durability of Concrete Structures*' and '*B1F - Arbitration and Dispute Resolution*' for B.E. Civil Engineering Degree Programme as given in **Annexure –P**(Page No.193 to 199).

*Resolved to approve the introduction of one credit courses 'B1E- Durability of Concrete Structures' and 'B1F- Arbitration and Dispute Resolution' for B.E. Civil Engineering Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2011-12 onwards.

- 48:17** To consider the recommendations of Board of Studies of Architecture to introduce One Credit Short Term Course on 'ARAST6 - Designing with Nature' for B.Arch. Degree Programme as given in **Annexure –Q** (Page No.200 to 201).

*Resolved to approve the introduction of One Credit Short Term Course on 'ARAST6 - Designing with Nature' for B.Arch. Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2010-11 onwards.

- 48:18** To consider the decision of Standing Committee of this academic council to introduce Curriculum framework of Outcome Based Education in B.E./B.Tech Degree Programmes as given in **Annexure - R** (Page No. 202 to 207)

*Resolved to approve the introduction of Curriculum framework of Outcome Based Education in B.E./B.Tech Degree Programmes as presented in the academic council.*

This comes into effect from the academic year 2014-15 onwards.

- 48:19** To consider the recommendations of Board of Studies of Mechanical Engineering to introduce the Scheduling of Courses for B.E. Mechanical Engineering Degree Programme as given in **Annexure –S** (Page No.208 to 211).

*Resolved to approve the introduction of Scheduling of Courses for B.E. Mechanical Engineering Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:20** To consider the recommendations of Board of Studies of Computer Science and Engineering to introduce the Scheduling of Courses for B.E. Computer Science and Engineering Degree Programme as given in **Annexure –T** (Page No.212 to 218).

*Resolved to approve the introduction of Scheduling of Courses for B.E. Computer Science and Engineering Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:21** To consider the recommendations of Board of Studies of Information Technology to introduce the Scheduling of Courses for B.Tech. Information Technology Degree Programme as given in **Annexure –U** (Page No.219 to 223).

*Resolved to approve the introduction of Scheduling of Courses for B.Tech. Information Technology Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.



- 48:22** To consider the recommendations of Board of Studies of Electronics and Communication Engineering to introduce the Scheduling of Courses for B.E. Electronics and Communication Engineering Degree Programme as given in **Annexure –V** (Page No.224 to 228).

*Resolved to approve the introduction of Scheduling of Courses for B.E. Electronics and Communication Engineering Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:23** To consider the recommendations of Board of Studies of Civil Engineering to introduce the Scheduling of Courses for B.E. Civil Engineering Degree Programme as given in **Annexure –W** (Page No.229 to 234).

*Resolved to approve the introduction of Scheduling of Courses for B.E. Civil Engineering Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:24** To consider the recommendations of Board of Studies of Electrical and Electronics Engineering to introduce the Scheduling of Courses for B.E. Electrical and Electronics Engineering Degree Programme as given in **Annexure –Y** (Page No. 235 to 241).

*Resolved to approve the introduction of Scheduling of Courses for B.E. Electrical and Electronics Engineering Degree Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:25** To consider the recommendations of Board of Studies of First Semester B.E./B.Tech. Degree Programmes to introduce Courses of Study, Scheme of Examinations, Syllabi for the First Semester B.E./B.Tech. Degree Programmes as given in **Annexure –Z** (Page No.242 to 281).

*Resolved to approve the introduction of Courses of Study, Scheme of Examinations, Syllabi for the First Semester B.E./B.Tech. Degree Programmes as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:26** To consider the recommendations of Board of Studies of Mechanical Engineering to introduce Subjects of Study, Scheme of Examinations, Syllabi for the First Semester M.E.Mechatronics Programme as given in **Annexure –AA** (Page No.282 to 322).

*Resolved to approve the introduction of Subjects of Study, Scheme of Examinations, Syllabi for the First Semester M.E.Mechatronics Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:27** To consider the recommendations of Board of Studies of Mechanical Engineering to introduce Scheduling of Courses for B.E. Mechatronics Programme as given in **Annexure –AB** (Page No.323).

*Resolved to approve the introduction of Scheduling of Courses for B.E. Mechatronics Programme as presented in the academic council.*

This comes into effect for the students admitted from the academic year 2014-15 onwards.

- 48:28** To consider the recommendations of Board of Studies of Architecture to conduct the Examinations for 'Theory cum Studio' subjects (except 'ARA36 3D Visualization and Modeling' and 'AR56 Working Drawing for Buildings') in the Department, with the question paper setting and evaluation including revaluation and moderation by the office of Controller of Examination, for B.Arch. Degree Programme.

*Resolved to approve to conduct the Examinations for 'Theory cum Studio' subjects (except 'ARA36 3D Visualization and Modeling' and 'AR56 Working Drawing for Buildings') in the Department, with the question paper setting and evaluation including revaluation and moderation by the office of Controller of Examination, for B.Arch. Degree Programme as presented in the academic council.*

This comes into effect from the odd semester of the academic year 2014-15 onwards

During the academic council meeting, the members had suggested the following points:

***Institution:***

- In the new curriculum framework for Outcome Based Education, the following points are to be addressed
  - The courses in the Programme core category may have subdivisions as Fundamentals, Systems and Applications.
  - Emphasis on Professional Practice, Employability and Research.
  - Course on Professional Ethics is to be introduced.
  - Computer Programming is to be renamed as Problem Solving using Computers
  - Credits for miniproject and seminar are to be included in the curriculum framework.
  - Credits for Institutional requirement may be given as range, instead of fixed value.
  - Interdisciplinary elective courses are to be visible



- Experiments for the Practical courses in the B.E./B.Tech degree programmes are to be framed in three modes namely Enquiry mode, Design mode and Product mode.
- One Credit Courses are to be introduced for M.E./M.Tech. Degree Programmes also.
- Vision and Mission of the College and Departments are to be fine tuned
- PEO-PO- CO mapping are to be revisited
- Faculty members publishing higher H-index publications may be rewarded
- Chairs/positions for Distinguished Scientist/Engineer may be created.
- Faculty members are to be encouraged to apply for awards such as Humbolt, INSPIRE.
- Applications are to be submitted for TEAM and CII Quality Award for Engineering Colleges.

## **Departments:**

### ***Civil Engineering***

- The content of one credit course on 'BIE Durability of Concrete Structures' is to be revised so that it deals with large systems.

### ***Mechanical Engineering***

- The topic on power plants is to be removed and in its place, Industrial safety practices are to be added.
- Courses like MEMS are to be introduced in M.E. Mechatronics Degree Programme.

### ***Electrical and Electronics Engineering***

- The title of the one credit course 'EIK - Industrial Safety' is to be changed as 'EIK - Safety Engineering'.
- The syllabi for Electrical Engineering part of the course '14ES160 Basics of Electrical and Electronics Engineering' is to be revised to introduce phasor/vector diagram and meters and to shorten the topic on statutory bodies of Indian Electricity.

### ***Electronics and Communication Engineering***

- The topics Amplifier and Oscillators are to be included in the course '14ES160 - Basics of Electrical and Electronics Engineering'.

### ***Computer Science and Engineering***

- The content of elective subject 'CCN- Storage Infrastructure Management' is to be revised.
- The topic 'Cloud Computing' is to be removed in elective subject 'CCN - Storage Infrastructure Management'.
- The content of one credit courses 'CIJ - Practical Approaches to Networking' and 'CIK - Introduction to Microsoft Active Directory Domain Services' for B.E. Computer Science and Engineering degree programme in discussion with course designer at Microsoft.

### **Information Technology**

- The Subjects of Study and the syllabi for the subjects in M.E.(Computer Science and Information Security) are to be revised as follows.
  - The courses on 'Network Security', "Secure Software Engineering" and "Database Security" are to be introduced instead of "Data Structures and Algorithms", "Object Oriented Software Engineering" and "Data Analytics" for first semester M.E.(Computer Science and Information Security)
  - The practical course on 'Cryptography and Network Security' is to be introduced in place of "Data Structures and Algorithms Lab" for first semester M.E.(Computer Science and Information Security)

### **Architecture**

- Detailed syllabus is to be given for one credit short term course on 'ARAST6 Designing with Nature' as per the standard format.

*S.J. Thiruvengadam*

Prepared by: **Dr.S.J. Thiruvengadam**  
Pedagogy Group Coordinator

*V. Abhaikumar*

Approved by: **Dr.V.Abhaikumar**  
Principal

