Proceedings of AICTE Model Curriculum TEQIP1.3 Workshop for 3-8th semester B.E.-CBCS Syllabus of BOS in Basic Sciences as per Outcome Based Education (OBE) and Revised Bloom's Taxonomy (RBT) format held on 2nd & 3rd May-2019 at Jnanasangama, VTU, Belagavi.

Ref :-
1. Registrar's letter No.VTU/Aca/SO/2018-19/256 dated 09-04-2019.
2. Registrar's letter No.VTU/Aca/A9/2019-20/440 dated 22-04-2019.
3. Meeting of members of BOS in Basic Sciences held on 15-10-2018 at VTU-RO, Bengaluru.
4. Meeting of members of JBOS in Basic Sciences held on 17-09-2018 at VTU-RO, Kalaburgi.
5. Workshop on "AICTE Model Curriculum" held on 12-03-2018 at BMS College of Engineering, Bengaluru.

It is imperative that the curriculum must be constantly refined and updated to ensure that the goal of an engineering student, who always requires a range of skills and knowledge to adopt in his/her career. Accordingly, VTU has taken several initiatives including conducting the preliminary workshop on 'AICTE Model Curriculum" for all Chairmen and Members of BOS & BOE, Principals and faculty members of all engineering colleges affiliated to VTU, vide Ref.5 above. Soon after this, a joint BOS meeting was held under the Chairmanship of Hon'ble Vice-Chancellor of VTU(Ref.4), where it was resolved implement the "AICTE Model Curriculum" for 3-8th semester B.E. from the academic year 2019-20, as the revised syllabus for the first year B.E program was already implemented w.e.f. the academic year 2018-19 itself.

As a result of this, a meeting of all members of BOS in Basic Sciences and Humanities, Subject Experts in various domains, was convened by the Chairman-BOS in Basic Sciences, vide Ref.3 above. In this meeting, Subject Experts, Chairmen of BOS of engineering streams have offered useful suggestions for drafting the syllabus for Mathematics courses for second year B.E. and open elective courses in Physics, Chemistry and Mathematics at higher semester levels.

The drafted syllabus was placed before the faculty members of Basic Science departments of various engineering colleges teaching higher semester of B.E., in TEQIP sponsored VTU Workshop conducted at Jnanasangama, VTU, Belagavi on 3rd and 4th May-2019, as per the Registrar's circular vide Ref.1 & 2 above. Faculty members of engineering colleges (constituent, autonomous and affiliated) coming

Veena
14.5.19

under all the four regions of VTU have actively participated in the deliberations and offered their feedback/useful comments on the drafted syllabus.

- One of the highlights of the feedback is to **rename** the Engg. Mathematics courses viz., Engineering Mathematics-III & Engineering Mathematics-IV respectively as, **Transform Calculus, Fourier Series and Numerical Techniques (18MAT31) & Complex Analysis, Probability and Statistical Methods (18MAT41)** with **03 credits each**. However, it was decided to retain the title of Mathematics bridge courses for lateral entry diploma holders as **Additional Mathematics-I (18MATDIP31) and Additional Mathematics-II (18MATDIP41), without any credits**.

  Further, the following open electives offered from Basic Science departments were also presented in the workshop and feedback was taken from the teaching fraternity. Indeed, The open electives proposed for VI semester B.E. with approved titles are as follows:

  (i) **18PHY651- Laser Physics and Non-Linear Optics (03 Credits);**
  (ii) **18CHE652- Applied Chemistry for Engineers (03 Credits);**
  (iii) **18MAT653- Advanced Linear Algebra (03 Credits).**

  Similarly, open electives proposed for VI semester B.E. with approved titles are as follows:

  (i) **18PHY751- Applied Physics for Engineers (03 Credits);**
  (ii) **18CHE752-Advanced Polymer Chemistry for Engineers (03 Credits);**
  (iii) **18MAT753-Advanced Mathematical Methods (03 Credits).**

- Another feedback emerged in these workshops is to **rename the Paper Setting Boards** in Basic Sciences as **Physics, Chemistry, Mathematics** against the above respective courses, for clarity.

- Taking all these feedback into consideration members of BOS in Basic Sciences have finalized the syllabus of

(i) (a)Transform Calculus, Fourier Series and Numerical Techniques **(18MAT31)** & Complex Analysis, Probability and Statistical Methods **(18MAT41) and**

(b) Additional Mathematics-I **(18MATDIP31)** & Additional Mathematics- II **(18 MATDIP41)**

(c) Advanced Linear Algebra **(18MAT653)** & Advanced Mathematical Methods **(18MAT753)(Annexure-I)**

&

(ii) Laser Physics and Non-Linear Optics (1**8PHY651**) & Applied Physics for Engineers **(18PHY751) (Annexure-II)**;

(iii) Applied Chemistry for Engineers **(18CHE652)** & Advanced Polymer Chemistry for Engineers **(18CHE752)(Annexure-III)**;

incorporating all the suggestions arrived in the workshop. Further, blow-up syllabus in each of the above theory courses have also been prepared upgraded after the feedback. This is final syllabus and no further changes are required. I am herewith submitting all of them for your kind consideration and further needful action.

Thanking you

With Regards

Dr.A.T.Eswara
Academic Senate member & Chairman-BOS in Basic Sciences, VTU, Belagavi
& Professor and Research Supervisor, Department of Mathematics
GSSSIETW, KRS Road, Mysuru-570 016.

Date: 08-05-2019
Place: Mysuru

Visvesvaraya Technological University, Belagavi

Board of Studies – Electrical and Electronics Engineering

Meeting Proceedings held on 24-05-2019 at Regional Office Bengaluru:

1. Chairman welcomed the members and invitees.

2. Draft copy of the syllabus has been finalized based on the feedback/suggestions given by the faculty members in the workshop held at BNMIT, Bengaluru.

3. Chairman is authorized to finalize syllabus and submit to VTU, Belagavi.

4. Subject to be studied/exempted for the students admitting to 2018 scheme from 2015 and 2017 scheme at different semesters are finalized.

5. Meeting is adjourned with thank note by Dr. G. H. Kulkarni.

24/5/19

Dr. G. H. Kulkarni
Chairman, BOS, EEE,
VTU, Belagavi.
Electrical & Electronics Engg.,
Jain College of Engineering,
Machhe, Belgaum-590 014.

Meeting of the Committee constituted for rectification in the credits of Scheme of B.Arch. Programme (2015 Scheme) convened on 11-7-2019, 10.00 AM at VTU, Belagavi

Following members were present:

1) Dr. N.V.R. Naidu, Dean & Faculty of Engineering, VTU, Belagavi ……. Chairman
2) Dr. H.C. Nagaraj, Principal, NMIT, Bengaluru ……..Member
3) Dr. Satish Annigeri, Registrar (I/c), VTU, Belagavi…… Member Secretary

Following members were absent:

1) Dr. M. G. Venkatesh Murthy, Hon'ble EC Member of VTU, Belagavi ….. Member

Dr. Satish Annigeri, Registrar (I/c) welcomed all the members.

All the members went through thoroughly the Scheme and Syllabus of B.Arch. Progamme of 2015 Scheme in detail in the context of variations in proposed total number of credits for B.Arch. programme/ scheme and resolved as follows:

Resolutions of the Meeting.

1) <u>B. Arch.</u>

   The credits and contact hours are normalized as below according to Council of Architecture

Subject	Contact Hours per week		Credits	
			Existing	Corrected
15ARC 9.1 Professional Training	-	-	14	13

The meeting ended with thanks to the Chair.

Signature of the Committee Members

1) Dr. N.V.R. Naidu, Dean & Faculty of Engineering, VTU, Belagavi _____

2) Dr. H.C. Nagaraj, Principal, NMIT, Bengaluru _____

3) Dr. Satish Annigeri, Registrar (I/c), VTU, Belagavi_____

Proceedings of the Architecture- Board of Studies Meeting
Held on 9th September 2019, 11.00 AM at the VTU Regional Office, Nagarabhavi, Bangalore

1	**Dr. Vasanth K Bhat.**, Member BOS in Architecture, Principal, R N S School of Architecture, Channasandra, Srinivasapura, Bengaluru - 560098
2	**Dr. Jagannathan. R.**, Member BOS in Architecture, Principal, K. S. School of Architecture, #15, Near Vajarahalli, Mallasandra, Off Kanakapura Road, Bengaluru – 560019.
3	**Dr. Nishita R Tadkodkar.**, Member, BOS, in Architecture, Professor & Head, Architecture Dept., KLS' Gogte Institute of Technology, "Jnana Ganga", Udyambag, Belgavi – 590008.
4	**Prof. Suresh Murthy.**, Member BOS in Architecture, Professor & Dean, R V School of Architecture, 14th Block, Vajarahalli Main Road, Near Chikagowdanapalya, Banashankari 6th Stage, Bengaluru
5	**Dr. M. N. Chandrashekhar.**, Member BOS in Architecture, Principal, SJB School of Architecture & Planning, BGS Health & Education City, Kengeri, Bengaluru-560060.
6	**Ar. Bijoy Ramachandran.**, Member in BOS Architecture, Architect, Hundred Hands, 9/2 Madras Bank Road, Bengaluru – 560001.
7	**Ar. Sapna Shivakumar.**, Member BOS in Architecture, Professor, Mysore School of Architecture, CA-01, University Layout, Near Dattagalli Ring Road, Lingambudi, Mysuru.

Members Present:

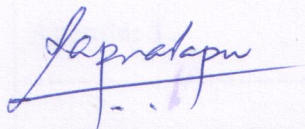**Members on Leave:** Dr. V. P. Thanksali had informed that he was unable to attend the meeting.

Minutes of the Meeting:

Agenda: 1	:	Revision of syllabus for PG programs starting from 2020-21. Draft Scheme to be finalized by December 2019.
Resolution	:	(i) In the first phase, The PG programs to be considered for revision, were listed down as, **M. Arch-Urban Design** and **M. Arch-Habitat Design.** (ii) The draft scheme of teaching and examinations and syllabus will be submitted to VTU on or before 29-12-2019. (iii) A panel comprising of academicians, practicing Architects, faculty and special invitees will be formed and detailed discussions w r t M. Arch curriculum will be held in the month of October 2019.

	(iv)	Towards the above, it was noted that the syllabus of 04 and 03 credit courses are to be designed for 50 and 40 hours respectively. Each theory course of the syllabus to have 05 course outcomes. Course outcomes for all studio-based subjects (Labs), internship, seminar etc shall be discussed further and arrived at. A template shall be furnished by the VTU for all M. Arch programs.
	(v)	It was also decided that **M. Arch-Digital Architecture** and **M. Arch- Construction Management** could be taken up at a later date, since they are being introduced recently and will commence only from the Academic year 2019-20. However, the syllabus should be re-scrutinized.
Agenda: 2	:	VTU – ETR Syllabus Part II, draft to be finalized
Resolution	:	Part-II of VTU-ETR, the frame work including ten units were listed down. The Draft syllabus has been enclosed as **Appendix-1**
Agenda: 3	:	Re admissions/ repeaters from 2015 syllabus to 2018 syllabus and issue of Marks cards to 2015 batch students
Resolution	:	It was decided by common consensus that (i) Readmission to the IIIrd semester of 2018 Scheme can be permitted for students from 2015 Scheme by taking up one additional subject 18HUM 28- Kannada Bhashe. (ii) For Readmission to the Vth and VIIth semesters of 2018 Scheme, students will have to continue in the 2015 Scheme, by taking up parallel classes conducted by respective colleges. (iii) Draft letter to the Registrar is as per **Appendix-2**
Agenda: 4	:	Suggestions regarding Revision of Examination fee structure for B. Arch Practical Examinations
Resolution	:	It was a general observation by most of the members that a raise in the Examination Fees per student would be beneficial for them as well as for the Institutions which would give an opportunity for good industry experts from bigger cities can be invited to conduct Juries (VIVA) for most of the studio subjects, Thesis and PT.
Agenda: 5	:	Suggestions for revised remuneration for examiners (Jurors) for Practical Examinations

Resolution	:	Most of the members requested for increasing the **TA-DA** and **Remuneration** for Jurors (Examiners) B. Arch Practical Examinations, to enable industry experts to be invited especially for subjects such as THESIS and PRACTICAL TRAINING. Example of Mysore University was cited, as a model to be adopted.
Agenda: 6	:	Ph.D. coursework subject classes to be conducted at research Centre
Resolution	:	Members suggested strongly, that all research Centers with students who have registered for PhDs under VTU, must be instructed to conduct classes for course work subjects regularly.
Agenda: 7	:	Any other matter with the permission of the chair.
Resolution	:	(1) The subject of 'OPEN ELECTIVE' was discussed briefly. The BOS noted that no shortlisted topics nor any details such as outcomes were suggested in the syllabus under Open Electives. The concept of Open Elective would be effective for Colleges having multiple programs. Excepting RVCA, no other college had opted for the open elective as on date. Hence, all the collages may be advised to choose from Professional Electives-a,b,c and open elective to be omitted. (2) 'JOURNAL' for Architecture under VTU will be highly beneficial to the fraternity. Request will be placed before the Registrar for the same.

The meeting ended on a positive note and the Chair thanked all the members for their participation.

Sapnalapu

Prof. Dr. Sapna Papu
Director, BMS School of Architecture, Yelahanka
Chairman, BOS, Architecture, VTU, Belagavi

Minutes of the Meeting of the Board of Studies in
MBA held at the Regional Office, VTU, Bangalore on 31st August 2019

Members Present:
1. Dr. T. Manjunatha, Chairman, BOS
2. Dr. M.M Bagali, Member
3. Dr. Reena Williams, Member
4. Dr. L. Vijayashree, Member

Members Absent:
1. Dr. S.R.Baramanaikar, Member
2. Dr. M.G Krishnamurthy, Member
3. Dr. Deepak G. Kulkarni, Member
4. Dr. R. Srinivasan, Member

Agenda:

1. To finalise the Syllabus for VTU Eligibility Test for Research (ETR) in MBA.
2. To discuss revision of MBA Syllabus 2018 Scheme.
3. Any other matters

The following resolutions were taken at the meeting:

1. Finalised the Syllabus for VTU Eligibility Test for Research (ETR) in MBA. Enclosed the revised Syllabus.
2. Discussed revision of MBA Syllabus 2018 Scheme for the revision of 2020 scheme.
   a. In order to have better placement opportunities for the students, organizational study and project work can be clubbed as Major Project report (MPR) for 10 weeks.
   b. Major project report will be carried on after 4th semester theory classes.
      (The scheme and the proposal of MPR will be sent by 5th Sep, 2019)
   c. Requested to organize workshop for HR Analytics (18MBAHR302) and Direct Taxation (18MBAFM303).

3. The meeting concluded with a vote of thanks by the Chair.

1. Dr. T. Manjunatha, Chairman, BOS   *(signature)* 31/8/2019

2. Dr. M. M. Bagali, Member   *(signature)* 31/8/15

3. Dr. Reena Williams, Member   *(signature)* 31/8/15.

4. Dr. L. Vijayashree, Member   *(signature)* 31/8/19

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MBA held at the Regional Office, VTU, Bangalore on 31st August 2019

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4. Dr. L. Vijayashree, Member

*****

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Topics of Syllabus for the Qualifying Exam for the Ph.D.Programme
Syllabus for the VTU-ERT

Part II: <u>Discipline Oriented</u>

**<u>Section</u> Questions carrying one   -50 questions
Marks (objective/multiple choice)**

Module 1:

Management- Definition, Nature, Purpose and Functions; Principles of Management- Planning**,** Nature, Process, Types and Steps; Organizing-Structure, Span of Management, Centralization, Decentralization; Empowerment; Staffing – Overview; Directing and Controlling - Process, Types of Control; MBO ; Management Guru's, Management Theories.

Module 2:

Organization Behavior- Nature, Learning; Personality- Definition, Traits, Determinants; Evolution & Organizational Behavior in India; Perception-Meaning, Factors Influencing Perception, Errors of Perception; Decision Making.

Module 3:

Marketing Management- Meaning, Importance, Marketing Management Process, Marketing Mix, Marketing Opportunities, challenges & Ethics, E-Marketing, Marketing Research.

Module 4:

Human Resource Management - Definition, Nature, Scope, Importance and Evolution of the concept of HRM, Managerial and operative functions of HRM- Man power Planning, Recruitment, Selection, Training and Development, Performance Management System.

Module 5:

Financial Management - Definition, Scope, Functions, Objectives, Time Value Money; Financial Markets; Financial Instruments, Financial Institutions and Financial Services.

Latest Management concepts in all the above modules.

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Minutes of the Meeting of the Board of Studies in
MBA held at the Regional Office, VTU, Bangalore on 31ˢᵗ August 2019

Members Present:
1. Dr. T. Manjunatha, Chairman, BOS
2. Dr. M.M Bagali, Member
3. Dr. Reena Williams, Member
4. Dr. L. Vijayashree, Member

Members Absent:
1. Dr. S.R.Baramanaikar, Member
2. Dr. M.G Krishnamurthy, Member
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Agenda:

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3. Dr. Reena Williams, Member *(signature)* 31/8/19.

4. Dr. L. Vijayashree, Member *(signature)* 31/8/19

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Reply to the appeal from the Hon'ble VC, VTU for inclusion of interdisci...

principal@rnsit.ac.in ✔ (January 6, 2020 5:09 PM)

To: "Registrar, VTU Belagavi" <registrar@vtu.ac.in>
CC: "Mkvenkatesha" <mkvenkatesha@gmail.com>

Inward No. 18003
Date: -7 JAN 2020

reply_vtu_bos_inc…
32KB

Sir,

Kindly find herewith the attached reply to
1. Your office letter dated Nov 19, 2019 with Ref. No: VTU/PS/2019-20/7048 and
2. Your office letter dated Dec 20, 2019 with Ref. No: VTU/Aca/A-9/2019-20/8074

with the following subjects:
Sub 1: Reply to the appeal from the Hon'ble VC, VTU for inclusion of interdisciplinary courses in
the VTU M.Tech Programme Curriculum 2020-21
Sub 2: % of modification/ change effected in the VTU M.Tech Programme Curriculum 2020-21

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru - 560 098

F 6 JAN 2020   veena   VM/07.1.2020

RNS Institute of Technology

Board of Studies in ECE/TCE: 2019 - 22

The Registrar
VTU, Belagavi – 590 018

Sir,

Sub: Reply to the appeal from the Hon'ble VC, VTU for **inclusion of interdisciplinary courses in the VTU M.TechProgramme Curriculum 2020-21**

Ref: Your office letter dated Nov 19, 2019 with Ref. No: VTU/PS/2019-20/7048

The current syllabus framed after the BOS meeting on Sept. 16, 2019 (Monday) for the M.TechProgramme Curriculum 2020-21 in VLSI DESIGN & EMBEDDED SYSTEMS (EVE) has the following interdisciplinary courses:

Sl. No.	Course Code	Course	Interdisciplinary Area Addressed
1	20EVE242	Nanoelectronics	Nano-electronics
2	20EVE244	Reconfigurable Computing	Control & Optimization
3	20EVE252	SoC Design	Electronic Circuits & Systems
4	20EVE253	Micro Electro Mechanical Systems	MEMS, Design & Manufacturing
5	20EVE321	Advances in Image Processing	Computer Algorithms, Games & Graphics
6	20EVE323	Embedded Linux System Design and Development	Embedded Technology, Computer Architecture
7	20EVE324	Advanced Computer Architecture	Computer Architecture
8	20EVE332	Pattern Recognition & Machine Learning	Artificial Intelligence, Machine learning, Deep Learning, Reinforcement Learning
9	20EVE333	Internet of things	IoT, Protocols and architecture for Constrained Applications viz., smart cities, connected factory / manufacturing, transportation, etc. ·
10	20EVE334	Cryptography and Network Security	Cryptography and Computer Security,

The **percentage (%) of interdisciplinary courses** in 2020-21 in M.Tech (VLSI DESIGN & EMBEDDED SYSTEMS (EVE)) is **38.46%** [10/26 → (no. of interdisciplinary courses =10) / (total no. of courses = 26)].

Similarly, other M.TechProgrammes under ECE/TCE board have incorporated the interdisciplinary courses in the 2020-21 curriculum.

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru – 560 098

RNS Institute of Technology
(AICTE Approved, VTU Affiliated and NAAC 'A' Accredited)
(UG programs – CSE, ECE, ISE, EIE and EEE have been Accredited by NBA)
Channasandra, Dr. Vishnuvardhan Road, Bengaluru – 560 098

Board of Studies in ECE/TCE: 2019 - 22

The Registrar
VTU, Belagavi – 590 018

Sir,

Sub: % of modification/ change effected in the VTU M.TechProgramme Curriculum 2020-21

Ref: Your office letter dated Dec20, 2019 with Ref. No: VTU/Aca/A-9/2019-20/8074

The current syllabus framed after the BOS meeting on Sept. 16, 2019 (Monday) for the M.TechProgramme Curriculum 2020-21 in VLSI DESIGN & EMBEDDED SYSTEMS (EVE) has the following percentage of changes in the number of courses and course content.

Sl. No.	A	B	% change = (B/A) x100
1	**22** [Total Number of Courses (core & electives) in 2018-19 syllabus of M.Tech EVE (VLSI Design & Embedded Systems) Programme]	**04** [Number of new courses added in 2020-21 syllabus of M.Tech EVE (VLSI Design & Embedded Systems) Programme]	**18.18%** **Change in percentage (%) of courses in the programme (M.Tech EVE (VLSI Design & Embedded Systems)**
2	**22 + 2 labs** [22 - Total Number of Courses (core & electives) in 2018-19 syllabus of M.Tech EVE (VLSI Design & Embedded Systems) Programme]	**15** [Number of courses with modified / changed contents in 2020-21 syllabus of M.Tech EVE (VLSI Design & Embedded Systems) Programme]	**62.5%** (15/24 * 100) **Change in percentage (%) of content of the course in a course.**

Also, the following are attached herewith:
1. All feedbacks from stakeholders (as briefed in the BoS meeting by the members)
2. BoS proceeding (with minuted discussions) with necessity of revision

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru – 560 098

Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018, Karnataka State

Board of Studies in ECE/TCE: 2019 - 22

First meeting of the BoS (ECE/TCE) : 2019-22
Date: Sept. 16, 2019   Time: 11.00 a. m.
Venue: VTU Regional Center, Nagarbhavi, Bangalore.

List of members present

Name & Address	Designation
Dr. M K Venkatesha Principal, RNS Institute of Technology Channasandra, Rajarajeshwari Post, Bengaluru – 560 098	**Chairman**
Dr. T M P Rajkumar Professor & Head. Dept. of E&C Engg. Anjuman Institute of Tech & Mgt.,Anjumanabad Bhatkal – 581 320	**Member**
Dr. A M Bhavikatti Professor & Head, Dept of E&C Engg. BheemannaKhandre Institute of Technology, Bhalki	**Member**
Dr. S V Sathyanarayana, Professor, Dept. of E&C Engg. JNNCE, Shivamogga.	**Member**
Dr. Savitha H M Professor & Dept. of E&C Engg., St. Joseph Engineering College, Vamanjoor, Mangaluru – 575 028	**Member**
Dr. D J Ravi Professor & Dean, Dept. of E&C Engg., Vidyavardhaka College of Engg., Gokulam 3rd Stage, Mysuru – 570 002	**Member**
Dr. T C Thanuja Professor, Dept. of VLSI Design and Embedded System VTU Center for PG Studies, Belagavi	**Member**
Dr. Jagadeesh Chandra A P Professor, Dept. of E&C Engg., Adichunchanagiri Inst. of Technology, Jyothi nagar Post, Chikmangaluru – 577 102	**Member**
Mr. Manjunatha V Design Compiler Synopsys India Pvt. Ltd., R&D 7th Floor, Tower B, RMZ Infinity, Old Madras Road, Bengaluru – 560 016	**Member**
Dr. Narendranath Udupa Energy Consultant, MEClink B2B services. Previously with Philips,Bengaluru – 560 032	**Member**
Dr. Andhe Pallavi Professor & Dean, Dept. of EIE Engg., RNSIT, Bengaluru –98	**Invited Member**

Proceedings of the meeting:

Dr. M K Venkatesha, Chairman, BoS (ECE/TCE) welcomed the members and invitees of the BoS (ECE/TCE).

Agenda No. 1: M.Tech 2020-21 Syllabus Revision with focus on VLSI & ES (EVE)

Discussions: The members discussed about the feedback received from the stakeholders regarding the current M.Tech Syllabus. A brief overview is presented below.

1. **Mr. Manjunatha V, Member,** Design Compiler Synopsys India Pvt. Ltd., R&D 7th Floor, Tower B, RMZ Infinity Old Madras Road, Bengaluru – 560 016 presented the following **feedback from Industry** perspective:

    a. Services industry in VLSI requires Pure Design and electronic design capabilities based on tools such as Cadence, Synopsys, etc.

b. Strong Digital Design Concepts required as compared to analog wherein opportunities are limited.

c. Present syllabus to be compared with syllabus from MIT, VIT, etc.

d. Emphasis on internship to facilitate moulding and absorption into industry.

e. To add more lab tools, viz., Virtuso for analog design layout, to add timing extraction in ASIC design, to introduce scripting knowledge viz., Tickle, Perl, etc.

2. **Dr. T C Thanuja, Member,** Professor, Dept. of VLSI Design and Embedded System VTU Center for PG Studies, Belagavi presented the following **feedback from faculty and alumni** perspective:

a. Teachers are concentrating more on theory with emphasis on passing percentage. They should also concentrate on lab skills.

b. Case studies not present in the books, but should be discussed.

c. Gaps observed in the following courses: Advanced embedded design, static timing analysis, system Verilog, etc.

3. **Dr. S V Sathyanarayana, Member,** Professor, Dept. of E&C Engg., JNN College of Engineering, Shivamogga presented the following observations:

Theoretical part with lab support is present for embedded systems. But using open sources more emphasis to be provided on Cortex M3 component.

4. **Dr. T M P Rajkumar, Member,** Professor & Head. Dept. of E&C Engg., Anjuman Institute of Tech & Mgt., AnjumanabadBhatkal – 581 320 presented the following observations:

Electives in the current syllabus to be made more stream relevant. say in EVE stream, more of VLSI relevant. The relevance of electives such as 'Advanced Image Processing' was questioned.

5. **Dr. Narendranath Udupa, Member,** Energy Consultant, MEClink B2B services., Previously with Philips, Bengaluru – 560 032 put forth the following suggestions:

To incorporate latest topics in VLSI, say EMI/EMC compatibility with industry support such as BEL.

Resolutions:
1. To incorporate lab experiments / Formulation of lab experiments (extra) to be conducted along with identified theory subjects. The following is the allotment of faculty & identified subjects:

Sl. No.	Subject Code	Subject	Faculty In-Charge for framing Lab Experiments as part of CIE of respective theory subject
VLSI Design & Embedded Systems (EVE)			
1	18EVE14	VLSI Testing	Dr. Thanuja&Manjunatha V
2	18EVE23	System Verilog	Dr. Thanuja
3	18EVE31	CAD of Digital Systems	Dr. Andhe Pallavi
Signal Processing (ESP)			
1	18EVE13	Advanced Embedded Systems (18ELD/EIE/ ECS/ESP/EVE13)	Dr. Satyanarayana
2	18ESP21	Image Processing and Machine Vision	Lab (BIT)
3	18ESP31	Adaptive Signal Processing	Lab (BIT)
Industrial Electronics (EIE)			
1	18EVE13	Advanced Embedded Systems (18ELD/EIE/ECS/ESP/EVE13)	Dr. Satyanarayana
2	18EIE23	Design of Power Converters	LAB

3	18EIE31	PLCs and Industrial Automation	LAB (Dr. AndhePallavi)
Digital Electronics/Electronics (ELD)			
1	18EVE13	Advanced Embedded Systems (18ELD/EIE/ECS/ESP/EVE13)	Dr. Satyanarayana
2	18ECS23	Error Control Coding (18ECS23/18ELD23)	Dr. Savitha
3	18ELD31	Synthesis and Optimization of Digital Circuits	LAB
Digital Communication & Networking/Communication Systems/Information & Comm. Systems/ Digital Electronics & Comm. /Digital Comm. Engg/Digital Electronics & Comm. System (ECS)			
1	18EVE13	Advanced Embedded System (18ELD/EIE/ECS/ESP/EVE13)	Dr. Satyanarayana
2	18ECS23	Error Control Coding (18ECS23/18ELD23)	Dr. Savitha
3	18ECS31	LTE 4G Broadband	Dr. Jagadish

2. Identification of 4th elective in the following streams:

New/ Old Electives to be identified	20XXX244	20XXX254	20XXX324	20XXX334
VLSI Design & Embedded Systems (EVE) – Identified & framed from old syllabus	20EVE244 Reconfigurable Computing (18ELD242)	20EVE254 Synthesis and Optimization of Digital Circuits (18ELD31)	20EVE324 Advanced Computer Architecture (18ELD21)	20EVE334 Cryptography and Network Security (18ECS243/ 18EIE243/ 18ELD243)
20XXX244, 20XXX254, 20XXX324, 20XXX334 To be identified for the below M.Tech Streams				
1	Signal Processing (ESP)			
2	Industrial Electronics (EIE)			
3	Digital Electronics/ Electronics (ELD)			
4	Digital Communication & Networking/Communication Systems/Information & Comm. Systems/ Digital Electronics & Comm. /Digital Comm. Engg/Digital Electronics & Comm. System (ECS)			

Agenda 2: Revised Syllabus for VTU ULRAT qualifying exam for Ph. D program in ECE

Discussions: Dr. M K Venkatesha presented the old and new syllabus for ratification with explanation.

Resolution: The new presented syllabus was given tentative agreement by all the members present.

The meeting ended with a vote of thanks from the Chairman, Dr. M K Venkatesha.

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru – 560 098

Reply to the appeal from the Hon'ble VC, VTU for inclusion of interdisci…

principal@rnsit.ac.in ✔ (January 6, 2020 5:09 PM)

To: "Registrar, VTU Belagavi" <registrar@vtu.ac.in>

CC: "Mkvenkatesha" <mkvenkatesha@gmail.com>

reply_vtu_bos_inc…

32KB

Inward No. 18003

Date: -7 JAN 2020

Sir,

Kindly find herewith the attached reply to
1. Your office letter dated Nov 19, 2019 with Ref. No: VTU/PS/2019-20/7048 and
2. Your office letter dated Dec 20, 2019 with Ref. No: VTU/Aca/A-9/2019-20/8074

with the following subjects:
Sub 1: Reply to the appeal from the Hon'ble VC, VTU for inclusion of interdisciplinary courses in
the VTU M.Tech Programme Curriculum 2020-21
Sub 2: % of modification/ change effected in the VTU M.Tech Programme Curriculum 2020-21

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru - 560 098

F 6 JAN 2020

RNS Institute of Technology

(AICTE Approved, VTU Affiliated and NAAC 'A' Accredited)
(UG programs – CSE, ECE, ISE, EIE and EEE have been Accredited by NBA)
Channasandra, Dr. Vishnuvardhan Road, Bengaluru – 560 098

Board of Studies in ECE/TCE: 2019 - 22

The Registrar
VTU, Belagavi – 590 018

Sir,

Sub: Reply to the appeal from the Hon'ble VC, VTU for **inclusion of interdisciplinary courses in the VTU M.TechProgramme Curriculum 2020-21**

Ref: Your office letter dated Nov 19, 2019 with Ref. No: VTU/PS/2019-20/7048

The current syllabus framed after the BOS meeting on Sept. 16, 2019 (Monday) for the M.TechProgramme Curriculum 2020-21 in VLSI DESIGN & EMBEDDED SYSTEMS (EVE) has the following interdisciplinary courses:

Sl. No.	Course Code	Course	Interdisciplinary Area Addressed
1	20EVE242	Nanoelectronics	Nano-electronics
2	20EVE244	Reconfigurable Computing	Control & Optimization
3	20EVE252	SoC Design	Electronic Circuits & Systems
4	20EVE253	Micro Electro Mechanical Systems	MEMS, Design & Manufacturing
5	20EVE321	Advances in Image Processing	Computer Algorithms, Games & Graphics
6	20EVE323	Embedded Linux System Design and Development	Embedded Technology, Computer Architecture
7	20EVE324	Advanced Computer Architecture	Computer Architecture
8	20EVE332	Pattern Recognition & Machine Learning	Artificial Intelligence, Machine learning, Deep Learning, Reinforcement Learning
9	20EVE333	Internet of things	IoT, Protocols and architecture for Constrained Applications viz., smart cities, connected factory / manufacturing, transportation, etc.
10	20EVE334	Cryptography and Network Security	Cryptography and Computer Security,

The **percentage (%) of interdisciplinary courses** in 2020-21 in M.Tech (VLSI DESIGN & EMBEDDED SYSTEMS (EVE)) is **38.46%** [10/26 → (no. of interdisciplinary courses = 10) / (total no. of courses = 26)].

Similarly, other M.TechProgrammes under ECE/TCE board have incorporated the interdisciplinary courses in the 2020-21 curriculum.

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra. Rajarajeshwari Post, Bengaluru – 560 098

Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018, Karnataka State
Board of Studies in ECE/TCE: 2019 - 22

First meeting of the BoS (ECE/TCE) : 2019-22
Date: Sept. 16, 2019   Time: 11.00 a. m.
Venue: VTU Regional Center, Nagarbhavi, Bangalore.

List of members present

Name & Address	Designation
Dr. M K Venkatesha Principal, RNS Institute of Technology Channasandra, Rajarajeshwari Post, Bengaluru – 560 098	Chairman
Dr. T M P Rajkumar Professor & Head, Dept. of E&C Engg. Anjuman Institute of Tech & Mgt.,Anjumanabad Bhatkal – 581 320	Member
Dr. A M Bhavikatti Professor & Head, Dept of E&C Engg. BheemannaKhandre Institute of Technology, Bhalki	Member
Dr. S V Sathyanarayana, Professor, Dept. of E&C Engg. JNNCE, Shivamogga.	Member
Dr. Savitha H M Professor & Dept. of E&C Engg., St. Joseph Engineering College, Vamanjoor, Mangaluru – 575 028	Member
Dr. D J Ravi Professor & Dean, Dept. of E&C Engg., Vidyavardhaka College of Engg., Gokulam 3rd Stage, Mysuru – 570 002	Member
Dr. T C Thanuja Professor, Dept. of VLSI Design and Embedded System VTU Center for PG Studies, Belagavi	Member
Dr. Jagadeesh Chandra A P Professor, Dept. of E&C Engg., Adichunchanagiri Inst. of Technology, Jyothi nagar Post, Chikmangaluru – 577 102	Member
Mr. Manjunatha V Design Compiler Synopsys India Pvt. Ltd., R&D 7th Floor, Tower B, RMZ Infinity, Old Madras Road, Bengaluru – 560 016	Member
Dr. Narendranath Udupa Energy Consultant, MEClink B2B services. Previously with Philips,Bengaluru – 560 032	Member
Dr. Andhe Pallavi Professor & Dean, Dept. of EIE Engg., RNSIT, Bengaluru –98	Invited Member

Proceedings of the meeting:

Dr. M K Venkatesha, Chairman, BoS (ECE/TCE) welcomed the members and invitees of the BoS (ECE/TCE).

Agenda No. 1: M.Tech 2020-21 Syllabus Revision with focus on VLSI & ES (EVE)

Discussions: The members discussed about the feedback received from the stakeholders regarding the current M.Tech Syllabus. A brief overview is presented below.

1. **Mr. Manjunatha V, Member,** Design Compiler Synopsys India Pvt. Ltd., R&D 7th Floor, Tower B, RMZ Infinity Old Madras Road, Bengaluru – 560 016 presented the following **feedback from Industry** perspective:

   a. Services industry in VLSI requires Pure Design and electronic design capabilities based on tools such as Cadence, Synopsys, etc.

3	18EIE31	PLCs and Industrial Automation	LAB (Dr. AndhePallavi)
Digital Electronics/Electronics (ELD)			
1	18EVE13	Advanced Embedded Systems (18ELD/EIE/ECS/ESP/EVE13)	Dr. Satyanarayana
2	18ECS23	Error Control Coding (18ECS23/18ELD23)	Dr. Savitha
3	18ELD31	Synthesis and Optimization of Digital Circuits	LAB
Digital Communication & Networking/Communication Systems/Information & Comm. Systems/ Digital Electronics & Comm. /Digital Comm. Engg/Digital Electronics & Comm. System (ECS)			
1	18EVE13	Advanced Embedded System (18ELD/EIE/ECS/ESP/EVE13)	Dr. Satyanarayana
2	18ECS23	Error Control Coding (18ECS23/18ELD23)	Dr. Savitha
3	18ECS31	LTE 4G Broadband	Dr. Jagadish

2. Identification of 4th elective in the following streams:

New/ Old Electives to be identified	20XXX244	20XXX254	20XXX324	20XXX334
VLSI Design & Embedded Systems (EVE) – Identified & framed from old syllabus	20EVE244 Reconfigurable Computing (18ELD242)	20EVE254 Synthesis and Optimization of Digital Circuits (18ELD31)	20EVE324 Advanced Computer Architecture (18ELD21)	20EVE334 Cryptography and Network Security (18ECS243/ 18EIE243/ 18ELD243)

20XXX244, 20XXX254, 20XXX324, 20XXX334 To be identified for the below M.Tech Streams	
1	Signal Processing (ESP)
2	Industrial Electronics (EIE)
3	Digital Electronics/ Electronics (ELD)
4	Digital Communication & Networking/Communication Systems/Information & Comm. Systems/ Digital Electronics & Comm. /Digital Comm. Engg/Digital Electronics & Comm. System (ECS)

Agenda 2: Revised Syllabus for VTU ULRAT qualifying exam for Ph. D program in ECE

Discussions: Dr. M K Venkatesha presented the old and new syllabus for ratification with explanation.

Resolution: The new presented syllabus was given tentative agreement by all the members present.

The meeting ended with a vote of thanks from the Chairman, Dr. M K Venkatesha.

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru – 560 098

PROCEEDINGS OF THE BOS (IPE/IEM/MSE) MEETING
(Held on 26th September, 2019 at VTU Belagavi, at 11:00 A.M)

Members Present:

Sl. No	Name	Designation	Signature
1	Dr. N Nagesha	Chairman	W. Nagesha 26.9.19
2	Dr. Suresh D Mane	Member	26/9/19
3	Dr. D R Swamy	Member	On leave with prior intimation
4	Dr. Vinod Puranik	Member	26.9.2019
5	Dr. N Mohan	Member	26/9/19
6	Mr. Elango	Member	
7	Dr. V N Gaitonde	Special Invitee	26/09/2019

Minutes of the meeting:

The Chairman Welcomed all the members and Special Invitee to the first meeting of the newly formed VTU-BoS in IPE/IEM/MSE. The Chairman briefly introduced all the Members and Special Invitee before requesting their active participation and involvement in all the activities of the BoS for the period 2019-2022, as stipulated by the VTU. Then, the agenda of the meeting was taken–up one by one and following resolutions were made.

Agenda-1	:	Discussion and Finalization of Syllabus of VTU-ETR for Ph.D. Programme
Resolution	:	The Chairman proposed One draft Syllabus for Industrial & Production Engineering (IPE) / Manufacturing Science & Engineering (MSE), and another one for Industrial Engineering & Management (IEM) as decided in the Joint BoS Meeting. Then, both the syllabi were critically studied and thoroughly discussed in the meeting. The final version of the syllabus unanimously adopted by the BoS for VTU-ETR for Ph.D. Programme is enclosed to these proceedings as **Annexure I & II**.
Agenda-2	:	Discussions on M.Tech Syllabus of 2020 Scheme
Resolution	:	The Chairman presented the **Templates** for Scheme of Teaching and Examinations, and also for the Syllabus (applicable for all the M.Tech programmes of 2020 scheme) as furnished by the VTU. Then, preliminary discussions were held regarding the modifications/additions/deletions of various courses (subjects) w.r.t the existing 2018 scheme and syllabus, in all the 7 M.Tech programmes coming under this BoS. It was decided that after due consultation with the teachers of these M.Tech programmes the draft syllabus be prepared and then subsequently to be finalized by the BoS and then submitted to VTU.
Agenda-3	:	Discussion on MOOCs Courses from NPTEL/SWAYAM Platforms for the Proposed B.E (Hon) degree of VTU
Resolution	:	A detailed discussion on various courses offered by NPTEL/SWAYAM

		Platform was held in the meeting. It was felt that the B.E students belonging to IPE/IEM/MSE intending to acquire B.E (Honours) must be encouraged to take up courses other than the ones studied by them as part of their UG degree curriculum, so that additional knowledge is acquired by them. Hence various courses offered by IITs, IISc and other Institutes of National Importance under NPTEL/SWAYAM Platform in different disciplines such as Multidisciplinary areas, Mechanical Engineering, Computer Science & Engineering, Civil Engineering, etc., appropriate for the B.E Students of IPE/IEM/MSE have been identified and recommended as per **Annexure III**. The students may select a combination of courses based on their interest meeting the ADDITIONAL credits requirement of the VTU, for this purpose.
Agenda-4	:	Any other relevant matter with the permission of chair
Resolution	:	As there were no other issues for discussion, the Chairman thanked all the members and special invitee for their active participation and concluded the meeting.

26.9.19

Dr. N Nagesha
Chairman
VTU-BoS in (IPE/IEM/MSE)

Dr. N. Nagesha
D.M.E.,B.E.,M.E.M., Ph.D.(IISc)
Professor & Chairman
Dept. of Industrial & Production Engg.
University BDT College of Engineering
(A Constituent College of VTU, Belagavi)
DAVANAGERE - 577 004

GOVERNMENT ENGINEERING COLLEGE, HAVERI

Ph No.: 08375 283347 (Pri), 08375 283323 (Off), 08375 283347 (Fax), ppl.gec.haveri@gmail.com

From,

    Dr. K.B.Prakash
    Principal, GEC Haveri,
    Chairman, BOS in Civil Engg (CV/TR/EV/CC)
    Mob – 9448267374
    Email – kbprakash04@gmail.com

To,

    The Registrar,
    Visvesvaraya Technological University,
    "Jnana Sangama",
    BELAGAVI – 590 018

Dear Sir,

Sub: - Proceedings of BOS meeting of Civil Engg (CV/TR/EV/CC)

***

    With reference to the above subject I am submitting herewith the proceedings of the 1st BOS meeting of Civil Engg (CV/TR/EV/CC) held on 26-09-2019 (Friday) at 11 Am at VTU Belagavi. BOS meeting was held to discuss the following agenda.

1. Online courses to be chosen from NPTEL / SWAYAM for the award of BE / B.Tech (Hons) or ME / M.Tech (Hons).

2. Revision of syllabus for the qualifying exam of the Ph.D programme for VTU –ETR.

3. Discussion on the draft PG Scheme for 2020.

4. Any other matter with the permission of chair.

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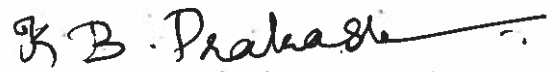
Following BOS members were present for the meeting.

1. Dr.K.B.Prakash   -   Chairman
2. Dr.A.V.Shivapur   -   Member
3. Dr.Nagesh M   -   Member
4. Dr.Ramakirishnegouda   -   Member
5. Dr.Sandeep Naik   -   Member
6. Dr.A.H.Biradar   -   Member
7. Dr.B.Shivakumar   -   Member
8. Dr.H.B.Balakrishna   -   Member
9. Dr.Sujit Kumar   -   Member

Proceedings sheet is attached here with. This is for your kind information and necessary action.

Thanking you,

Yours Sincerely,

Dr. K.B Prakash

Chairman, BOS in Civil Engg (CV/TR/EV/CC)

PRINCIPAL
Govt. Engineering College
Haveri-581 110.

Proceedings of BOS meeting of Civil Engineering (CV/TR/EC/CC) held on 26-09-2019 at VTU Belagavi

The chairman of the board Dr.K.B.Prakash welcomed all the BOS members for the meeting. All the members present were requested to introduce themselves along with their academic achievements and credentials. After this the agendas were discussed in depth and deliberations were done to draw final conclusions.

1. **Agenda No 1 :Online courses to chosen from NPTEL / SWAYAM for the award of BE / B.Tech (Hons) or ME / M.Tech (Hons).**

   The chairman explained the rules and regulations pertaining to BE/B.Tech (Hons) and ME/M.Tech (Hons) and extra credits to be scored by the registered candidates. It was decided to identity the list of online courses by NPTEL/SWAYAM as and when they announce the courses every three months once.

2. **Agenda No 2 :Revision of syllabus for the qualifying exam of the Ph.D programme for VTU –ETR.**

   The chairman displayed the old syllabus for Ph.D programme for VTU-ETR. In length discussion was held and syllabus was modified and finalized with 10 modules. The finalized syllabus copy is enclosed herewith.

3. **Agenda No 3 :Discussion on the draft PG Scheme for 2020.**

   The draft PG scheme to be implemented from the academic year 2020 was discussed in length. It was the opinion of all the members to display the scheme on VTU website/ or send to the colleges where M.Tech programmes are running and take the feedback from the concerned staff. After getting the feedback, it becomes more effective to finalize the scheme and syllabus. Therefore it is requested to the authorities to display the scheme on VTU website at the earliest.

In between the meeting Hon.Vice Chancellor Dr.Karisiddappa visited the BOS meeting venue and addressed all the members and encouraged them to give the best to VTU students. He was of the openion that a thorough revision of syllabus should happen which includes the latest technologies and advances which can attract the students and support for their life.

At the end BOS chairman thanked all the members for their active participation in the deliberations and requested the same cooperation in the coming meetings.

Dr. K.B.Prakash
Chairman, BOS in Civil Engg (CV/TR/EV/CC)
PRINCIPAL
Govt. Engineering College
Haveri-581 110.

VISVESARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Topics of Syllabus for the Qualifying Exam for the Ph.D. Programme Syllabus for VTU-ETR

Civil Engineering Science

- **Structural analysis**
  Structural systems
  Truss analysis
  Deflection of beams
  · Strain energy
  Arches and cables
- **Fluid mechanics**
  Open channel flow
  Pipe flow and water hammer
  Dimensional analysis and model studies
  Impact of jets on vanes
  Pumps & turbines
- **Concrete technology**
  Properties of fresh and hardened concrete
  Special concretes
  Non destructive testing of concrete
- **Design of concrete structures**
  Principles of limit state design
  Design of beams
  Design of slabs
  Design of columns
- **Geotechnical engineering**
  Index properties of soil
  Soil structure & classification of soils
  Compaction of soil
  Soil water system
  Consolidation of soils
  Effective stress and shear strength
  Ground modifications
- **Transportation engineering**
  Highway planning and alignment
  Highway geometric design
  Pavement material and construction
  Wind analysis and site selection for airport
  Pavement of evaluation

- **Irrigation engineering**
  Water requirements of crops
  Canal cross drainage work
  Gravity dams and earthen dams
- **Design of Steel structures**
  Steel structural fasteners
  Tesnion, compression, flexural members
  Connections
- **Environmental engineering**
  Population forecasting
  Water quality
  Water treatment
  Methods of sanitation
  Sewage treatment and industrial waste water treatment
- **Surveying**
  Compass surveying
  Leveling and contouring
  Theodalite survey
  Curve settings
  Areas & volumes
  Total station survey

K B Prakash
Chairman BOS Gul.

PRINCIPAL
Govt. Engineering College
Haveri-581 110.

M Gmail

Proceedings of BOS(AE) meeting at 11 AM on 30 Sept 2019 at VTU's RO, Nagarabhavi

1 message

SK Maharana <skmaha123@gmail.com>
23 October 2019 at 14:28
To: Registrar Vtu <registrar@vtu.ac.in>, VTU Academic <academic.vtu@gmail.com>, Academic VTU <academicsyl2018@gmail.com>
Cc: Ramachandra Krishnaswamy <drkrc2006@gmail.com>, nchikkanna1967@gmail.com, Mukesh PR <vsmprm@gmail.com>, hod-ae@nmit.ac.in, hodaer@mite.ac.in

Sir

Teh proceedings of BOS(AE) meeting held on 30 Sept 2019 is attached herewith for you're kind reference.

Regards
Dr SK Maharana

On Mon, Sep 16, 2019 at 1:29 PM SK Maharana <skmaha123@gmail.com> wrote:

Sir

A BOS(AE) meeting has been proposed to be held on **30 Sept 2019(Monday)**.

Agenda for the above meeting are :

1. To finalise the Mass Online Open Courses(MOOCs) or courses from NPTEL/ SWAYAM platform for additional credits to be earned by a student for the award B.E./B.Tech(Honours) degree in Aeronautical Engineering or in Aerospace Engineering.
2. Revision of PG (MTech in Aeronautical Engineering and MTech in Aerospace Propulsion Technology) of Syllabus of 2018 scheme.
3. Discussion on PhD coursework(for Aeronautical Engineering/Aerospace Engineering) -2019 onwards.
4. Any other points wif the permission from the Chairman.

Email Ids for all members are:
1. K Ramachandra (drkrc2006@gmail.com)
2. Dr SK Maharana (skmaha123@gmail.com)
3. Dr N Chikkanna (nchikkanna1967@gmail.com)
4. Dr G Purushotham (hodaer@mite.ac.in)
5. PK Dash (hod-ae@nmit.ac.in)
6. Dr R Mukesh(vsmprm@gmail.com)

The necessary logistics (local transport, hospitality and other arrangements for the meeting) may please be approved as well.

Regards
Dr SK Maharana
Chairman, BOS(AE)
Contact 9900094967

📄 **Proceedings of teh Board of Studies 30 Sep 2019.pdf**
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Proceedings of the Board of Studies (AE) held on 30 Sep 2019 at RO, Bangalore, at 11 AM.

Members Present:
1. Dr SK Maharana
2. Dr G Purushotham
3. Dr PK Dash
4. Dr Mukesh R

Members on leave: Dr K Ramachandra, Dr N Chikkanna

Agenda-1	:	To finalise the Mass Online Open Courses(MOOCs) or courses from NPTEL/ SWAYAM platform for additional credits to be earned by a student for the award B.E./B.Tech(Honours) degree in Aeronautical Engineering or in Aerospace Engineering.
Resolution		A list of courses has been prepared and sent to the University
Agenda-2		Revision of PG (MTech in Aeronautical Engineering and MTech in Aerospace Propulsion Technology) of Syllabus of 2018 scheme.
Resolution		PG Scheme 2020-21 (Aeronautical Engineering and Aerospace Propulsion Technology) has been modified as per the guidelines and sent to the University
Agenda-3		Discussion on PhD coursework(for Aeronautical Engineering/Aerospace Engineering) -2019 onwards.
Resolution		BOS suggested to continue with the existing coursework
Agenda		Any other points with the permission from the Chairman.
Resolution		i) Workshop could be organised by BOS(AE) only for new-age subjects[Artificial Intelligence, Machine Learning , Data Science etc.] being introduced in Aeronautical Engineering/Aerospace engineering [both UG and PG prorammes] with the approval from the University. ii) BOS(AE) requested the Univ to consider the two points[under other points] mentioned in the BOS meeting held on 29 Aug 2019

BOARD OF STUDIES

AUTOMOBILE ENGINEERING

Proceedings of the Board of Studies Meeting held on 11ᵗʰ October 2019 at VTU Belagavi, at 11.30 AM

Members Present:

1 | Dr. Ramakrishna N. Hegde, Chairman, BOS in Automobile Engineering, Professor and Head, Dept. of Automobile Engineering, Srinivas Institute of Tech., Srinivas Campus, Valachil, Farangipete, Mangaluru.

2 | Dr. J Venkatesh,, Member, BOS in Automobile Engineering, Professor and Head, Dept. of Automobile Engineering, PES College of Engineering, Mandya

3 , Dr. Raju B R, Member, BOS in Automobile Engineering, Professor and Head, Dept. of Automobile Engineering, Oxford College of Engineering, Bengaluru

4 | Sri. Vinayak Lokur, Member, BOS in Automobile Engineering, Expert Valves Pvt. Ltd, Belagavi

Members on Leave:

1. Dr. M I Sakri , Member, BOS in Automobile Engineering, Professor and Head, Dept. of Automobile Engineering, BLDEA's Dr. PG Halakatti college of Engineering, Vijayapur

Minutes of the Meeting:

Chairman, AU Board, welcomed the members of the Board of Studies, Automobile Engineering requested for their active participation, discussions and fruitful conclusions on the agenda. The proceedings of meeting are as follows:

Agenda -1 .

1.   **Feedback on draft copy of VTU-ERT syllabus and approval**
Draft copy of the VTU-ERT that was sent to all the BOS members through email was taken up for further discussion for changes/modifications and final approval. The members agreed to retain the draft copy as the final approved copy, without any modifications.
Resolution:

 The draft copy **of VTU-ERT syllabus shall** be the final approved copy.

Agenda -2 : | Constitute /Frame the M.Tech syllabus as per the VTU guidelines and template

All BOS members were apprised of the proceeds of Joint BOS meeting and the guidelines to be followed while framing the M.Tech syllabus for 2019-20 schemes. Discussion was made at length to include latest technological advancements in Automobile Engineering sector. Taking into consideration a draft scheme was prepared , for which the detailed syllabus to be framed.

Resolution:

(i) To introduce the following new courses under Professional core category(PCC) and under Professional Elective category (PEC)

> **Semester 1:**
>> 1. Advances in Automotive engines & systems (New)
>> 2.. Automotive Chassis & power transmission (New- Modified)
>> 3. Alternative fuels & emission norms (New-Modified)
> **Semester 2**
> **New courses under Professional core category (PCC)**
>> 1. Vehicle dynamics (New)   2. Autotronics (New)
> **New courses under Professional Elective category (PEC)**
> **Professional Elective 1**
>> 1. Driverless vehicles (New)   2. Automotive components design (New)
> **Professional Elective 2**
>> 1. Engine management systems (New) 2. Computational fluid dynamics (New)
>> 3. Gas turbines (New)
> **Semester 3**
> **New courses under Professional core category (PCC)**
>> 1.Hybrid and Electric vehicles (New-Modified)
> **New courses under Professional Elective category (PEC)**
> **Professional Elective 3**
> 1. IOT in Automotive Vehicles (New) 2. Advanced Manufacturing Technology (New)
> 3. Vehicle Aerodynamics & Ergonomics (New)
> **Professional Elective 4**
> 1. Machine Learning (New) 2. Artificial Intelligence (New)

(ii) A draft scheme of Teaching and Examination for the M.Tech syllabus 2019-20 as per the VTU guidelines and template was framed and the same shall be sent to all the members for constituting the detailed syllabus.

Agenda -3

Guidelines to be followed, discussion on inclusion/deletion/modification of M.Tech syllabus

The following points of the proceedings of JBOS meeting were briefed to all the members present.

(i) The syllabus of 04 and 03 credit courses to be designed for 50 and 40 hours respectively for teaching and learning process.

(ii) Each theory course of the syllabus to have 05 course outcomes.

Resolution:

(i) Guidelines for the mini project shall be finalized in the next meeting.

ii) The draft syllabus of M.Tech, to be finalized before 23/11/2019 and taken up for scrutiny in the next meeting in November - 2019.

Agenda -4

Feedback on SWAYAM courses identified for the proposed honors degree; Additions /Modifications if any

The hard copy of prepared list of Massive Online Open Courses (MOOCs) selected from only NPTEL/SWAYAM platforms for additional credits to be earned by a student for the award of BE/B.Tech (Honors) degree, was given to all the members for comments, if any.

Resolution:

(i) The list was approved without any modifications.
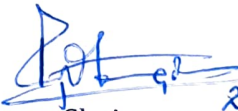
(ii) Shall be updated as and when the need arise.

Agenda -5

Any other matter

Communication to the members either from VTU or from the chairman shall be through the email, and shall be duly responded on time.

The meeting concluded with thanks by the chair.

21/10/2019

Chairman,

BOS in Automobile Engineering,

✕   ◰   ▲   🗑   👤 ▾

submitting Proceedings of the BoS meeting held on 21st sept, 2019

Vadiraj Katti ✔ (October 2, 2019 3:40 PM)

To: registrar@vtu.ac.in

10309

3 OCT 2019

pdf   proceedings of Bo…   314KB

pdf   ETR_ Mechanical …   121KB

📄   mechanical PG Pr…   13KB

📄   List of courses sel…   14KB

pdf   Booklet_jul-dec_2…   16.9MB

Respected sir,

Please find attached herewith Proceedings of the meeting of BoS ME Board held on 21st sept, 2019 in Rgistrar's Conference room at VTU, Belagavi.

This is for your kind consideration and perusal

with regards

Prof. Vadiraj V. katti

M Tech (NITK), PhD (IIT Bombay)

(Chairman BoS ME Board and Member- Academic Senate, VTU Belagavi) and

Principal

KLS VDIT Udyog Vidya Nagar,

Haliyal 581329

Cell No. 9449454542

9480587316

Spl. officer
BOS

E- 3 OCT 2019

Submitted sir

To

Registrar, VTU, Belagavi.

Date: 21st September, 2019

The Meeting of Board of Studies (Mechanical Board) 2019-22 of VTU was held on Saturday 21st September, 2019 at 11:00 a.m. in the Conference Room of Registrar of VTU, Belagavi.

Members present:

1.	DR VADIRAJ V KATTI	: Chairman
2.	DR. M A KAMOJI	: Member
3.	DR. RAJESHA S	: Member
4.	DR. K. MAHESH DUTT	: Member
5.	DR. T. MADHUSUDHAN	: Member
6.	DR. K.R.DINESH	: Member
7.	DR.H R MANOHARA	: Member
8.	PRAKASH R. PATIL	: Member
9.	SANTOSH KOTNIS	: Invitee

Leave of absence was granted to:

1.	DR B SADASHIVE GOWDA	: Member
2.	DR T. MUNIKENCHE GOWDA	: Member
3.	ANAND JOSHI	: Member

Proceedings of the Meeting

Chairman of BoS welcomed the members for the meeting and briefed the agenda. The details of the proceedings are as below:

1. **Agenda (1):** To discuss about the frame work for designing of ETR Syllabus for Entrance test for Ph D Programme and MSc Engg.

   Resolution No.(1): As per the Resolution (Table Agenda 2) of Joint Board of Studies Meeting held on 19th August, 2019 VTU – ETR (Part-ii) is to be conducted for each Programme based on the syllabus prepared exclusively for that programme referring to respective under-graduate programme syllabus. The syllabus should have 10 modules.

   Members of the Board of Studies (Mechanical Board) discussed the matter in detail and prepared the draft copy of syllabus of VTU-ETR (part-ii) for

Engg., Marine Engg., Mechatronics and Mining Engg. The detailed draft copies of VTU-ETR (part-ii) are enclosed herewith for kind consideration.

2. **Agenda (2):** To initiate the revision of syllabus for PG programme starting from academic year 2020-21

Resolution No.(2): As per the Resolution (Agenda 6) of Joint Board of Studies Meeting held on 19th August, 2019, BoS were informed to initiate the revision of the syllabus of MTech programme listed under Mechanical Board.

Members of the Board of Studies (Mechanical Board) perused the guidelines and template notified from Registrar, VTU. It is opined to initiate framing of syllabus by all the members segregated based on the respective field and expertise of the members. The inputs of the members from Industry will be considered while preparing the draft syllabus. Detailed syllabus copy of ongoing courses is shared with all the members. Attached herewith the list of allotment of courses to Members of BoS for initial preparation of curriculum as per the guidelines notified by VTU.

3. **Agenda (3):** To prepare the list of subjects to be selected from MOOCs, NPTEL/SWAYAM platforms for additional credits for the award of BE with Honours in respective specialization:

Resolution No.(3): As per the Resolution (Agenda 3) of Joint Board of Studies Meeting held on 19th August, 2019, BoS were informed to initiate necessary steps to prepare a list of online courses selected from NPTEL-SWAYAM platforms for additional credits to be earned by a student for the award of BE/BTech (Honours) degree.

Members of the Board of Studies (Mechanical Board) perused the guidelines and referred to complete list of online courses available for Jul-Dec 2019 in NPTEL portal. Members discussed thoroughly on the agenda and suggested exclusions of some of the subjected listed in NPTEL portal under mechanical engg. Accordingly, the proposed list of subjects are attached for kind consideration and perusal

Dr. Vadiraj V. Katti,
Chairman, Board of Studies (Mechanical Board) 2019-22
VTU, Belagavi

Minutes of nanotechnology BOS meeting
5 messages

Dinesh Rangappa <dineshrangappa@gmail.com> 21 October 2019 at 18:13
To: Registrar <registrar@vtu.ac.in>
Cc: VTU Academic <academic.vtu@gmail.com>, Academic VTU <academicsyl2018@gmail.com>, kishennaik@vtu.ac.in

Dear Sir
PFA is minutes of nanotechnology BOS meeting held on 21-10-2019 at ROB.

This is for kind information and necessary action.

Yours faithfully
Dinesh

📕 **New Doc 2019-10-21 17.56.21.pdf**
1401K

Academic VTU <academicsyl2018@gmail.com> 22 October 2019 at 10:47
To: Dinesh Rangappa <dineshrangappa@gmail.com>

Thank you sir

[Quoted text hidden]
--
with regards
Special Officer
Academic Section
VTU, Belagavi

Dinesh Rangappa <dineshrangappa@gmail.com> 13 May 2020 at 00:21
To: VTU Academic <academic.vtu@gmail.com>, Academic VTU <academicsyl2018@gmail.com>, sbhalbhavi@vtu.ac.in, Registrar <registrar@vtu.ac.in>

Dear Sir
I am herewith forwarding previous Nanotechnology BOS meeting minutes for your kind perusal, drawing your kind attention of the one of the meeting agenda no. 3, **introducing one year PG Diploma course in**   Nanotechnology**, it is to inform that BOS in the held meeting has recommended to start the one year PG Diploma course in** Nanotechnology and have framed the syllabus for the same. I**n this regard I am again requesting you to consider the same and place the request before upcoming JBOS and get the necessary administrative approval from the concerned body so that course can be** introduced from this academic year, i.e from the year 2020-21.

Kindly do **the needful and oblige .**

Sincerely
Dinesh
[Quoted text hidden]
--
Professor & Chairman
Department of Nanotechnology
Visvesvaraya Technological University
Center for Postgraduate Studies, Bengaluru Region
Muddenahalli, Chikkaballapur – 562 101, INDIA

Chairman: BOS in Nanotechnology, VTU
Editorial Member: International Journal of Green Nanotechnology
Editorial Member: HSOA Journal of Nanotechnology: Nanomedicine & Nanobiotechnology
Email: dineshrangappa@gmail.com, dinus74@yahoo.com
Phone: +91-9632764659

📕 **New Doc 2019-10-21 17.56.21.pdf**
1401K

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sbhalbhavi@vtu.ac.in <sbhalbhavi@vtu.ac.in>   13 May 2020 at 16:38
To: academicsyl2018@gmail.com

Thanks and Regards
Prof. Sadashiv. B. Halbhavi
Special Officer
Academic Section
VTU, Belagavi-590016
Karnataka, India
+91 9945456070

-------- Forwarded message -------
From: "Dinesh Rangappa" <dineshrangappa@gmail.com>
To: "VTU Academic" <academic.vtu@gmail.com>, "Academic VTU" <academicsyl2018@gmail.com>, sbhalbhavi@vtu.ac.in,
"Registrar" <registrar@vtu.ac.in>
Sent: May 13, 2020 12:28 AM
[Quoted text hidden]

📄 **New Doc 2019-10-21 17.56.21.pdf**
   1401K

Visvesvaraya Technological University

MINUTES	[MEETING DATE] 21-10-2019	[MEETING TIME] 10.30 am 5.00 pm	[MEETING LOCATION] VTU RO Bangalore

MEETING CALLED BY	Registrar
PURPOSE OF MEETING	Board of Studies in Nanotechnology meeting
CHAIRMAN	**Dr. Dinesh Rangappa**, Professor, Department of Nanotechnolgy, VTU PG Centre, Muddenahalli, Chickballapur, Karnataka, India
MEMBERS PRESENT	1. **Dr. Prasad**, HoD, Dept. Nanotechnology, Srinivasa Engg. College, Mangalore 2. **Dr. Balaram Sahoo Associate. Professor, Materials Research Centre, IISc. Bangalore** 3. **Dr. Lokesh S. V.**, Department of Nanotechnolgy, VTU PG Centre, Muddenahalli, Chickballapur, Karnataka, India 4. **Dr. R.M. Kulkarni**, Professor, Centre for Nano Studies KLS Gogte Institute of Technology, Belagavi
SPECIAL INVITEES PRESENT	NIL
MEETING AGENDA	1. Finalize the syllabus for VTU-ETR Ph.D/M.Sc. (Engg) by Research 2019-20 Nanotechnology 2. Eligibility criteria for M.Tech and Ph.D in Nanotechnology Program. 3. Introducing one-year PG diploma course in Nanotechnology 4. Any other matters with permission from Chairman

Page –1

MINUTES OF THE MEETING

Chairman Welcomed all the members of the committee for first BOS meeting after the formation of new committee. Agendas were opened for the discussion and following deliberation and resolutions were taken in the meeting:

Agenda 1. ***Finalize the syllabus for VTU-ETR Ph.D/M.Sc. (Engg) by Research 2019-20 Nanotechnology***

The Board has discussed in detail and revised the syllabus for VTU-ETR Ph.D/M.Sc. (Engg) by Research 2019-20 for Nanotechnology and copy of the finalized syllabus is enclosed for the further necessary action.

Agenda 2. ***Eligibility criteria for M.Tech and Ph.D in Nanotechnology Program.***

The Board has discussed existing eligibility criteria for M.Tech Nanotechnology and Ph.D. Programs. Considering the interdisciplinary nature of nanotechnology and emerging trends in the multidisciplinary courses and development in and around the country, Board has resolved to revise the eligibility criteria for M.Tech and Ph.D. programs in Nanotechnology. After the thorough deliberation, Board has recommended to extend the eligibility criteria for candidates of all the Engineering graduates and M.Sc. graduates in Basics science disciplines except Computer Science and Engineering and Information Science graduates. List of courses eligible for M.Tech and Ph.D are enclosed as Annexure II.
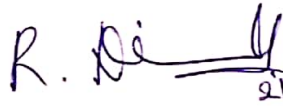
Agenda 3. ***Introducing one-year PG diploma course in Nanotechnology***

The Board has discussed in detail about the need for PG diploma course in Nanotechnology, considering increasing demand for Nanotechnology based activity and research at Industries Academic and R&D Institutions due to its interdisciplinary nature, one-year PG diploma program may cater the needs of the above institutions and working people.

The Chair thanked all the members for their valuable suggestions & involvement.

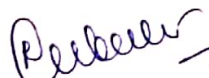**Members present:**
1. Dr. Dinesh Rangappa
2. Dr. Prasad,
3. Dr. Balaram Sahoo
4. Dr. Lokesh S. V.
5. Dr. R.M. Kulkarni

Page – 2.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM

Topics of Syllabus for the Qualifying Exam for the Ph.D. Programme Syllabus for the NANO TECHNOLOGY ULRAT 2019-20

1. Introduction to Nanoscience and Nanotechnology:- Importance and interdisciplinary nature of nanoscience and nanotechnology, 0D, 1D & 2D nanomaterials, size effects: surface to volume ratio, atomic, molecular & crystal structure, classification of phases & properties of materials, density of states & electronic energy bands- conductors, semiconductors and insulators, quantum effects in nanoscale materials.

2. Synthesis of Nanomaterials:- Bottom-Up and Top-Down approach, Mechanisms involved in nano-synthesis: Fundamentals of thermodynamics: Laws of thermodynamics (zeroth, first, second & third laws). Statistical processes, diffusion (Fick's laws), Heat capacity. Phase transformation, Nucleation processes (Homogeneous & Heterogeneous). Basics of chemical kinetics, Catalysis. Synthesis Methods: Chemical precipitation, Sol-gel, Chemical reduction, Sonochemical synthesis, Hydrothermal, Solvothermal, Solution combustion, Super-critical fluid. Spin coating & Ball milling. Lithography techniques and Nanofabrication. Physical vapour deposition (PVD): Thermal evaporation, Electron beam evaporation, Sputtering & electric arc, Laser ablation, Atomic layer deposition. Chemical vapor deposition (CVD): Closed/open reactor CVD, High & low pressure CVD, High & low Temperature CVD, Metal organic (MO) CVD, Hybrid Methods. Biological methods- Synthesis using micro organisms, Synthesis using plant extract, use of proteins and DNA templates.

3. Material Characterization Techniques:- Elemental & compositional characterization techniques: X-ray Photoelectron Spectroscopy (XPS), Energy Dispersive X-ray Analysis (EDAX), Structural characterisation: X-ray, Neutron & Electron diffraction. Surface & interface characterization techniques- Optical microscopy. Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM), Electron Energy Loss Spectroscopy (EELS), Atomic Force Microscopy (AFM), Scanning Tunnelling Microscopy (STM), Adsorption-desorption isotherms. Spectroscopic techniques: Fourier Transform Infrared (FTIR), Raman, UV-Visible. Thermal characterisation: Thermo Gravimetric Analysis, DTA & Differential Scanning Calorimetry. Electrical characterisation: Four probe I-V characterisation. Mechanical testing: using Universal Testing Machine. Impedence spectroscopy, Dynamic Light Scattering (DLS), Contact angle measurement, Zeta potential. SQUID magnetometry. EPR, NMR & Moessbauer Spectroscopy.

4. Properties at Nanoscale:- Physical properties: Mechanical, Thermal, Electrical, Electronic, Magnetic and Superconducting, Optical properties & Coupled properties (Electromagnetic, ferroic properties, etc.)

5. Advanced, Smart Nanomaterials and Applications:- Carbon Based Nanostructures: Carbon Nanotubes (CNTs), Graphene, Fullerenes, Carbon clusters. Smart fluids (magneto- and Electro-rheological fluids), Polymeric materials, Biological nanomaterials: Proteins, DNA, Nanomedicine, Nanomaterials for targeted drug delivery, biological imaging and therapy (cancer therapy, etc). Metal & Metal oxide naomaterials, Core-Shell nanostructures, Meta (Electromagnetic) materials, Composite materials, Glasses, Glazes & other ceramics. Applications of nanomaterials: Anisotropic, Giant & Colossal magneto-resistance, Super-paramagnetism, Spintronics, Dielectric, Piezoelectric, Pyroelectric, Multiferroics. Ferromagnetic & Ferroelectric memory devices. P-N junctions, Lasers, Photodectctors, Field Effect Transistors, High Electron Mobility Transistors. Energy Systems: Photovoltaics (Solar cells), Batteries & Fuel cells, Supercapacitors, catalysts. Powder metallurgy & processing, Mechanical alloying, Anti-corrosion coatings & Super hydrophobic surfaces.

Text Books and References

1. T. Pradeep , "NANO The Essential , understanding Nanoscience and Nanotechnology". Tata McGraw-Hill Publishing Company Limited, 2007.

2. Introduction to Nanotechnology, Chareles P.poole jr. and frank J.Owens, wiley inter science.

3. Nanotechnology Principles and Practices by Sulabha K. Kulakarni.

4. The Chemistry of nanomaterials: Synthesis, Properties and Applications, Vol-I by C.N.R. Rao, A. Muller and A.K. Cheetham

5. Introduction to Solid State Physics, C. Kittel, Wiley Eastern

6. Fundamentals of Nanoelectronics by George W. Hanson (Pearson Education,New delhi)

7. Nanotechnology and Nano Electronics – Materials, devices and measurement Techniques by W. R. Fahrner – Springer

8. NanoBiotechnology-BioInspired Devices and materials of the Future by Oded Shoseyov, Ilan Levy.

9. . Bio Nano Technology by Good Sell, Wiley Liss

10. A practical approach to X-Ray diffraction analysis by C.Suryanarayana

11. Electron Microscopy and analysis by P.J. Goodhew and F.J. Humpreys

21/10/19   21/10/2019   21/10/2019

21/10/19   21/10/19

page – 4

Eligibility criteria for M.Tech and Ph.D. programme in Nanotechnology at VTU

The Board of Studies in Nanotechnology Recommended the following eligibility criteria for admission to M.Tech and Ph.D. programme in Nanotechnology.

- The candidates with Bachelor/M.Sc. degree are eligible for M.Tech in Nanotechnology.
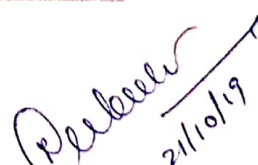- The candidates with M.Tech/M.Sc. degree are eligible for Ph.D. in Nanotechnology.

Bachelor of Engineering	MEDICAL, DENTAL & ISMH COURSE	Master of Science
Aeronautical Engineering	MBBS	Physics
Automobile Engineering	BDS	Chemistry
Bio Medical Engineering	BAMS	Biotechnology
Biotechnology	BHMS	Electronics
Civil Engineering	BNYS	Material Science
Chemical Engineering	BUMS	Polymer Science
Ceramics & Cement Technology		
Electronics & Communication Engineering		Note: Any other M.Sc Courses in Basic or
Electrical & Electronics Engineering		Applied subjects
Electronics & Instrumentation Engineering		associated with the
Environmental Engineering		above mentioned
Electronics & Telecommunication		courses
Industrial & Production Engineering		
Instrumentation Technology		
Medical Electronics		
Mechanical Engineering		
Marine Engineering		
Manufacturing Science and Engineering		
Mechatronics Engineering		
Nano Technology		
Petrochem Engineering		
Petroleum Engineering		
Polymer Science & Technology		
Automation and Robotics Engineering		
Aero Space Engineering		
Silk Technology		
Tool Engineering		
Textile Technology		

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page - 5

Visvesvaraya Technological University

Centre for Post Graduate Studies, Bengaluru Region

Muddenahalli, Chikkaballapur – 562 101

Dr. Dinesh Rangappa
Chairman
BOS in Nanotechnology

Mobile: +91 9632764659
E-mail: *dineshrangapp@gmail.com*

Ref: VTU/MH/PGC/NT/2019-20/ 237

25-10-2019

Inward No. 14636
3-0-NOV-2019

To
The Registrar
Visvesvaraya Technological University
Jnana Sangama
Belgaum - 590018

Respected Sir,

Sub: Minutes of The Nanotechnology BOS Meeting Held at ROB on 19-11-2019-reg
*****

With reference to the above mentioned subject, herewith we are submitting Minutes of the Nanotechnology BOS Meeting Held at ROB on 19-11-2019 attached in the sealed envelope. In this regard, it is forwarded for further action.

Kindly do the needful at the earliest and oblige.

Yours Sincerely

25/11/2019

(Dr. Dinesh Rangappa)

Dr. DINESH RANGAPPA
Ph D., D.Engg. (Tokyo)
Professor
Dept. of Nanotechnology, CPGS
Visvesvaraya Technological University
Bengaluru Region

RECEIVED AT THE
OFFICE OF THE REGISTRAR

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Visvesvaraya Technological University

MINUTES | **[MEETING DATE]** | **[MEETING TIME]** | **[MEETING LOCATION]**
19-11-2019 | 10.30 am 5.00 pm | VTU RO Bangalore

MEETING CALLED BY	Registrar
PURPOSE OF MEETING	Board of Studies in Nanotechnology meeting
CHAIRMAN	**Dr. Dinesh Rangappa**, Professor, Department of Nanotechnolgy, VTU PG Centre, Muddenahalli, Chickballapur, Karnataka, India
MEMBERS PRESENT	1. **Dr. Prasad**, HoD, Dept. Nanotechnology, Srinivasa Engg. College, Mangalore 2. **Dr. Balaram Sahoo Associate. Professor, Materials Research Centre, IISc. Bangalore** 3. **Dr. Lokesh S. V.**, Department of Nanotechnolgy, VTU PG Centre, Muddenahalli, Chickballapur, Karnataka, India 4. **Dr. R.M. Kulkarni,** Professor, Centre for Nano Studies KLS Gogte Institute of Technology, Belagavi
SPECIAL INVITEES PRESENT	**NIL**
MEETING AGENDA	1. Revise the scheme and syllabus for M.Tech Nanotechnology for 2020 2. Scheme and syllabus for one year PG Diploma Course in Nanotechnology 3. Any other matters with permission from Chairman

MINUTES OF THE MEETING

Chairman Welcomed all the members of the committee for BOS meeting. Agendas were opened for the discussion and following deliberation and resolutions were taken in the meeting:

Agenda 1. Revise the scheme and syllabus for M.Tech Nanotechnology for 2020

The Board has discussed in detail on scheme and syllabus. The members were circulated with the framed scheme as per the new template provided by the VTU. Board has finalized the Scheme and assigned different members to frame/modify and include new courses to revise the syllabus.

Agenda 2. Scheme and syllabus for one-year PG Diploma Course in Nanotechnology

The Board has discussed the Scheme and syllabus for one-year PG Diploma Course in Nanotechnology and proposed name of the course as "PG Diploma in Nanotechnology". The members have framed the scheme for the PG diploma in Nanotechnology. The members assigned to modify the syllabus according to the scheme. The proposed Scheme for one-year PG Diploma Course in Nanotechnology is enclosed for further needful action.

The Chair thanked all the members for their valuable suggestions & involvement.

Members present:
1. Dr. Dinesh Rangappa
2. Dr. Prasad P,
3. Dr. Balaram Sahoo
4. Dr. Lokesh S. V.
5. Dr. R.M. Kulkarni

RNS Institute of Technology

Board of Studies in ECE/TCE: 2019 - 22

The Registrar
VTU, Belagavi – 590 018

Sir,

Sub: Reply to the appeal from the Hon'ble VC, VTU for **inclusion of interdisciplinary courses in the VTU M.TechProgramme Curriculum 2020-21**

Ref: Your office letter dated Nov 19, 2019 with Ref. No: VTU/PS/2019-20/7048

The current syllabus framed after the BOS meeting on Sept. 16, 2019 (Monday) for the M.TechProgramme Curriculum 2020-21 in VLSI DESIGN & EMBEDDED SYSTEMS (EVE) has the following interdisciplinary courses:

Sl. No.	Course Code	Course	Interdisciplinary Area Addressed
1	20EVE242	Nanoelectronics	Nano-electronics
2	20EVE244	Reconfigurable Computing	Control & Optimization
3	20EVE252	SoC Design	Electronic Circuits & Systems
4	20EVE253	Micro Electro Mechanical Systems	MEMS, Design & Manufacturing
5	20EVE321	Advances in Image Processing	Computer Algorithms, Games & Graphics
6	20EVE323	Embedded Linux System Design and Development	Embedded Technology, Computer Architecture
7	20EVE324	Advanced Computer Architecture	Computer Architecture
8	20EVE332	Pattern Recognition & Machine Learning	Artificial Intelligence, Machine learning, Deep Learning, Reinforcement Learning
9	20EVE333	Internet of things	IoT, Protocols and architecture for Constrained Applications viz., smart cities, connected factory / manufacturing, transportation, etc. ·
10	20EVE334	Cryptography and Network Security	Cryptography and Computer Security,

The **percentage (%) of interdisciplinary courses** in 2020-21 in M.Tech (VLSI DESIGN & EMBEDDED SYSTEMS (EVE)) is **38.46%** [10/26 → (no. of interdisciplinary courses =10) / (total no. of courses = 26)].

Similarly, other M.TechProgrammes under ECE/TCE board have incorporated the interdisciplinary courses in the 2020-21 curriculum.

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru – 560 098

RNS Institute of Technology

Board of Studies in ECE/TCE: 2019 - 22

The Registrar
VTU, Belagavi – 590 018

Sir,

        Sub:% of modification/ change effected in the VTU M.TechProgramme Curriculum 2020-21

        Ref: Your office letter dated Dec20, 2019 with Ref. No: VTU/Aca/A-9/2019-20/8074

The current syllabus framed after the BOS meeting on Sept. 16, 2019 (Monday) for the M.TechProgramme Curriculum 2020-21 in VLSI DESIGN & EMBEDDED SYSTEMS (EVE) has the following percentage of changes in the number of courses and course content.

Sl. No.	A	B	% change = (B/A) x100
1	**22** [Total Number of Courses (core & electives) in 2018-19 syllabus of M.Tech EVE (VLSI Design & Embedded Systems) Programme]	**04** [Number of new courses added in 2020-21 syllabus of M.Tech EVE (VLSI Design & Embedded Systems) Programme]	**18.18%** **Change in percentage (%) of courses in the programme** (M.Tech EVE (VLSI Design & Embedded Systems)
2	**22 + 2 labs** [22 - Total Number of Courses (core & electives) in 2018-19 syllabus of M.Tech EVE (VLSI Design & Embedded Systems) Programme]	**15** [Number of courses with modified / changed contents in 2020-21 syllabus of M.Tech EVE (VLSI Design & Embedded Systems) Programme]	**62.5%** (15/24 * 100) **Change in percentage (%) of content of the course in a course.**

Also, the following are attached herewith:
1. All feedbacks from stakeholders (as briefed in the BoS meeting by the members)
2. BoS proceeding (with minuted discussions) with necessity of revision

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru – 560 098

Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018, Karnataka State

Board of Studies in ECE/TCE: 2019 - 22

First meeting of the BoS (ECE/TCE) : 2019-22
Date: Sept. 16, 2019   Time: 11.00 a. m.
Venue: VTU Regional Center, Nagarbhavi, Bangalore.

List of members present

Name & Address	Designation
Dr. M K Venkatesha Principal, RNS Institute of Technology Channasandra, Rajarajeshwari Post, Bengaluru – 560 098	**Chairman**
Dr. T M P Rajkumar Professor & Head. Dept. of E&C Engg. Anjuman Institute of Tech & Mgt.,Anjumanabad Bhatkal – 581 320	**Member**
Dr. A M Bhavikatti Professor & Head, Dept of E&C Engg. BheemannaKhandre Institute of Technology, Bhalki	**Member**
Dr. S V Sathyanarayana, Professor, Dept. of E&C Engg. JNNCE. Shivamogga.	**Member**
Dr. Savitha H M Professor & Dept. of E&C Engg., St. Joseph Engineering College, Vamanjoor, Mangaluru – 575 028	**Member**
Dr. D J Ravi Professor & Dean, Dept. of E&C Engg., Vidyavardhaka College of Engg., Gokulam 3rd Stage, Mysuru – 570 002	**Member**
Dr. T C Thanuja Professor, Dept. of VLSI Design and Embedded System VTU Center for PG Studies, Belagavi	**Member**
Dr. Jagadeesh Chandra A P Professor, Dept. of E&C Engg., Adichunchanagiri Inst. of Technology, Jyothi nagar Post, Chikmangaluru – 577 102	**Member**
Mr. Manjunatha V Design Compiler Synopsys India Pvt. Ltd., R&D 7th Floor, Tower B, RMZ Infinity, Old Madras Road, Bengaluru – 560 016	**Member**
Dr. Narendranath Udupa Energy Consultant, MEClink B2B services. Previously with Philips,Bengaluru – 560 032	**Member**
Dr. Andhe Pallavi Professor & Dean, Dept. of EIE Engg., RNSIT, Bengaluru –98	**Invited Member**

Proceedings of the meeting:

Dr. M K Venkatesha, Chairman, BoS (ECE/TCE) welcomed the members and invitees of the BoS (ECE/TCE).

Agenda No. 1: M.Tech 2020-21 Syllabus Revision with focus on VLSI & ES (EVE)

Discussions: The members discussed about the feedback received from the stakeholders regarding the current M.Tech Syllabus. A brief overview is presented below.

1. **Mr. Manjunatha V, Member,** Design Compiler Synopsys India Pvt. Ltd., R&D 7th Floor, Tower B, RMZ Infinity Old Madras Road, Bengaluru – 560 016 presented the following **feedback from Industry perspective:**

    a. Services industry in VLSI requires Pure Design and electronic design capabilities based on tools such as Cadence, Synopsys, etc.

b. Strong Digital Design Concepts required as compared to analog wherein opportunities are limited.

c. Present syllabus to be compared with syllabus from MIT, VIT, etc.

d. Emphasis on internship to facilitate moulding and absorption into industry.

e. To add more lab tools, viz., Virtuso for analog design layout, to add timing extraction in ASIC design, to introduce scripting knowledge viz., Tickle, Perl, etc.

2. **Dr. T C Thanuja, Member,** Professor, Dept. of VLSI Design and Embedded System VTU Center for PG Studies, Belagavi presented the following **feedback from faculty and alumni** perspective:

a. Teachers are concentrating more on theory with emphasis on passing percentage. They should also concentrate on lab skills.

b. Case studies not present in the books, but should be discussed.

c. Gaps observed in the following courses: Advanced embedded design, static timing analysis, system Verilog, etc.

3. **Dr. S V Sathyanarayana, Member,** Professor, Dept. of E&C Engg., JNN College of Engineering, Shivamogga presented the following observations:

Theoretical part with lab support is present for embedded systems. But using open sources more emphasis to be provided on Cortex M3 component.

4. **Dr. T M P Rajkumar, Member,** Professor & Head. Dept. ofE&C Engg., Anjuman Institute of Tech & Mgt., AnjumanabadBhatkal – 581 320 presented the following observations:

Electives in the current syllabus to be made more stream relevant. say in EVE stream, more of VLSI relevant. The relevance of electives such as 'Advanced Image Processing' was questioned.

5. **Dr. Narendranath Udupa, Member,** Energy Consultant, MEClink B2B services., Previously with Philips, Bengaluru – 560 032 put forth the following suggestions:

To incorporate latest topics in VLSI, say EMI/EMC compatibility with industry support such as BEL.

Resolutions:
1. To incorporate lab experiments / Formulation of lab experiments (extra) to be conducted along with identified theory subjects. The following is the allotment of faculty & identified subjects:

Sl. No.	Subject Code	Subject	Faculty In-Charge for framing Lab Experiments as part of CIE of respective theory subject
VLSI Design & Embedded Systems (EVE)			
1	18EVE14	VLSI Testing	Dr. Thanuja&Manjunatha V
2	18EVE23	System Verilog	Dr. Thanuja
3	18EVE31	CAD of Digital Systems	Dr. Andhe Pallavi
Signal Processing (ESP)			
1	18EVE13	Advanced Embedded Systems (18ELD/EIE/ ECS/ESP/EVE13)	Dr. Satyanarayana
2	18ESP21	Image Processing and Machine Vision	Lab (BIT)
3	18ESP31	Adaptive Signal Processing	Lab (BIT)
Industrial Electronics (EIE)			
1	18EVE13	Advanced Embedded Systems (18ELD/EIE/ECS/ESP/EVE13)	Dr. Satyanarayana
2	18EIE23	Design of Power Converters	LAB

3	18EIE31	PLCs and Industrial Automation	LAB (Dr. AndhePallavi)
Digital Electronics/Electronics (ELD)			
1	18EVE13	Advanced Embedded Systems (18ELD/EIE/ECS/ESP/EVE13)	Dr. Satyanarayana
2	18ECS23	Error Control Coding (18ECS23/18ELD23)	Dr. Savitha
3	18ELD31	Synthesis and Optimization of Digital Circuits	LAB
Digital Communication & Networking/Communication Systems/Information & Comm. Systems/ Digital Electronics & Comm. /Digital Comm. Engg/Digital Electronics & Comm. System (ECS)			
1	18EVE13	Advanced Embedded System (18ELD/EIE/ECS/ESP/EVE13)	Dr. Satyanarayana
2	18ECS23	Error Control Coding (18ECS23/18ELD23)	Dr. Savitha
3	18ECS31	LTE 4G Broadband	Dr. Jagadish

2. Identification of 4th elective in the following streams:

New/ Old Electives to be identified	20XXX244	20XXX254	20XXX324	20XXX334
VLSI Design & Embedded Systems (EVE) – Identified & framed from old syllabus	20EVE244 Reconfigurable Computing (18ELD242)	20EVE254 Synthesis and Optimization of Digital Circuits (18ELD31)	20EVE324 Advanced Computer Architecture (18ELD21)	20EVE334 Cryptography and Network Security (18ECS243/ 18EIE243/ 18ELD243)
20XXX244, 20XXX254, 20XXX324, 20XXX334 To be identified for the below M.Tech Streams				
1	Signal Processing (ESP)			
2	Industrial Electronics (EIE)			
3	Digital Electronics/ Electronics (ELD)			
4	Digital Communication & Networking/Communication Systems/Information & Comm. Systems/ Digital Electronics & Comm. /Digital Comm. Engg/Digital Electronics & Comm. System (ECS)			

Agenda 2: Revised Syllabus for VTU ULRAT qualifying exam for Ph. D program in ECE

Discussions: Dr. M K Venkatesha presented the old and new syllabus for ratification with explanation.

Resolution: The new presented syllabus was given tentative agreement by all the members present.

The meeting ended with a vote of thanks from the Chairman, Dr. M K Venkatesha.

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru – 560 098

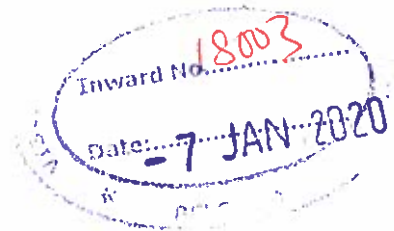✖   📦   ⚠   🗑   👤▾

☆   **Reply to the appeal from the Hon'ble VC, VTU for inclusion of interdisci…**

principal@rnsit.ac.in ✔ (January 6, 2020 5:09 PM)

To: "Registrar, VTU Belagavi" <registrar@vtu.ac.in>

CC: "Mkvenkatesha" <mkvenkatesha@gmail.com>

(stamp: Inward No. 18003 Date: -7 JAN 2020)

📄 reply_vtu_bos_inc…
32KB

Sir,

Kindly find herewith the attached reply to
1. Your office letter dated Nov 19, 2019 with Ref. No: VTU/PS/2019-20/7048 and
2. Your office letter dated Dec 20, 2019 with Ref. No: VTU/Aca/A-9/2019-20/8074

with the following subjects:
Sub 1: Reply to the appeal from the Hon'ble VC, VTU for inclusion of interdisciplinary courses in
the VTU M.Tech Programme Curriculum 2020-21
Sub 2: % of modification/ change effected in the VTU M.Tech Programme Curriculum 2020-21

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra, Rajarajeshwari Post, Bengaluru - 560 098

RNS Institute of Technology

Board of Studies in ECE/TCE: 2019 - 22

The Registrar
VTU, Belagavi – 590 018

Sir,

Sub: Reply to the appeal from the Hon'ble VC, VTU for **inclusion of interdisciplinary courses in the VTU M.TechProgramme Curriculum 2020-21**

Ref: Your office letter dated Nov 19, 2019 with Ref. No: VTU/PS/2019-20/7048

The current syllabus framed after the BOS meeting on Sept. 16, 2019 (Monday) for the M.TechProgramme Curriculum 2020-21 in VLSI DESIGN & EMBEDDED SYSTEMS (EVE) has the following interdisciplinary courses:

Sl. No.	Course Code	Course	Interdisciplinary Area Addressed
1	20EVE242	Nanoelectronics	Nano-electronics
2	20EVE244	Reconfigurable Computing	Control & Optimization
3	20EVE252	SoC Design	Electronic Circuits & Systems
4	20EVE253	Micro Electro Mechanical Systems	MEMS, Design & Manufacturing
5	20EVE321	Advances in Image Processing	Computer Algorithms, Games & Graphics
6	20EVE323	Embedded Linux System Design and Development	Embedded Technology, Computer Architecture
7	20EVE324	Advanced Computer Architecture	Computer Architecture
8	20EVE332	Pattern Recognition & Machine Learning	Artificial Intelligence, Machine learning, Deep Learning, Reinforcement Learning
9	20EVE333	Internet of things	IoT, Protocols and architecture for Constrained Applications viz., smart cities, connected factory / manufacturing, transportation, etc.
10	20EVE334	Cryptography and Network Security	Cryptography and Computer Security,

The **percentage (%) of interdisciplinary courses** in 2020-21 in M.Tech (VLSI DESIGN & EMBEDDED SYSTEMS (EVE)) is **38.46%** [10/26 → (no. of interdisciplinary courses = 10) / (total no. of courses = 26)].

Similarly, other M.TechProgrammes under ECE/TCE board have incorporated the interdisciplinary courses in the 2020-21 curriculum.

Regards,

Yours faithfully,

Dr. M K Venkatesha
Chairman, ECE BoS, VTU, Belgaum
Principal, RNS Institute of Technology
Channasandra. Rajarajeshwari Post, Bengaluru – 560 098

Members Present:
1. Dr. T. Manjunatha, Chairman, BOS
2. Dr. M.M Bagali, Member
3. Dr. Reena Williams, Member
4. Dr. L. Vijayashree, Member
5. Dr. R. Srinivasan, Member
6. Prof.V.Keshava Murthy, Special Invitee

Members Absent:
7. Dr. S.R.Baramanaikar, Member
8. Dr. M.G Krishnamurthy, Member
9. Dr. Deepak G. Kulkarni, Member

Agenda:
1. To discuss about MBA Scheme & Syllabus for 2020.
2. To discuss about Organisation Study & Project Report for 2020
3. To discuss about calendar of events for MBA in 2020 scheme
4. Any other matter with the permission of the Chair

The following resolutions were taken at the meeting:

1. MBA Scheme & Syllabus for 2020:
- MBA Scheme of teaching and examinations-2020-21 finalized.
- Detail syllabus to be developed and presented in the meeting tentatively fixed on 20th January 2020.
- Following members of the board of studies are requested to formulate the syllabus of the courses mentioned against their names.
    a. Dr. M.G Krishnamurthy: accounting for manager, financial management and all the other financial courses of IIII and IV Sem MBA
    b. Dr. Reena Williams: Marketing Management and all other marketing courses of IIII and IV Sem MBA
    c. Dr. M.M Bagali: MOB, HRM and all other HR courses of IIII and IV Sem MBA
    d. Dr. L. Vijayashree: General management courses of I & II sem MBA.
    e. Dr.T.Manjunatha & Dr. Deepak G. Kulkarni: Two newly introduced Core courses of III sem MBA, organization study and project report.

2. Organisation Study & Project Report for 2020:
    a. Resolved to retain the same procedure as it is vogue.

3. Calendar of events for MBA in 2020 scheme:
    a. Chairman BOS to discuss with Registrar (Evaluation) regarding the viability of revision of MBA Calender of Events to suit placement and project work.
4. The meeting concluded with a vote of thanks by the Chair.

Dr. M. M. Bagali   Dr. L. Vijayashree
Dr. Reena Williams   Dr. R. Srinivasan
                                                    Prof.V. Keshava Murthy

              Dr. T. Manjunatha

Proceedings of the BOS(CS/IS) Board Meeting held on 19-12-2019 at VTU Regional office, Bangalore

Chairman welcomed all the members to the meeting. In the meeting following topics are discussed :
1. Drafting of Scheme/Syllabus for the new UG course AI-ML
2. Scheme/Syllabus for the PG programs
3. Listing and recommending MOOC courses
4. Discussion on CSBS course in collaboration with TCS

1. Drafting of Scheme/Syllabus for the new UG course AI-ML(Artificial Intelligence and Machine Learning)
Following resolutions are made:
  a. First and second year courses for AI-ML will be at par with CSE/ ISE courses
  b. Third and fourth year scheme is discussed and content of the syllabus will be finalized at the earliest, because many new courses are introduced in the scheme.
  c. Since the course is to be made more practical, few courses CIE is to be modified as (20(IA)+ 20(mini project)= 40) instead of 30 + 10=40.
  d. Few courses are to be kept unique compared to CSE/ ISE Program from 5th semester onwards to meet industry requirements.

2. Finalization of scheme and syllabus for PG programs of CS/IS board
  a. Scheme for PG programs are discussed and finalized
  b. Courses are allotted to BOS members for updating the contents as per the prescribed text books and references.
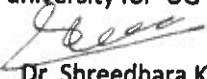
3. List of MOOC courses
  a. Relevant MOOC courses are listed and recommended.

     Committee felt that the Department HOD / Chairman / Principal of the concerned college should suitably guide the student to take appropriate and necessary courses which are not studied by him/her in regular BE programme (avoids duplicate and irrelevant courses).

4. Discussion on Computer Science and Business system (CSBS) new UG course

Committee recommends common syllabus for the first year. From 2nd year onwards in collaboration with TCS people the scheme and syllabus will be framed in the prescribed framework of the university for UG courses

Dr Shreedhara K S
BOS Chairman(CS/IS)
Principal, UBDTCE
DAVANAGERE 577 004

Visvesvaraya Technological University

REGIONAL OFFICE

RHCS Layout, Annapoorneshwari Nagar, Nagarabhav 2nd stage, Bengaluru

Attendance for **Meeting of Board of Studies in CSE/ISE,** held at VTU, Regional Office, Bengaluru on 19th DEC 2019 @ 11 AM.

S N	Name of the Members		SIGNATURE
1	**Dr. K S SHREEDHAR** BOS IN CS/IS PROF DEPT OF CS UBDT, DAVANAGERE.	CHAIRMAN	
2	**Dr. SHANMUKAPPA ANGADI** BOS IN CS/IS DEPT OF COMPUTER SCIENCE VTU PG CENTRE, BELAGAVI	MEMBER	
3	**Dr. G T RAJU** BOS IN CS/IS & HoD DEPT OF COMPUTER SCIENCE RNS INST OF TECH BENGALURU	MEMBER	
4	**Dr B SHADAKSHARAPPA** BOS IN CS/IS & HoD DEPT OF COMPUTER SCIENCE SAIRAM COLLEGE OF ENGINEERING , ANEKAL	MEMBER	
5	**Dr. ANTHONY P J** BOS IN CS/IS & HoD DEPT OF COMPUTER SCIENCE AJ INST OF TECH, MANGALURU	MEMBER	
6	**Dr. THIPPESWAMY G** BOS IN CS/IS & DEAN DEPT OF COMPUTER SCIENCE BMS INST OF TECH, BENGALURU	MEMBER	
7	**Dr. VENKATARAMANA BHAT** BOS IN CS/IS & HoD DEPT OF COMPUTER SCIENCE MANGALORE INST OF TECH, MANGALORE	MEMBER	
8	**Dr. REKHA B VENKATAPUR** BOS IN CS/IS DEPT OF COMPUTER SCIENCE KS INST OF TECH, BENGALURU	MEMBER	
9	**Dr. J PRAKSH** BOS IN CS/IS & HoD DEPT OF COMPUTER SCIENCE BANGALORE INST OF TECH, BENGALURU	MEMBER	
10	**SREENIVASA RAMANUJAM** BOS IN CS/IS ACADEMIC INTERFACE PROGRAME TATA CONSULTANCY, BENGALURU	MEMBER	
11	**Dr. M S DINESH** BOS IN CS/IS PRINCIPAL SCIENTIST PHLIPS INDIA RESEARCH BENGALURU	MEMBER	
12	**Dr. T YERRISWAMY** PROF. IN CS/IS KLE COLLEGE OF ENGG, HUBBLI	SPECIAL INVITEE	

Proceedings of BOS meeting of Civil Engineering (CV/TR/EC/CC) held on 26-09-2019 at VTU Belagavi

The chairman of the board Dr.K.B.Prakash welcomed all the BOS members for the meeting. All the members present were requested to introduce themselves along with their academic achievements and credentials. After this the agendas were discussed in depth and deliberations were done to draw final conclusions.

1. Agenda No 1 :Online courses to chosen from NPTEL / SWAYAM for the award of BE / B.Tech (Hons) or ME / M.Tech (Hons).

   The chairman explained the rules and regulations pertaining to BE/B.Tech (Hons) and ME/M.Tech (Hons) and extra credits to be scored by the registered candidates. It was decided to identity the list of online courses by NPTEL/SWAYAM as and when they announce the courses every three months once.

2. Agenda No 2 :Revision of syllabus for the qualifying exam of the Ph.D programme for VTU –ETR.

   The chairman displayed the old syllabus for Ph.D programme for VTU-ETR. In length discussion was held and syllabus was modified and finalized with 10 modules. The finalized syllabus copy is enclosed herewith.

3. Agenda No 3 :Discussion on the draft PG Scheme for 2020.

   The draft PG scheme to be implemented from the academic year 2020 was discussed in length. It was the opinion of all the members to display the scheme on VTU website/ or send to the colleges where M.Tech programmes are running and take the feedback from the concerned staff. After getting the feedback, it becomes more effective to finalize the scheme and syllabus. Therefore it is requested to the authorities to display the scheme on VTU website at the earliest.

In between the meeting Hon.Vice Chancellor Dr.Karisiddappa visited the BOS meeting venue and addressed all the members and encouraged them to give the best to VTU students. He was of the openion that a thorough revision of syllabus should happen which includes the latest technologies and advances which can attract the students and support for their life.

At the end BOS chairman thanked all the members for their active participation in the deliberations and requested the same cooperation in the coming meetings.

Dr. K.B.Prakash
Chairman, BOS in Civil Engg (CV/TR/EV/CC)
PRINCIPAL
Govt. Engineering College
Haveri-581 110

VISVESARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Topics of Syllabus for the Qualifying Exam for the Ph.D. Programme Syllabus for VTU-ETR

Civil Engineering Science

- **Structural analysis**
  Structural systems
  Truss analysis
  Deflection of beams
  Strain energy
  Arches and cables
- **Fluid mechanics**
  Open channel flow
  Pipe flow and water hammer
  Dimensional analysis and model studies
  Impact of jets on vanes
  Pumps & turbines
- **Concrete technology**
  Properties of fresh and hardened concrete
  Special concretes
  Non destructive testing of concrete
- **Design of concrete structures**
  Principles of limit state design
  Design of beams
  Design of slabs
  Design of columns
- **Geotechnical engineering**
  Index properties of soil
  Soil structure & classification of soils
  Compaction of soil
  Soil water system
  Consolidation of soils
  Effective stress and shear strength
  Ground modifications
- **Transportation engineering**
  Highway planning and alignment
  Highway geometric design
  Pavement material and construction
  Wind analysis and site selection for airport
  Pavement of evaluation

- Irrigation engineering
  Water requirements of crops
  Canal cross drainage work
  Gravity dams and earthen dams
- **Design of Steel structures**
  Steel structural fasteners
  Tesnion, compression, flexural members
  Connections
- **Environmental engineering**
  Population forecasting
  Water quality
  Water treatment
  Methods of sanitation
  Sewage treatment and industrial waste water treatment
- **Surveying**
  Compass surveying
  Leveling and contouring
  Theodalite survey
  Curve settings
  Areas & volumes
  Total station survey

K B Prakash
Chairman BOS Gul.

PRINCIPAL
Govt. Engineering College
Haveri-581 110.

University B.D.T. College of Engineering
Davangere-577004, Karnataka, India
(A Constituent College of Visvesvaraya Technological University, Belagavi)

Phone: +91-8192-233414   Fax: +91-8192-233412   Web: www.ubdtce.org

Ref.No. UBDTCE/EI/BOS (EI/BM/ML)/02/2019-20   September 24, 2019

Dr. Mallikarjun S. Holi
Professor & Chairman, Dept. of Electronics & Instrumentation Engg.
Chairman, BOS in Electronics & Instrumentation Engg (EI/BM/ML)
Email: msholi@yahoo.com, Phone: +91-98442 80814, 9110685601

To,
The Registrar
Visvesvaraya Technological University
"Jnana Sangama", Belagavi-590 018

Sir,

Sub: Proceedings of BOS Meeting of Electronics & Instrumentation Engg (EI/BM/ML)

With reference to the above mentioned subject I am herewith submitting the Proceedings of the BOS Meeting **of Electronics & Instrumentation Engineering Board (EI/BM/ML)** held on Saturday, 21ˢᵗ September 2019, 11AM at VTU Regional Office, Annapoorneshwari Nagar, Nagarbhavi, Bengaluru

Agenda of the BOS (EI/BM/ML) Meeting were as follows:

1. To finalize the Syllabus of VTU- Eligibility Test for Research (VTU-ETR) for the following specializations: (i) Electronics & Instrumentation Engg & Instrumentation Technology
   (ii) Biomedical Engineering and Medical Electronics
2. Preliminary discussion on the Draft PG Scheme and Syllabus for 2020.
3. Preparation of Supplementary Document for Elective & Open Elective Courses.
4. Preparing the List of NPTEL and SWAYAM courses for B.E. with Honours.
5. Any other matter with permission of the Chair.

The BOS Members who attended the meeting are as follows:

1. Dr. Mallikarjun S. Holi – Chairman   2. Dr. H. N. Suresh - Member
3. Dr. T. D. Vishnumurthy – Member   4. Dr. D. Mahesh Kumar – Member
5. Dr. Raviraj H. Havaldar – Member   6. Mr. R. K. Arunkumar – Member

This is for your kind information
Thanking you,
Yours faithfully,

(Dr. Mallikarjun S. Holi)
Chairman, VTU-BOS (EI/BM/ML)

Proceedings of BOS Meeting of Electronics & Instrumentation Engg Board (EI/BM/ML) held on Saturday, 21st September 2019, at VTU Regional Office, Bengaluru.

Agenda of the BOS (EI/BM/ML) Meeting were as follows:

1. To finalize the Syllabus of VTU- Eligibility Test for Research (VTU-ETR) for the following specializations: (i) Electronics & Instrumentation Engg & Instrumentation Technology
   (ii) Biomedical Engineering and Medical Electronics
2. Preliminary discussion on the Draft PG Scheme and Syllabus for 2020.
3. Preparation of Supplementary Document for Elective & Open Elective Courses.
4. Preparing the List of NPTEL and SWAYAM courses for B.E. with Honours.
5. Any other matter with permission of the Chair.

The Chairman of the Board Dr. Mallikarjun S. Holi, welcomed all the BOS members for the meeting and requested the members to deliberate as per the meeting agenda one by one.

1. To finalize the Syllabus of VTU- Eligibility Test for Research (VTU-ETR) for the following specializations: (i) Electronics & Instrumentation Engg & Instrumentation Technology
   (ii) Biomedical Engineering and Medical Electronics
The Chairman explained the VTU-ETR and its importance to all the BOS members. The draft syllabus copies were distributed and all the members actively participated in the discussion, edited the contents suitably and finalized the syllabus.

2. Preliminary discussion on the Draft PG Scheme and Syllabus for 2020
The Draft PG scheme prepared as per the 2020 template was distributed to all the members. The members suggested for the changes in the Elective subjects. Some of the members asked for the some time to come-out with better core & elective subjects. Based on these inputs only a Draft Scheme was prepared, and it was suggested to publish in the VTU website to seek Feedback from the concerned colleges and faculty members. Hence the contents of the syllabus were not discussed in detail.
All the members opined that the <u>Internship for PG should be for one complete semester</u>. The industry representative BOS member Mr.Arunkumar said that the industries will provide internship for PG students provided they come for one complete semester, and further he said that such internship will help the students to do industry based projects, which increases the employment opportunity for the students.

3. Preparation of Supplementary Document for Elective & Open Elective Courses.
A draft document will be prepared by the BOS members and Faculty members who are expertise in the respective elective subjects, and will be circulated to members and based on the feedback the supplementary document will be finalized.

4. Preparing the List of NPTEL and SWAYAM courses for B.E. with Honours.
As per the Joint BOS meeting held on 19th August 2019, it was informed to all the Chairmen to prepare the list of NPTEL / SWAYAM online courses which can considered as Credit Courses (20 Additional credits) for the award of B.E. degree with Honours as per regulations 18OB11.1 (2). Accordingly the list of courses for the B.E. programs in Electronics & Instrumentation Engg., Biomedical Engineering and Medical Electronics, is prepared, discussed and finalized.

The meeting was concluded with a note of thanks all BOS members, and requested to extend their kind cooperation and active participation in all the BOS activities and meetings.

(Dr. Mallikarjun S. Holi)
Chairman, VTU-BOS (EI/BM/ML)