



KLE Technological
University
Creating Value
Leveraging Knowledge

Minutes
5th Board of Studies Meeting
of
School of Electronics and Communication Engineering
Hubballi, Karnataka
13th April 2019

KLE Technological University
(Established under Karnataka Act No.22, 2013)


REGISTRAR
KLE Technological University
HUBBALLI-580 031





School of Electronics & Communication Engineering
KLE Tech University
BVBCET Campus, Hubballi -31

The following are the minutes of the Board of Studies meeting of SoECE, KLE Technological University, Hubballi which was held on 13th April 2019 at 9:30 am at the in Senate Hall of University.

The following members were present.

SI No	Name	Designation	Position
1.	Dr. Nalini C.Iyer	Head of School, SoECE	Chairperson
2.	Dr. R M Bankar	Professor, SoECE	Member
3.	Dr. Uma Mudengudi	Professor, SoECE	Member
4.	Dr. Priyatamkumar	Professor, SoECE	Member
5.	Dr. Saroja S	Professor, SoECE	Member
6.	Prof. Ujwala Patil	Associate Professor, SoECE	Member
7.	Dr. D. Manjunath	Professor, Department of EC,IIT Bombay	Member
8.	Dr. Chetan Parekh	Professor, Department of EC,IIIT Bangalore	Member
9.	Mr. Praveen B P	Samsung India, Bangalore	Member
10.	Mrs. Padmini Naval Gund	RBEI, Bangalore	Member
11.	Mr. Sumit Bhat	Design Lead, Sankalp Semiconductor	Member
12.	Mr. Shivakumar Turmari	Tessolve Semiconductors, Bangalore	Member
13.	Dr. Sujata S Kotabagi	Professor, SoECE	Member
14.	Dr. R B Shettar	Professor, SoECE	Member
15.	Prof. Suneeta V B	Professor, SoECE	
16.	Prof. P. C. Nissimgoudar	Associate Professor, SoECE	
17.	Prof. R. M. Shet	Assistant Professor, SoECE	
18.	1. UG: Pranav K 2. UG: Niveditha J 3. PG1 :Vijaylakshmi 4. PG2: Saiarpita 5. PhD: Suhas Shirol		Student Members

The following members have sought leave of absence:

SI No	Name	Designation	Position
1.	Dr. D. Manjunath	Professor, Department of EC,IIT Bombay	Member
2.	Dr. Chetan Parekh	Professor, Department of EC,IIIT Bangalore	Member
3.	Mr. Shivakumar Turmari	Tessolve Semiconductors, Bangalore	Member
4.	Mr. Vivek Pawar	Sankalp Semiconductors, Hubballi	Member


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Agenda

Sl No	Particulars	Page No.
5.1	To welcome the BoS Members and present department achievements & initiatives	
5.2	To read and confirm the minutes of 4 th BoS meeting held on 7 th April 2018	
5.3	To confirm the action taken report on the minutes of the previous meeting held on 7 th April 2018	
5.4	To consider the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication and approve the same. a) Scheme approval of I to VIII Semester (2019-23) b) Syllabus approval of I / II Semester, Basic Electronics for Mechanical and Electrical stream course (2019-23) c) Scheme approval of III to VIII Semester (2018-22) d) Syllabus approval of III to VIII Semester (2018-22) e) Scheme approval of V to VIII Semester (2017-21) f) Syllabus approval of V to VIII Semester (2017-21) g) Scheme approval of VII and VIII Semester (2016-20) h) Syllabus approval of V and VIII Semester (2016-20) i) Scheme approval: Scheme 2018-22 in Minor Program j) Scheme approval: Scheme 2017-21 in Minor Program k) Syllabus approval: Scheme 2017-21 in Minor Program	
5.5	To consider the Schemes and Syllabi of the postgraduate program M.Tech in Digital Electronics and approve the same. a) Scheme approval of I to IV Semester (2019-21) b) Syllabus approval of I/II Semester (2019-21) c) Modification of Scheme of III/IV Semester (2018-20) d) Syllabus approval of III/IV Semester (2018-20)	
5.6	To consider the Schemes and Syllabi of the postgraduate program M.Tech in VLSI Design & Embedded Systems and approve the same. a) Scheme approval of I to IV Semester (2019-21) b) Syllabus approval of I/II Semester (2019-21) c) Modification of Scheme of III/IV Semester (2018-20) d) Syllabus approval of III/IV Semester (2018-20)	
5.7	Question Paper review and Discussion on attainment of POs and PSOs	
5.8	Vision, Mission, POs, PSOs of School of ECE and CAM and PAM	
5.9	Any other matter for discussion with the permission of the chair	


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BoS 5.1 To welcome the BoS Members and present department achievements & initiatives

Resolution 4.1: The BoS members appreciated the initiatives of SoECE and lauded its achievements.

BoS 5.2	To read and confirm the minutes of 4th BoS meeting held on 7th April 2018		
	The following are the minutes of the Board of Studies meeting of SoECE, KLE Technological University, Hubballi, which was held on 7 th April 2018 at 10:30 am at the Senate Hall of the University. The following members were present.		
BoS 4.2	To read and confirm the minutes of 4th BoS meeting held on 7th April 2018		
	The following are the minutes of the Board of Studies meeting of SoECE, KLE Technological University, Hubballi, which was held on 7 th April 2018 at 10:30 am at the ED Studio of the School. The following members were present.		
	Sl No	Name	Designation
	1.	Dr. Nalini C.Iyer	Head of School, SoECE
	2.	Dr. R M Bankar	Professor, SoECE
	3.	Dr. Uma Mudengudi	Professor, SoECE
	4.	Dr. Priyatamkumar	Professor, SoECE
	5.	Dr. Anil Nandi	Professor, SoECE
	6.	Dr. Saroja S	Professor, SoECE
	7.	Prof. Ujwala Patil	Associate Professor, SoECE
	8.	Prof. Sanjay Eligar	Assistant Professor, SoECE
	9.	Dr. D. Manjunath	Professor, Department of EC,IIT Bombay
	10.	Dr. Chetan Parekh	Professor, Department of EC,IIT Bangalore
	11.	Dr. Lokesh Boregouda	Head Research, Samsung India, Bangalore
	12.	Dr. P Subbanna Bhat	Professor Emirates, KLE Tech
	13.	Mr. Vivek G Pawar	Founder & CEO, Sankalp Semiconductor
	14.	Mrs. Padmini Navalgund	RBEI, Bangalore
	15.	Mr. Shiva Turmuri	Analog Devices, Bangalore
	16.	Mr. Sumit Bhat	Design Lead, Sankalp Semiconductor
	17.	Dr. Sujata S Kotabagi	Professor, SoECE
	18.	Dr. R B Shettar	Professor, SoECE
	19.	Prof. Suneeta V B	Professor, SoECE
	20.	Prof. P. C. Nissimgoudar	Associate Professor, SoECE
	21.	Prof. Rohini Hongal	Associate Professor, SoECE
	22.	Prof. R. M. Shet	Assistant Professor, SoECE
	23.	1. UG: Rohan D 2. UG: Sheetal 3. PG1 :Ravi 4. PG2: Pratima 5. PhD: Suhas Shirol	Student Members
	Item No	Description	
	BoS 4.1	To welcome the BoS Members and present department achievements & initiatives and discussed about the inputs from all stake holders (Annexure 5.1) Resolution 4.1: The BoS members appreciated the work done towards recognition of KLE Technological University as a State private University effective from 2015.	

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BoS 4.2	To read and confirm the minutes of 4 th BoS meeting held on 7 th April 2018 Resolution 4.2: Minutes of the last meeting were read and confirmed by BoS.
BoS 4.3	To confirm the action taken report on the minutes of the previous meeting held on 7 th April 2018 Resolution 4.3: BoS confirmed the action taken report on the minutes of the previous meeting held on 7th April 2018 and suggestions were implemented.
BoS 4.4	<p>To consider the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication and approve the same.</p> <ul style="list-style-type: none"> a) Scheme of I to VIII Semester (2018-22) Batch b) Syllabus of I / II Semester, Basic Electronics for Mechanical and Electrical stream course (2018-22) Batch c) Scheme of III to VIII Semester (2017-21) Batch d) Syllabus of III to VIII Semester (2017-21) Batch e) Scheme of V to VIII Semester (2016-20) Batch f) Syllabus of V to VIII Semester (2016-20) Batch g) Modification of Scheme of VII and VIII Semester (2015-19) Batch h) Syllabus of VII and VIII Semester (2015-19) Batch <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 7th April 2018. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting. The details of discussion are in Annexure 4.4</p> <p>Action Item No.1: Suggested new courses to strengthen basic concepts of Communication technology and programming</p> <ul style="list-style-type: none"> a) Mobile and Wireless Communication b) Microwave and Antennas c) Embedded Linux <p>Action Item No.2: Suggested new elective courses with Industry Collaboration for design and delivery</p> <ul style="list-style-type: none"> a) CMOS ASIC Design b) Physical Design Analog c) Embedded Intelligent Systems <p>Action Item No.3: Enhance programming skills: application to real world problem</p> <ul style="list-style-type: none"> a) Data structure applications lab b) C programming (Diploma) <p>Action Item No.4: Enhancing Research capabilities</p> <ul style="list-style-type: none"> a) Research Experience for Undergraduates <p>Action Item No.5: Enabling Industry Eco System</p> <ul style="list-style-type: none"> a) Institutional Research Project b) Internship Training c) Internship Project. <p>Resolution 4.4: Resolved to approve the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication:</p> <ul style="list-style-type: none"> a) Scheme of I to VIII Semester (2018-22) batch. b) Syllabus of I / II Semester, Basic Electronics for Mechanical and Electrical stream course (2018-22) batch. c) Scheme of III to VIII Semester (2017-21) batch. d) Syllabus of III to VIII Semester (2017-21) batch. e) Scheme of V to VIII Semester (2016-20) batch.

	<p>f) Syllabus of V to VIII Semester (2016-20) batch. g) Modification of Scheme of VII and VIII Semester (2015-19). h) Syllabus of VII and VIII Semester (2015-19) batch. i) Scheme for Minor program in electronics for (2017-21) Batch j) Scheme for Minor program in electronics for (2016-20) Batch k) Scheme for Minor program in electronics for (2016-20) Batch</p>
BoS 4.5	<p>To consider the Schemes and Syllabi of the postgraduate program M. Tech in Digital Electronics and approve the same.</p> <p>a) Scheme of I to IV Semester (2018-20) batch. b) Syllabus of I/II Semester (2018-20) batch. c) Modification of Scheme of III/IV Semester (2017-19) d) Syllabus of III/IV Semester (2017-19) batch.</p> <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 15th April 2017. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: Suggested new course to strengthen basic concepts and programming</p> <p>1) Advanced computer architecture and programming. 2) Autosar and infotainment</p> <p>Action Item No.2: Enabling Industry Eco System</p> <p>1) Project Phase -I/ Minor Project</p> <p>Resolution 4.6: Resolved to the Schemes and Syllabi of the postgraduate program M. Tech in Digital Electronics:</p> <p>a) Scheme of I to IV Semester (2018-20) batch. b) Syllabus of I/II Semester (2018-20) batch. c) Modification of Scheme of III/IV Semester (2017-19) batch. d) Syllabus of III/IV Semester (2017-19) batch.</p>
BoS 4.6	<p>To consider the Schemes and Syllabi of the postgraduate program M. Tech in VLSI Design and Embedded Systems and approve the same.</p> <p>a) Scheme of I to IV Semester (2018-20) b) Syllabus of I/II Semester (2018-20) c) Modification of Scheme of III/IV Semester (2017-19) d) Syllabus of III/IV Semester (2017-19)</p> <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 15th April 2017. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: Suggested new core course to strengthen basic concepts and programming</p> <p>1) Machine learning 2) Advanced computer architecture and programming.</p> <p>Action Item No.2: Suggested new electives courses to build background with application perspective</p> <p>1) System simulation and modeling 2) System on Chip</p>



	<p>Resolution 4.6: Resolved to the Schemes and Syllabi of the postgraduate program M. Tech in VLSI Design and Embedded Systems.</p> <p>a) Scheme of I to IV Semester (2018-20) batch b) Syllabus of I/II Semester (2018-20) batch c) Modification of Scheme of III/IV Semester (2017-19) d) Syllabus of III/IV Semester (2017-19) batch.</p>															
BoS 4.7	<p>Question Paper review Discussion: The Question Paper along with assessment patterns with respect to Bloom's Levels and PO-PSO-PI mapping was presented.</p> <p>Resolution 4.7: Resolved to approve the Question Paper Pattern</p>															
BoS 4.8	<p>Vision, Mission, POs and PSOs of School of ECE Discussion: The Vision, Mission, POs and PSOs of School of ECE were presented.</p> <p>Resolution 4.8: Resolved to approve the Vision, Mission, POs and PSOs of School of ECE</p>															
BoS 4.9	<p>Any other subject with the permission of the Chair Nil.</p>															
<p>Resolution 5.2: Resolved to confirm the minutes of its 4th BoS meeting held on 7th April 2018</p>																
BoS 5.3	<p>To confirm the action taken report on the minutes of the previous meeting held on 7th April 2018 Resolution: 4.3 Resolved to confirm the action taken report on the minutes of its 4th BoS meeting held on 7th April 2018. The BoS members appreciated the new initiatives taken by SoECE.</p> <table border="1"> <thead> <tr> <th>Item No</th> <th>Description</th> <th>Action Taken</th> </tr> </thead> <tbody> <tr> <td>BoS 4.1</td> <td> <p>To welcome the BoS Members and present department achievements & initiatives and discussed about the inputs from all stake holders (Annexure 5.1) Resolution 4.1: The BoS members appreciated the work done towards recognition of KLE Technological University as a State private University effective from 2015.</p> </td> <td>Noted</td> </tr> <tr> <td>BoS 4.2</td> <td> <p>To read and confirm the minutes of 4th BoS meeting held on 7th April 2018 Resolution 4.2: Minutes of the last meeting were read and confirmed by BoS.</p> </td> <td>Noted</td> </tr> <tr> <td>BoS 4.3</td> <td> <p>To confirm the action taken report on the minutes of the previous meeting held on 7th April 2018 Resolution 4.3: BoS confirmed the action taken report on the minutes of the previous meeting held on 7th April 2018 and suggestions were implemented.</p> </td> <td>Noted</td> </tr> <tr> <td>BoS 4.4</td> <td> <p>To consider the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication and approve the same.</p> <p>a) Scheme of I to VIII Semester (2018-22) Batch b) Syllabus of I / II Semester, Basic Electronics for Mechanical and Electrical stream course (2018-22) Batch c) Scheme of III to VIII Semester (2017-21) Batch d) Syllabus of III to VIII Semester (2017-21) Batch e) Scheme of V to VIII Semester (2016-20) Batch f) Syllabus of V to VIII Semester (2016-20) Batch</p> </td> <td> <p>The BoS members noted the progress of the School and recommended action items and timeline.</p> <p>Action Item No.1: Suggested new courses to strengthen basic concepts of Communication technology and programming</p> <p>ATR: To understand how emerging technologies are changing the landscape responsible for making</p> </td> </tr> </tbody> </table>	Item No	Description	Action Taken	BoS 4.1	<p>To welcome the BoS Members and present department achievements & initiatives and discussed about the inputs from all stake holders (Annexure 5.1) Resolution 4.1: The BoS members appreciated the work done towards recognition of KLE Technological University as a State private University effective from 2015.</p>	Noted	BoS 4.2	<p>To read and confirm the minutes of 4th BoS meeting held on 7th April 2018 Resolution 4.2: Minutes of the last meeting were read and confirmed by BoS.</p>	Noted	BoS 4.3	<p>To confirm the action taken report on the minutes of the previous meeting held on 7th April 2018 Resolution 4.3: BoS confirmed the action taken report on the minutes of the previous meeting held on 7th April 2018 and suggestions were implemented.</p>	Noted	BoS 4.4	<p>To consider the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication and approve the same.</p> <p>a) Scheme of I to VIII Semester (2018-22) Batch b) Syllabus of I / II Semester, Basic Electronics for Mechanical and Electrical stream course (2018-22) Batch c) Scheme of III to VIII Semester (2017-21) Batch d) Syllabus of III to VIII Semester (2017-21) Batch e) Scheme of V to VIII Semester (2016-20) Batch f) Syllabus of V to VIII Semester (2016-20) Batch</p>	<p>The BoS members noted the progress of the School and recommended action items and timeline.</p> <p>Action Item No.1: Suggested new courses to strengthen basic concepts of Communication technology and programming</p> <p>ATR: To understand how emerging technologies are changing the landscape responsible for making</p>
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		<p>h) Syllabus of VII and VIII Semester (2015-19) batch.</p> <p>i) Scheme for Minor program in electronics for (2017-21) Batch</p> <p>j) Scheme for Minor program in electronics for (2016-20) Batch</p> <p>k) Scheme for Minor program in electronics for (2016-20) Batch</p>	<p>ATR: A course on Data Structure application is introduced to enhance rigor in building programming skills and to bridge the gap of applying the required data structures and algorithmic skills to solve complex real world problems. Emphasis is on use of industry standard coding and online coding platform.</p> <p>To impart programming skills for lateral entry(Diploma) students, a basic course on C programming is introduced.</p> <p>Action Item No.4: Enhancing Research capabilities. ATR: a course on Research Experience for Undergraduates is introduced to enable students to take part in the research mission in their future career during and beyond their academia</p> <p>Action Item No.5: Enabling Industry Eco System. ATR: A course on Institutional Research project (IRP) is introduced to provide students an exposure for solving a real time projects involving current technologies. Industry Internship training and project is introduced to enable students for the industry echo system while working on live projects.</p>
<p>BoS 4.5</p>		<p>To consider the Schemes and Syllabi of the postgraduate program M. Tech in Digital Electronics and approve the same.</p> <p>a) Scheme of I to IV Semester (2018-20) batch.</p> <p>b) Syllabus of I/II Semester (2018-20) batch.</p> <p>c) Modification of Scheme of III/IV Semester (2017-19)</p> <p>d) Syllabus of III/IV Semester (2017-19) batch.</p> <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 15th April 2017. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: Suggested new course to strengthen basic concepts and programming</p> <p>1) Advanced computer architecture and programming.</p> <p>2) Autosar and infotainment</p> <p>Action Item No.2: Enabling Industry Eco System</p>	<p>The BoS members noted the progress of the School and recommended action items and timeline.</p> <p>Action Item No.1: Suggested new course to strengthen basic concepts and programming ATR: A course on Advanced computer architecture and programming is introduced to give insights on the concepts of advance pipelining and trade off in design of modern computer systems for performance analysis.</p> <p>To acquire skills related to electrification, connectivity and infotainment to support the vehicle functions and A standardized</p>

		<p>1) Project Phase -I/ Minor Project</p> <p>Resolution 4.5: Resolved to the Schemes and Syllabi of the postgraduate program M. Tech in Digital Electronics:</p> <ol style="list-style-type: none"> Scheme of I to IV Semester (2018-20) batch. Syllabus of I/II Semester (2018-20) batch. Modification of Scheme of III/IV Semester (2017-19) batch. Syllabus of III/IV Semester (2017-19) batch. 	<p>interface for software components in the application layer, a course on Autosar and infotainment is introduced in collaboration with Bosch, Bangalore</p> <p>Action Item No.2: Enabling Industry Eco System</p> <p>Project Phase-I/ Minor Project is introduced to enable students for the industry echo system while working on live projects.</p>
	<p>BoS 4.6</p>	<p>To consider the Schemes and Syllabi of the postgraduate program M. Tech in VLSI Design and Embedded Systems and approve the same.</p> <ol style="list-style-type: none"> Scheme of I to IV Semester (2018-20) Syllabus of I/II Semester (2018-20) Modification of Scheme of III/IV Semester (2017-19) Syllabus of III/IV Semester (2017-19) <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 15th April 2017. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: Suggested new core course to strengthen basic concepts and programming</p> <ol style="list-style-type: none"> Machine learning Advanced computer architecture and programming. <p>Action Item No.2: Suggested new electives courses to build background with application perspective</p> <ol style="list-style-type: none"> System simulation and modeling System on Chip <p>Resolution 4.6: Resolved to the Schemes and Syllabi of the postgraduate program M. Tech in VLSI Design and Embedded Systems.</p> <ol style="list-style-type: none"> Scheme of I to IV Semester (2018-20) batch Syllabus of I/II Semester (2018-20) batch Modification of Scheme of III/IV Semester (2017-19) Syllabus of III/IV Semester (2017-19) batch. 	<p>The BoS members noted the progress of the School and recommended action items and timeline.</p> <p>Action Item No.1: Suggested new core course to strengthen basic concepts and programming</p> <p>ATR:</p> <p>Introduction of Machine learning course with Project-based learning which involves dynamic classroom approach in which students acquire a deeper knowledge through active investigation of real-world challenges and problems.</p> <p>To give insights on the concepts of advance pipelining and trade off in design of modern computer systems a course Advanced computer architecture and programming is introduced.</p> <p>Action Item No.2: Suggested new electives courses to build background with application perspective</p> <p>ATR:</p> <p>A course is introduced to give insights on the concepts and classification of modeling and simulation. To introduce students to the concepts of system integration on a single chip and their interconnections a course System on Chip is introduced.</p>
	<p>BoS 4.7</p>	<p>Question Paper review</p> <p>Discussion: The Question Paper along with assessment patterns with respect to Bloom's Levels and PO-PSO-PI mapping was presented.</p> <p>Resolution 4.7: Resolved to approve the Question Paper Pattern</p>	<p>QP Pattern is incorporated in all the courses.</p>

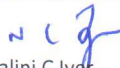
BoS 4.8	<p>Vision, Mission, POs and PSOs of School of ECE Discussion: The Vision, Mission, POs and PSOs of School of ECE were presented.</p> <p>Resolution 4.8: Resolved to approve the Vision, Mission, POs and PSOs of School of ECE</p>	SoECE staff aligned to Vision, Mission, POs and PSOs .
BoS 4.9	Any other subject with the permission of the Chair Nil.	
<p>Resolution: 5.3 Resolved to confirm the action taken report on the minutes of its 4th BoS meeting held on 7th April 2018. The BoS members appreciated the new initiatives taken by SoECE</p>		
BoS 5.4	<p>To consider the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication and approve the same.</p> <ol style="list-style-type: none"> Scheme approval of I to VIII Semester (2019-23) Syllabus approval of I / II Semester, Basic Electronics for Mechanical and Electrical stream course (2019-23) Scheme approval of III to VIII Semester (2018-22) Syllabus approval of III to VIII Semester (2018-22) Scheme approval of V to VIII Semester (2017-21) Syllabus approval of V to VIII Semester (2017-21) Scheme approval of VII and VIII Semester (2016-20) Syllabus approval of V and VIII Semester (2016-20) Scheme approval: Scheme 2018-22 in Minor Program Scheme approval: Scheme 2017-21 in Minor Program Syllabus approval: Scheme 2017-21 in Minor Program <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 13th April 2019. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: New courses added: OOPS using C++, Biosensor Action Item No.2: Revised courses : CMOS VLSI Circuits, Internet of Things, Information Theory and coding and Signals and System</p> <p>Resolution 5.4: Resolved to approve the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication:</p> <ol style="list-style-type: none"> Scheme approval of I to VIII Semester (2019-23) Syllabus approval of I / II Semester, Basic Electronics for Mechanical and Electrical stream course (2019-23) Scheme approval of III to VIII Semester (2018-22) Syllabus approval of III to VIII Semester (2018-22) Scheme approval of V to VIII Semester (2017-21) Syllabus approval of V to VIII Semester (2017-21) Scheme approval of VII and VIII Semester (2016-20) Syllabus approval of V and VIII Semester (2016-20) Scheme approval: Scheme 2018-22 in Minor Program Scheme approval: Scheme 2017-21 in Minor Program 	
BoS 5.5	<p>To consider the Schemes and Syllabi of the postgraduate program M.Tech in Digital Electronics and approve the same.</p> <ol style="list-style-type: none"> Scheme approval of I to IV Semester (2019-21) Syllabus approval of I/II Semester (2019-21) Modification of Scheme of III/IV Semester (2018-20) 	



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	<p>d) Syllabus approval of III/IV Semester (2018-20)</p> <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 13th April 2019. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: Suggested new core courses to strengthen basic concepts and programming</p> <ol style="list-style-type: none">1. Automotive electronics and Communication <p>Resolution 5.5: Resolved to approve the following Schemes and Syllabi of the postgraduate program M. Tech in Digital Electronics subjected to implementation of action points listed above.</p> <ol style="list-style-type: none">a) Scheme approval of I to IV Semester (2019-21)b) Syllabus approval of I/II Semester (2019-21)c) Modification of Scheme of III/IV Semester (2018-20)d) Syllabus approval of III/IV Semester (2018-20)
BoS 5.6	<p>To consider the Schemes and Syllabi of the postgraduate program M.Tech in VLSI Design and Embedded Systems and approve the same.</p> <ol style="list-style-type: none">a) Scheme approval of I to IV Semester (2019-21)b) Syllabus approval of I/II Semester (2019-21)c) Modification of Scheme of III/IV Semester (2018-20)d) Syllabus approval of III/IV Semester (2018-20) <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 13th April 2019. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: Suggested new core courses to strengthen basic concepts and programming</p> <ol style="list-style-type: none">1. Automotive electronics and Communication2. AUTOSAR and Infotainment <p>Resolution 5.6: Resolved to the Schemes and Syllabi of the postgraduate program M. Tech in in VLSI Design and Embedded Systems subjected to implementation of action points listed above.</p> <ol style="list-style-type: none">a) Scheme approval of I to IV Semester (2019-21)b) Syllabus approval of I/II Semester (2019-21)c) Modification of Scheme of III/IV Semester (2018-20)d) Syllabus approval of III/IV Semester (2018-20)
BoS 5.7	<p>Question Paper review</p> <p>Discussion: The Question Paper along with assessment patterns with respect to Bloom's Levels and PO-PSO-PI mapping were presented.</p>
BoS 5.8	<p>Vision, Mission, POs, PSOs, CAM and PAM of School of ECE</p> <p>Discussion: The Vision, Mission, POs, PSOs, CAM and PAM of School of ECE were presented.</p>
BoS 5.9	<p>Any other subject with the permission of the Chair</p> <p>Nil.</p>

The Chairperson thanked all the members for the fantastic contributions


Dr. Nalini C Iyer
Chairperson, BoS, SoECE


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Annexure 5.1

Discussion Item

Employers Feedback:

- Able to generate a diverse set of alternative design solutions for the given application.
- Enhance ability to identify and formulate problem in designing electronic system for real world applications.
- Enhance basic programming skills, to apply and realize real world problems.

Teachers Feedback (Pre-BoS MoM):

- To focus on latest technological trends and development.
- Formulation of application oriented examples
- Focus on problem solving using programming skills and use of online platform.

Students Feedback:

- Focus on real time applications.
- Hands on using EDA tools with Integrated Development Environment (IDEs).

Alumni Feedback:

- Industry Specific Skills for employability.
- Depth of programming and analysis.

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Annexure 5.4

Discussion Item	Course
BE (ECE)	
1. Integrated theory and laboratory approach is adopted to bridge the gap between understanding theoretical concepts and realising the same using EDA Tools with separate credits for theory and labs.	CMOS-19EECC301 Revised- Delivery
2. A course on Object Oriented Programming to aid the students for heterogeneous computing in real time context is introduced using C++.	OOPS using C++-19EECE302 Added- New course
3. To emphasize the basic principles of bio sensing in terms of photonic/ optical responses and demonstrate the same using simulation and modelling tools, a course on biosensor is introduced with experiential learning.	Biosensor-19EECE416 Added-New course
4. Network of physical objects that are embedded with sensors, software, and other communication protocols for connecting and exchanging data with other devices and systems over the internet is introduced in the course with separate credits for course project.	Internet of things-19EECE401 Revised- Delivery
5. To introduce the principles and applications of information theory with coding techniques for performance analysis of communication channel, modelling and simulation using MATLAB/Simulink followed by a course project is introduced with separate credits for course project.	Information Theory and coding- 19EECE402 Revised- Delivery
6. Context based learning for the most fundamental course in communication domain is introduced in the course Signals and Systems through Co-teaching. Mathematical concepts are mapped with physical interpretation of signal processing towards better learning .	Signals and Systems19EECC202 Revised- Delivery
M.Tech Digital Electronics	
1. Electronics and technology advances are changing the automotive industry forcing engineers to acquire new skills in connectivity, electrification and infotainment	Automotive Electronics and Communication-19EDEC701, Added- New course
2. Electronics and technology advances are changing the automotive industry forcing engineers to acquire new skills in connectivity, electrification and infotainment .	AUTOSAR and Infotainment- 19EDEC702 Added- New course
3. IoT- A unique technology transition that is impacting human lives and will have huge implications for business of logistics.	Internet of Things-19EDEC703 Added- New course
M.Tech VLSI Design and Embedded Systems	
1. Electronics and technology advances are changing the automotive industry forcing engineers to acquire new skills in connectivity, electrification and infotainment .	Automotive Electronics and Communication-19EEEC701 Added- New course
2. Electronics and technology advances are changing the automotive industry forcing engineers to acquire new skills in connectivity, electrification and infotainment .	AUTOSAR and Infotainment- 19EEEC707 Added- New course


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KLE Technological
University
Creating Value
Leveraging Knowledge

Action Taken Report
5th Board of Studies Meeting
of
School of Electronics and Communication Engineering
Hubballi, Karnataka
13th April 2019

KLE Technological University
(Established under Karnataka Act No.22, 2013)


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The following are the action items proposed during 5th Board of Studies meeting of SoECE, KLE Technological University, Hubballi which was held on 13th April 2019. The corresponding actions taken are also listed below.

Item No	Description	Action Taken
BoS 5.1	To welcome the BoS Members and present department achievements & initiatives and discussed about the inputs from all stake holders (Annexure 5.1) Resolution 4.1: The BoS members appreciated the work done towards recognition of KLE Technological University as a State private University effective from 2015.	Noted
BoS 5.2	To read and confirm the minutes of 4 th BoS meeting held on 7 th April 2018 Resolution 4.2: Minutes of the last meeting were read and confirmed by BoS.	Noted
BoS 5.3	To confirm the action taken report on the minutes of the previous meeting held on 7 th April 2018 Resolution 4.3: BoS confirmed the action taken report on the minutes of the previous meeting held on 7th April 2018 and suggestions were implemented.	Noted
BoS 5.4	To consider the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication and approve the same. <ol style="list-style-type: none"> Scheme of I to VIII Semester (2019-23) Batch Syllabus approval of I / II Semester, Basic Electronics for Mechanical and Electrical stream course (2019-23) Batch Scheme of III to VIII Semester (2018-22) Batch Syllabus of III to VIII Semester (2018-22) Batch Scheme of V to VIII Semester (2017-21) Batch Syllabus of V to VIII Semester (2017-21) Batch Scheme of VII and VIII Semester (2016-20) Batch Syllabus of VIII Semester (2016-20) Batch Scheme for Minor program in electronics for (2018-22) Batch Scheme for Minor program in electronics for (2017-21) Batch Scheme for Minor program in electronics for (2017-21) Batch <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 13th April 2019. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting. The details of discussion are in Annexure 5.4</p> <p>Action Item No.1: Suggested new elective courses: with Industry Collaboration for design and delivery</p> <ol style="list-style-type: none"> CMOS ASIC design Physical design analog Introduction to deep learning <p>Action Item No.2: Integrated approach with hands on: Revised courses</p> <ol style="list-style-type: none"> CMOS VLSI Circuits, Internet of Things, Information Theory and coding Signals and System <p>Resolution 5.4: Resolved to approve the Schemes and Syllabi of the undergraduate program B.E in Electronics & Communication subject to implementation of action points listed above:</p>	<p>The BoS members noted the progress of the School and recommended action items and timeline.</p> <p>Action Item No.1: Suggested new elective courses: with Industry Collaboration for design and delivery ATR: Elective courses (3) are introduced in verticals (identified by SoECE) VLSI, Embedded and Communication Systems in collaboration with Industry in respective domain.</p> <p>Specialized Courses in VLSI domain, one of the vertical of SoECE, introduced are CMOS ASIC Design and Physical design analog in collaboration with Sifive Bangalore and, Sankalp semiconductors Pvt. Ltd, Hubli respectively with focus on project based learning.</p> <p>To gain complete chip design flow knowledge of CMOS ASIC design course with hands-on intensive covers and explore complete digital design flow of programmable ASIC through VLSI EDA tools.</p> <p>A course in the domain of analog VLSI to enhance teaching learning in Analog circuit design and layout, in turn build upon competency through mini minor and capstone projects.</p> <p>Course on Deep learning is introduced in interaction with SRIB, Bangalore. with Project-based learning which involves dynamic classroom approach in which students acquire a deeper knowledge through active investigation of real-world challenges and problems.</p>

	<ol style="list-style-type: none"> 1. Scheme of I to VIII Semester (2019-23) Batch 2. Syllabus of I / II Semester, Basic Electronics course for Mechanical and Electrical streams for (2019-23) Batch 3. Scheme of III to VIII Semester (2018-22) Batch 4. Syllabus of III to VIII Semester (2018-22) Batch 5. Scheme of V to VIII Semester (2017-21) Batch 6. Syllabus of V to VIII Semester (2017-21) Batch 7. Scheme of VII and VIII Semester (2016-20) Batch 8. Syllabus of V and VIII Semester (2016-20) Batch 9. Scheme for Minor program in electronics for (2018-22) Batch 10. Scheme for Minor program in electronics for (2017-21) Batch 11. Modification of Scheme of VII and VIII Semester (2015-19) 12. Syllabus approval of VII and VIII Semester (2015-19) 13. Scheme for Minor program in electronics for (2017-21) Batch 14. Scheme for Minor program in electronics for (2016-20) Batch 15. Syllabus for Minor program in electronics for (2016-20) Batch 	<p>Changes are made according to the suggestions and will be presented during the next BoS.</p> <p>Action Item No.2: Integrated approach with hands on: Revised courses</p> <p>ATR: Integrated theory and lab approach is adapted to bridge the gap between understanding theoretical and realization the same with programming using EDA Tools and in the course CMOS VLSI circuits with separate credit structure</p> <p>Course on Internet of Things. (IoT) is introduced in interaction with Bosch, Bangalore. Focusing on hands on with separate credits for course project.</p> <p>An elective course on Information Theory and coding also focuses on hands on with various coding techniques for performance analysis of communication channel, modelling and simulation using MATLAB/Simulink followed by a course project with separate credits for course project.</p> <p>Context based learning for the most fundamental course in communication domain Signals and Systems is introduced through Co-teaching with hands on for mapping Mathematical concepts with physical interpretation of signal processing towards better learning.</p>
BoS 5.5	<p>To consider the Schemes and Syllabi of the postgraduate program M. Tech in Digital Electronics and approve the same.</p> <ol style="list-style-type: none"> a) Scheme of I to IV Semester (2019-21) Batch b) Syllabus of I/II Semester (2019-21) Batch c) Modification of Scheme of III/IV Semester (2018-20) d) Syllabus of III/IV Semester (2018-20) Batch <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 13th April 2019. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: Suggested new core courses to strengthen basic concepts and programming</p> <ol style="list-style-type: none"> 1. Automotive electronics and Communication 	<p>The BoS members noted the progress of the School and recommended action items and timeline.</p> <p>Action Item No.1: Suggested new core courses to strengthen basic concepts and programming</p> <p>ATR: A course on Automotive electronics and Communication is introduced with the focus on industry specific model based design approach and necessary communication protocols for inter and intra vehicular communication in collaboration with Bosch Bangalore.</p>

	<p>Resolution 5.5: Resolved to approve the following Schemes and Syllabi of the postgraduate program M. Tech in Digital Electronics subjected to implementation of action points listed above.</p> <ol style="list-style-type: none"> Scheme of I to IV Semester (2019-21) Batch Syllabus of I/II Semester (2019-21) Batch Modification of Scheme of III/IV Semester (2018-20) Batch Syllabus of III/IV Semester (2018-20) Batch 	
BoS 5.6	<p>To consider the Schemes and Syllabi of the postgraduate program M. Tech in VLSI Design and Embedded Systems and approve the same.</p> <ol style="list-style-type: none"> Scheme of I to IV Semester (2019-21) Batch Syllabus of I/II Semester (2019-21) Batch Modification of Scheme of III/IV Semester (2018-20) Batch Syllabus of III/IV Semester (2018-20) Batch <p>Discussion: Based on the discussions following action items as agreed upon by everyone were finalized and the same were circulated to all the members on 13th April 2019. Persons responsible for these action items have already initiated the actions, which will be shared in the next BoS meeting.</p> <p>Action Item No.1: Suggested new core courses to strengthen basic concepts and programming</p> <ol style="list-style-type: none"> Automotive electronics and Communication AUTOSAR and Infotainment <p>Resolution 5.6: Resolved to the Schemes and Syllabi of the postgraduate program M. Tech in in VLSI Design and Embedded Systems subjected to implementation of action points listed above.</p> <ol style="list-style-type: none"> Scheme of I to IV Semester (2019-21) Batch Syllabus of I/II Semester (2019-21) Batch Modification of Scheme of III/IV Semester (2018-20) Batch Syllabus of III/IV Semester (2018-20) Batch 	<p>The BoS members noted the progress of the School and recommended action items and timeline.</p> <p>Action Item No.1: Suggested new core courses to strengthen basic concepts and programming</p> <p>ATR: A course on Automotive electronics and Communication is introduced with the focus on industry specific model based design approach and necessary communication protocols for inter and intra vehicular communication in collaboration with Bosch Bangalore.</p> <p>A standardized interface for software components in the application layer for building applications including infotainment to support the vehicle functions is introduced in AUTOSAR and Infotainment in collaboration with Bosch, Bangalore.</p>
BoS 5.7	<p>Question Paper review</p> <p>Discussion: The Question Paper along with assessment patterns with respect to Bloom's Levels and PO-PSO-PI mapping was presented.</p>	<p>QP Pattern is incorporated in all the courses.</p>
BoS 5.8	<p>Vision, Mission, POs, PSOs of School of ECE and CAM, PAM of 2015-19</p> <p>Discussion: The Vision, Mission, POs, PSOs and CAM, PAM of 2015-19 of School of ECE were presented.</p>	<p>SoECE staff aligned to Vision, Mission, POs and PSOs.</p>
BoS 5.9	<p>Any other subject with the permission of the Chair Nil.</p>	