MINUTES OF THE MEETING

Date of the meeting: 16-11-2019
Name of the meeting: Board of Studies
Attended by: Dr.P.Chitra, HDCSE, Dr. S. Mercy Shalinie, Dean (III), Dr. P. Balamurugan, IIT, Bombay (BSM1), Dr.S.Karthick, NIT, Andra Pradesh (BSM2) Mr. Vidhya Shankar, Fractal Analytics, Bangalore (BSM3), Dr. C. Uma Rani, A.C. College of Engg & Tech, Karaikudi and CSE department Faculty Members

Sl. No.	Points discussed	Action plan	Responsibility	Target date
1.	Dr. P.Chitra, Head of CSE Department gave a presentation about the PEOs, POs and Program Specific Outcomes (PSOs) for B.E(CSE) Programme, Introduction about the CDIO framework and Categorization of Courses under CDIO for B.E.(CSE). The suggestions given by the experts are • "Innovation" to be incorporated to the Vision of the Department. • The subjects Data mining, Webapps and Calculus was recommended to be streamlined with the industry. • Introduce Linear Algebra and Calculus and python in the earlier semesters • Connect the importance of Generic Mathematics vs Computer Science • Suggestions were given to identify the competencies of the students and groom them to focus on AI, Data structures and computer Architecture which helps in research and placements. • Addition of " Python" to "Problem Solving using Computers: is recommended - Mark sheets can have footnotes regarding the tools used for study in the semester. • Equip the students to solve ML problems in R and Python. This would be useful in interviews based on the fundamental courses on OOPS and Python. • Students are suggested to have Github repository and learn on collaborative working to strengthen their resume. This can be facilitated by Organizing workshops on "Github" • Project Management can be added to 4th Semester which includes Github Training • Include Puzzles in Lateral Thinking Course • Verify if Parallel Computing is included with a Lab component	The suggestions will be considered	Head of Department and TLP Coordinator	-

	• Introduce the need for Main Frame systems which is offered as 1 credit course and map the real-time trends. • SIG work can be aligned with capstone Design Project and Engineering Design Project			

2.	**18CS520 – Theory of Computation**
	• Dr.K.Sundarakantham, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	• CO2 is not at right abstraction level
	• Questions for CO5/CO6 is not appropriate
	• The following can be added:
	  ▪ Closure property of regular languages/Decision properties of CFLA or regular languages
	  ▪ Equivalence between PDA accepting by null and final state
	  ▪ Equivalence between PDA and CFG
	  ▪ Greibach NF and DCFLS
	  ▪ Include new model of computing like Quantum Computing, include Godel's incompleteness theorem
	  ▪ Recursive, Recursively Enumerable language, Grammar Reduction
		The suggestions have been incorporated in the syllabus	Dr.K.Sundarakantham	19.11.2019

3.	**18CS530 – Data Communication and Networking** • Dr.C.Senthilkumar, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Include RARP, Token Ring, WLANs, BSD Sockets, Client server app	The suggestions have been incorporated in the syllabus	Dr.C.Senthilkumar	19.11.2019

4.	**18CS560 – Software Engineering: Theory and Practice**
	• Dr.A.Malini, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	• Include the following :
	  • Life cycle models – iterative, spiral, prototyping
	  • Project schedule/staffing , Risk Management
	  • Coverage analysis, reliability, defect removal
	  • SRS, TDD
		The suggestions have been incorporated in the syllabus	Dr.A.Malini	19.11.2019

5.	**18CS570 – Databases Lab** • Ms.A.M.Rajeswari, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Resources must be properly specified	The suggestions have been incorporated in the syllabus	Ms.A.M.Rajeswari	19.11.2019

	• PL/SQL – include exception handling, compound trigger, trigger restrictions • Add data types - CLOB,BLOB,NCLOB,BFILE • Include TCL commands – commit, rollback, save point, set transactions • Ask the student to practice with transaction Management – Query execution plan, Query optimization, Compilation			

6.	**18CS580 – Network Programming Lab**
	• Dr.C.Senthilkumar, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	    • Implementation of Mail server/ Chat server
	    • Handling of Raw sockets
	    • Implementation of Application Layer protocol
	    • Refer the book "Unix Network Programming" Volume 1 or 2 by Richard Stevens
		The suggestions have been incorporated in the syllabus	Dr.C.Senthilkumar	19.11.2019

7.	**18CS610 – Compilers**
	• Dr. R.Leena Sri, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	    • Finite Automata – to be changed as a review topic
	    • Include Type Checking – Semantic Analysis
	    • Use ambiguous grammars (Parser Generation) – like Lex and Yacc
	    • Refer book "Optimizing Compilers for Modern Architecture", Randy Allen and Kennady, Morgan Kauffman publishers
		The suggestions have been incorporated in the syllabus	Dr. R.Leena Sri	19.11.2019

8.	**18CS620 – Web Programming**
	• Mr.M.Sivakumar, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	    • COs to be reframed
	    • Revisit the Preamble
	    • In DHTML, include Object model and event model
	    • XML –DTD, XML Schema, Chemical Markup Language(CML), DOM Parser, SAX Parser , XSl, SOAP
	    • Web server – Include architecture , HTTP request types, IIS
	    • Server side scripting - remove PHP, Add JSP, Servlet
		The suggestions have been incorporated in the syllabus	Mr.M.Sivakumar	19.11.2019

		The suggestions have been incorporated in the syllabus		
	• Web services – add WSDL, UDDI, JAX-RPC, web services orchestration • Corresponding changes can be incorporated in the Web Programming Lab			

9.	**18CS630 – Artificial Intelligence**
	• Dr.K.Sundarakantham, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are Inclusion of
	    • Uncertainty and Probability reasoning – Bayesian Networks
	    • Stat. Learning methods like learning with complete data and hidden variable
	    • Expectation – Maximization
		The suggestions have been incorporated in the syllabus	Dr.K.Sundarakantham	19.11.2019

10.	**18CS770 – Engineering Tools Lab** • Dr.M.Nirmala Devi, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Integrate all experiments through a theme or project	The suggestions have been incorporated in the syllabus	Dr.M.Nirmala Devi	19.11.2019

11.	**18CSPL0 – 5G Architecture and Protocol**
	• Dr. Narashimma Mallikarjunan representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	    • Hands-on training in IoT and Sensors
	    • Case studies can be included
	    • Lab perspective teaching can be done
	    • Introduce Learning Tools in Co3 and CO4
	    • Topics on Energy Preservation and Minimization can be referred
	    • CO7 can be added as generalization of all the objectives of the course
		The suggestions have been incorporated in the syllabus	Dr. Narashimma Mallikarjunan	19.11.2019

12.	**18CS710 – Accounting and Finance**
	• Mr. Bruce Lee, representative from Mech Department gave brief description of the syllabus. The suggestions given by the experts are
	    • Use case of Financial Planning can be included
	    • Mapping of the course outcomes with Project management
	    • Give practical perspective of the course rather than theoretical concepts
		The suggestions have been incorporated in the syllabus	Mr. Bruce Lee	19.11.2019

		• Case studies and assignments can be given in computer science perspective • Ideas on crowd funding can be added • Video contents on Venture Capitalization can be referred			

13.		**18CGPU1 – 5G Networks and SDN**
		• Dr.C.Senthil Kumar, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
		   • Introduction to Openflow
		   • Topics can be limited to SDN. Title can be changed to SDN with introduction to 5G in the last session
		   • Check the references of resource material
			The suggestions have been incorporated in the syllabus	Dr.C.Senthil Kumar	19.11.2019

14.		**18CSPA0 – Data Warehousing and Mining**
		• Mrs.A.M.Rajeswari, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
		   • Need for ML and cloud infrastructure in mining
		   • Additional classification algorithms are required
		   • Reframe the importance such that 80% weightage to data mining and 20% to ML.
		   • Topics on cloud data mining by Amazon and GCP can be referred
		   • CO can be introduced or rewritten to enhance hands-on
		   • Any of the programming paradigm R/Python to be followed
		   • Case studies stating use of R/Python
		   • Data visualization and analysis of data
			The suggestions have been incorporated in the syllabus	Mrs.A.M.Rajeswari	19.11.2019

15.		**18CSPD0 – Data Science using Python**
		• Dr.M.Nirmala Devi, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
		   • Can reduce the syllabus contents.
		   • Can revisit the content and focus on the outcome of the course
		   • Benchmark the contents with higher learning Institutions.
		   • Include the following :
		      ○ Programming for basic computational methods – QR, SVD, Interpolation
		      ○ Data acquisition and data handling techniques
		      ○ More topics on visualization - histogram, frequency polygon, Box-plots, Quartiles, Scatter Plots, Heat Maps
			The suggestions have been incorporated in the syllabus	Dr.M.Nirmala Devi	19.11.2019

		o Causalities of Bayesian networks in descriptive statistics o Topics correlating the matrix concept of PCA and SVD o Basic optimization algorithms, probability and linear algebra, LDA o Topics on prescriptive and descriptive analysis o Data science and Big data by EMC			
16.	**18CSPG0 – Predictive Analytics** • Mrs.B.Subbulakshmi, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Course title can be changed or needs justification. • Fragment courses and provide clear mapping. • Revisit PO vs CO mapping and map the PO6 to PO8 • Check for overlapped contents with Data science using Python and Data Mining course • Rather than Predictive Analytics, Text or Video Analytics can be offered or Big Data Analytics as electives	The suggestions have been incorporated in the syllabus	Mrs.B.Subbulakshmi	19.11.2019	
17.	**18CSPH0 – Recommender Systems** • Dr.Nirmal Devi, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Cannot be a course on its own • Linear algebra, Probability and statistics can be added as prerequisites • Introduce Hands-on topics • Revisit the CO-PO mapping	The suggestions have been incorporated in the syllabus	Dr.M.K.Kavitha Devi	19.11.2019	
18.	**18CSPC0 – Kernel Programming** • Dr.Madhu Priya, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • OS can be added as a prerequisite • Provide assessment questions with respect to COs • "Source code of MINIX" can be added for the reference of the concepts	The suggestions have been incorporated in the syllabus	Dr.Madhu Priya	19.11.2019	
19.	**18CSPE0 – Wireless Networks** • Prof. Sridharan, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Inclusion of a recent edition of text book in the reference was suggested	The suggestions have been incorporated in the syllabus	Prof. Sridharan, Dr.C.Senthil Kumar	19.11.2019	

20.	**18CSPK0 – Block chain Technology and Applications**
	• Mrs. Raja Lavanya, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	   • Refer AICTE Recommendation on model curriculum
	   • Justify the need for the topic on Double spending
		The suggestions have been incorporated in the syllabus	Mrs. Raja Lavanya	19.11.2019

21.	**18CSPM0 – Deep Learning**
	• Dr. K.Sundarakantham, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are inclusion of
	   • Basics of CNN
	   • Topics on basics of DL can be reduced
	   • Applications of use of Tensorflow with python
		The suggestions have been incorporated in the syllabus	Dr. K.Sundarakantham	19.11.2019

22.	**18CSPP0 – IoT and its Applications** • Dr. M.Vijayalakshmi, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are inclusion of • Components of AWS and Azure relevant to IoT	The suggestions have been incorporated in the syllabus	Dr. M.Vijayalakshmi	19.11.2019

23.	**18XXXXX – Robotic Process Automation Design and Development**
	• Dr. N.Sivakumar, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are inclusion of
	   • Hands-on sessions
	   • DB, Webapp as prerequisite
		The suggestions have been incorporated in the syllabus	Dr. N.Sivakumar,
			Dr.A.Malini
			Mr.V.Vignaraj Ananth
				19.11.2019

24.	**19CS490 – Project Management** • Dr. N.Sivakumar, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are inclusion of • Gantt Chart	The suggestions have been incorporated in the syllabus	Dr. N.Sivakumar	19.11.2019
25.	**18CSPJ0 – Microservices Architecture** • Dr. N.Sivakumar, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are inclusion of • Hands-on session	The suggestions have been incorporated in the syllabus	Dr.A.Malini	19.11.2019

26.	**18CSGA0 – Object Oriented Software Development** • Mrs. A.M.Rajeswari, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Text book addition was recommended	The suggestions have been incorporated in the syllabus	Mrs. A.M.Rajeswari	19.11.2019
27.	**18CSGB0 – Programming using Python** • Mrs. Raja Lavanys, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Revisit databases topic in the course and file handling concepts	The suggestions have been incorporated in the syllabus	Mrs. Raja Lavanys	19.11.2019

28.	**18CSGC0 - Data Analytics using Python**
	• Dr. Nirmala Devi, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	    • Python libraries regarding DA can be included
	    • The contents to be checked with the course ML using R and Data science using Python
		The suggestions have been incorporated in the syllabus	Dr. Nirmala Devi	19.11.2019

29.	**14CS1P0 - Computer Vision using CNN**
	• Mr. M. Siva Kumar, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are
	    • The topic can be changed to "Image classification using CNN".
	    • Basics of CNN, classification and transfer learning alone can be retained.
	    • Revise course content with detailed specification
	    • Granularity of course contents may be given
		The suggestions have been incorporated in the syllabus	Mr. M. Siva Kumar	19.11.2019

30.	**18CSPF0 – Parallel Computing** • Dr. P.Chitra, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are • Remove duplication of reference book	The suggestions have been incorporated in the syllabus	Dr. P.Chitra	19.11.2019

31.	**18CSPN0 – Cloud Computing**
	• Dr. P.Chitra, representative from CSE Department gave brief description of the syllabus. The suggestions given by the experts are inclusion of
	    • AWS and Components
	    • Hands-on contents
		The suggestions have been incorporated in the syllabus	Dr.Jane Rubel Angelina	19.11.2019

32.	Dr.S.Mercy Shalinie, Dean (III) gave a presentation about the draft scheduling of courses and categorization of courses for the new Industry (TCS) supported B.E programme on Computer Science and Business Systems. The suggestions given by the expert members are :
	
	 • Split the mathematics course into two
	     • Probability
	     • Statistics and Calculus
	 • Include principles of Electrical engineering
	 • Addition of courses on Business Analytics or Intelligence
	 • Fundamentals of physics can be removed
	 • Topics on Green Computing can be added
	 • Content uphold should be prioritized to academicians rather if TCS specifically provide the course they may handle
	 • Course mapping with semesters in CSE curriculum has to be rechecked
	 • Recheck the NBA Mandatory components
	 • Computational Statistics provided in 2nd semester is difficult
	 • Core courses to be considered with B.E CSE curriculum mapping
		The suggestions will be considered	Dr.S.Mercy Shalinie, Dr.A.Malini	-

Prepared by……B.Suelal……Date…20/11/19…… Approved by……P.chik……Date…20/11/19……

THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI-625015
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Date of Board of Studies: 16-11-2019

Ref No: CSE/BOS/2019/

Date: 15-11-2019

The Members of Board of Studies for the B.E.Computer Science and Engineering to be held on 16-11-2019(Saturday).

Sl.No	Name of the Member	Position of the member	Name of the Organization/ Institution of the member	Address of the member	Position in BOS	Signature
1.	Dr.P.Chitra	Professor and Head, CSE	Thiagarajar College of Engineering	HDCSE, Department of CSE, TCE, Madurai	Chairman	P. chK
2.	Dr. S. Mercy Shalinie	Professor and Dean (III)	Thiagarajar College of Engineering	Dean (III) TCE, Madurai	Internal Staff	Sp. Shil e
3.	Mr.Vidhya Shankar	Sr. Data Scientist	Fractal Analytics	Fractal Analytics, Bangalore	Industry Representative	V. Volad
4.	Dr.S.Karthick	Assistant Professor and HOD	NIT	Andhra Pradesh	Academic Representative	S. karthi
5.	Dr.P.Balamurugan	Assistant Professor	IEOR,IIT	Bombay	Academic Representative	P.Balamunya.
6.	Dr. C.Uma Rani	Assistant Professor	A.C.Govt. College of Engg. & Tech	Karaikudi	Academic Representative	
7.	Prof. C.Sridharan	Associate Professor	Thiagarajar College of Engineering	Madurai	Internal Staff	Sridharan
8.	Mr.M.Sivakumar	Associate Professor	Thiagarajar College of Engineering	Madurai	Internal Staff	Sivakumar

9.	Dr.K.Sundarakantham	Associate Professor, CSE	Thiagarajar College of Engineering	Madurai	Internal Staff	K. Sundarakantham
10.	Ms.B.Subbulakshmi	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
11.	Dr.C.Senthil Kumar	Associate Professor, CSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
12.	Dr.M.K.Kavitha Devi	Professor, CSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
13.	Ms.A.M.Rajeswari	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
14.	Dr.G.S.R.Emil Selvan	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
15.	Dr.M.Vijayalakshmi	Associate Professor, CSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
16.	Mr.S.Prasanna	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
17.	Dr.T.Manikandan	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
18.	Dr.N.Shivakumar	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
19.	Dr.M.P.Ram Kumar	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
20.	Dr.G.MadhuPriya	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	G.Madhupriya
21.	Dr.J.Janerubel Angelina	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
22.	Dr.A.Malini	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
23.	Dr.K.Narasima Mallikarjunan	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
24.	Dr.M.Suguna	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
25.	Dr.R.LeenaSri	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	

26.	Dr. M.Nirmala Devi	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
27.	Mr.V.Vignaraj Anand	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
28.	Ms.Raja Lavanya	APCSE	Thiagarajar College of Engineering	Madurai	Internal Staff	
29.	Dr.A.Anitha	APMaths	Thiagarajar College of Engineering	Madurai	Internal Staff	
30.	Mr.B. Brucelee	APMech	Thiagarajar College of Engineering	Madurai	Internal Staff	
31.						
32.						

HDCSE