



Criterion 1 – Curricular Aspects

Key Indicator	1.2	Academic Flexibility
Metric	1.2.2	Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Data for the latest completed academic year)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING STRUCTURE OF THE PROGRAM CLEARLY INDICATING COURSES, CREDITS/ELECTIVES

Programmes

1. B.Tech Computer Science and Engineering

1. B.Tech Computer Science and Engineering – Full Time

CURRICULUM

SEMESTER I						
COURSE CODE	COURSE TITLE	L	T	P	C	H
XMA101	Algebra, Differential calculus and their application	3	1	0	4	5
XCP102	Computer Programming (Lab included)	3	0	1	4	5
XBW103	Mechanical and Civil Engineering Systems (workshop practice included)	3	1	1	5	7
XAC104	Applied Chemistry (Lab included)	3	1	1	5	7
XGS105	Study Skills and Language Laboratory	1	0	0	1	3(1L+2SS)
XUM106	Human Ethics, Values, Rights and Gender Equality (plus 2 hours self-study)	1	0	0	1	3
	Total				20	30
SEMESTER II						
XMA201	Calculus and Laplace Transforms	3	1	0	4	5
XEM202	Engineering Mechanics	3	1	0	4	5
XBW203	Electrical and Electronics Engineering Systems (BEE Lab included)	3	1	1	5	7
XAP204	Applied Physics(Physics Lab included)	3	1	1	5	7
XEG205	Engineering Graphics	2	0	1	3	4
XGS206	Speech Communication	1	0	0	1	3
	Total				22	31

SEMESTER III						
XDM301	Discrete Mathematics	3	1	0	4	5
XCS302	Computer Architecture	3	1	0	4	5
XCS303	Object Oriented Programming(Lab included)	3	0	1	4	5
XCS304	Data Structures (Lab included)	3	1	1	5	7
XMS305	Material Science	3	0	0	3	3
XEP306	Entrepreneurship Development	2	0	0	2	3
XGS307	Interpersonal Communication	0	0	0	0	2
XCS308	In-plant Training –I	-	-	-	1	
	Total				24	30
SEMESTER IV						
XMA401	Probability and Queuing Theory	3	0	0	3	3
XCS402	Theory of Computation	3	0	0	3	3
XCS403	Digital systems and Microprocessor(Lab Included)	3	0	1	4	5
XCS404	Operating Systems(Lab Included)	3	1	1	5	7
XCS405	Design and Analysis of Algorithms	3	1	0	4	5
XEE406	Economics for Engineers	3	0	0	3	3
XGS407	Technical communication	1	0	0	1	3
	Extracurricular Activities-NCC/NSS/YRC/RRC/Sports	-	-	-	-	-
	Total				23	29
SEMESTER V						
XMA501	Numerical Methods	2	1	0	3	4
XCS502	Java Programming	2	1	0	3	4

XCS503	Database Management Systems(Lab Included)	3	0	1	4	5
XCS504	Web Technology and Mobile Application Development (Lab Included)	3	1	1	5	7
XCSE5*	Professional Elective-I (with Tutorial)	2	1	0	3	4
XTQ506	Total Quality Management	3	0	0	3	3
XGS507	Business Communication	1	0	0	1	3
XCS508	In-plant Training –II				1	
	Total				23	30
SEMESTER VI						
X**OE*	Open Elective –I	3	0	0	3	3
XCS602	Big Data Analytics	3	0	0	3	3
XCS603	Principles of Compiler Design(Lab Included)	3	0	1	4	5
XCS604	Computer Networks(Lab Included)	3	1	1	5	7
XCS605	Digital Signal Processing	3	1	0	4	5
XCSE6*	Professional Elective- II	3	0	0	3	3
XES607	Environmental Studies (Non Credit Course)	0	0	0	0	3
XGS608	Academic Writing (Non credit course)	0	0	0	0	2
	Total				22	31
SEMESTER VII						
X**OE*	Open Elective II	3	0	0	3	3
XCS702	Software Engineering (Lab Included)	3	0	1	4	5
XCS703	Mobile Communication	3	1	1	5	7
XCSE7*	Professional Elective-III	3	0	0	3	3
XCSE7*	Professional Elective-IV	3	0	0	3	3

XUMC706	Cyber Security	3	0	0	3	3
XCS707	Project phase – I	0	0	2	2	4
XGS708	Career Development Skills(Non Credit Course)	0	0	0	0	1
XCS709	In-plant Training – III	-	-	-	2	-
	Total				25	29
SEMESTER VIII						
X**OE*	Open Elective III	3	0	0	3	3
XCSE8*	Professional Elective-V	3	0	0	3	3
XCSE8*	Professional Elective – VI	3	0	0	3	3
XCS804	Project Phase II	0	0	12	12	24
	Total				21	33

OPEN ELECTIVES

Open Elective Code No.	Course Title	L	T	P	C	H
XC SOE1	Free Open Source Software	3	0	0	3	3
XC SOE2	Web Design	3	0	0	3	3
XC SOE3	Object Oriented Programming	3	0	0	3	3
XC SOE4	Multimedia design and Development	3	0	0	3	3
XC SOE5	Digital Marketing	3	0	0	3	3

LIST OF PROFESSIONAL ELECTIVES V SEMESTER

* Elective Code No.	Course Title	L	T	P	C	H
XCSE51	Software Testing	2	1	0	3	4
XCSE52	Artificial Intelligence and Expert System	2	1	0	3	4
XCSE53	Graph Theory	2	1	0	3	4
XCSE54	Data Warehousing and Data Mining	2	1	0	3	4

VI SEMESTER

Elective Code No.	Course Title	L	T	P	C	H
XCSE61	Cryptography and Network Security	3	0	0	3	3
XCSE62	Cloud Computing	3	0	0	3	3
XCSE63	Distributed Computing	3	0	0	3	3
XCSE64	Programming with Python	3	0	0	3	3

VII SEMESTER

Elective Code No.	Course Title	L	T	P	C	H
XCSE71	Network Measurements and Testing	3	0	0	3	3
XCSE72	XML and Web Services	3	0	0	3	3
XCSE73	Disaster Management	3	0	0	3	3
XCSE74	Language Technologies	3	0	0	3	3
XCSE75	Internet of Things	3	0	0	3	3
XCSE76	Computer Graphics and Multimedia	3	0	0	3	3
XCSE77	Advanced Databases	3	0	0	3	3
XCSE78	Design and Analysis of Parallel algorithms	3	0	0	3	3

VIII SEMESTER

Elective Code No	Course Title	L	T	P	C	H
XCSE81	Digital Image Processing	3	0	0	3	3
XCSE82	Information Retrieval	3	0	0	3	3
XCSE83	Wireless Sensor Networks	3	0	0	3	3
XCSE84	Embedded Systems and PLC	3	0	0	3	3
XCSE85	Service Oriented Architecture	3	0	0	3	3
XCSE86	Advanced Computer Architecture	3	0	0	3	3
XCSE87	Soft Computing	3	0	0	3	3

TOTAL CREDIT: 179

REGULATION -2017

CURRICULUM

SEMESTER I						
COURSE CODE	COURSE TITLE	L	T	P	C	H
XMA101	Algebra, Differential calculus and their application	3	1	0	4	5
XCP102	Computer Programming (Lab included)	3	0	1	4	5
XBW103	Mechanical and Civil Engineering Systems (workshop practice included)	3	1	1	5	7
XAC104	Applied Chemistry(Lab included)	3	1	1	5	7
XGS105	Study Skills and Language Laboratory	1	0	0	1	3(1L+2SS)
XUM106	Human Ethics, Values, Rights and Gender Equality (plus 2 hours self-study)	1	0	0	1	3
	Total				20	30
SEMESTER II						
XMA201	Calculus and Laplace Transforms	3	1	0	4	5
XEM202	Engineering Mechanics	3	1	0	4	5

XBW203	Electrical and Electronics Engineering Systems (BEE Lab included)	3	1	1	5	7
XAP204	Applied Physics(Physics Lab included)	3	1	1	5	7
XEG205	Engineering Graphics	2	0	1	3	4
XGS206	Speech Communication	1	0	0	1	3
	Total				22	31
SEMESTER III						
XDM301	Discrete Mathematics	3	1	0	4	5
XCS302	Data Communication	3	1	0	4	5
XCS303	Digital systems and Microprocessor(Lab Included)	3	0	1	4	5
XCS304	Data Structures (Lab included)	3	1	1	5	7
XMS305	Material Science	3	0	0	3	3
XEP306	Entrepreneurship Development	2	0	0	2	3
XGS307	Interpersonal Communication	0	0	0	0	2
XCS308	In-plant Training –I	-	-	-	1	
	Total				23	30
SEMESTER IV						
XMA401	Probability and Queuing Theory	3	0	0	3	3
XCS402	Computer Architecture	3	0	0	3	3
XCS403	Object Oriented Programming with Java	3	0	1	4	5
XCS404	Operating Systems(Lab Included)	3	1	1	5	7
XCS405	Design and Analysis of Algorithms	3	1	0	4	5
XEE406	Economics for Engineers	3	0	0	3	3
XGS407	Technical communication	1	0	0	1	3

	Extracurricular Activities-NCC/NSS/YRC/RRC/Sports	-	-	-	-	-
	Total				23	29
SEMESTER V						
XMA501	Numerical Methods	2	1	0	3	4
XCS502	Theory of Computation	2	1	0	3	4
XCS503	Database Management Systems(Lab Included)	3	0	1	4	5
XCS504	Web Technology and Mobile Application Development (Lab Included)	3	1	1	5	7
XCSE5*	Professional Elective-I (with Tutorial)	2	1	0	3	4
XTQ506	Total Quality Management	3	0	0	3	3
XGS507	Business Communication	1	0	0	1	3
XCS508	In-plant Training –II				1	
	Total				23	30
SEMESTER VI						
X**OE*	Open Elective –I	3	0	0	3	3
XCS602	Data Warehousing and Data Mining	3	0	0	3	3
XCS603	Cloud Computing (Lab Included)	3	0	1	4	5
XCS604	Principles of Compiler Design(Lab Included)	3	1	1	5	7
XCS605	Digital Signal Processing	3	1	0	4	5
XCSE6*	Professional Elective- II	3	0	0	3	3
XES607	Environmental Studies (Non Credit Course)	0	0	0	0	3
XGS608	Academic Writing (Non credit course)	0	0	0	0	2
	Total				22	31
SEMESTER VII						

X**OE*	Open Elective II	3	0	0	3	3
XCS702	Software Engineering (Lab Included)	3	0	1	4	5
XCS703	Data Analytics (Lab Included)	3	1	1	5	7
XCSE7*	Professional Elective-III	3	0	0	3	3
XCSE7*	Professional Elective-IV	3	0	0	3	3
XUMC706	Cyber Security	3	0	0	3	3
XCS707	Project phase – I	0	0	2	2	4
XGS708	Career Development Skills(Non Credit Course)	0	0	0	0	1
XCS709	In-Plant Training – III	-	-	-	2	-
	Total				25	29

SEMESTER VIII

X**OE*	Open Elective III	3	0	0	3	3
XCSE8*	Professional Elective-V	3	0	0	3	3
XCSE8*	Professional Elective – VI	3	0	0	3	3
XCS804	Project Phase II	0	0	12	12	24
	Total				21	33

OPEN ELECTIVES

Open Elective Code No.	Course Title	L	T	P	C	H
XCISOE1	Free Open Source Software	3	0	0	3	3
XCISOE2	Web Design	3	0	0	3	3
XCISOE3	Object Oriented Programming	3	0	0	3	3
XCISOE4	Multimedia design and Development	3	0	0	3	3
XCISOE5	Digital Marketing	3	0	0	3	3

**LIST OF PROFESSIONAL ELECTIVES
V SEMESTER**

* Elective Code No.	Course Title	L	T	P	C	H
XCSE51	Cryptography and Network Security	2	1	0	3	4
XCSE52	Distributed Computing	2	1	0	3	4
XCSE53	Graph Theory	2	1	0	3	4
XCSE54	Computer Graphics and Multimedia	2	1	0	3	4

VI SEMESTER

Elective Code No.	Course Title	L	T	P	C	H
XCSE61	Advanced Databases	3	0	0	3	3
XCSE62	Mobile Computing and Communication	3	0	0	3	3
XCSE63	Internet of Things	3	0	0	3	3
XCSE64	Programming with Python	3	0	0	3	3

VII SEMESTER

Elective Code No.	Course Title	L	T	P	C	H
XCSE71	Network Measurements and Testing	3	0	0	3	3
XCSE72	Software Testing	3	0	0	3	3
XCSE73	XML and Web Services	3	0	0	3	3
XCSE74	Disaster Management	3	0	0	3	3
XCSE75	Ethical Hacking	3	0	0	3	3
XCSE76	Artificial Intelligence and Expert System	3	0	0	3	3
XCSE77	Design and Analysis of Parallel algorithms	3	0	0	3	3
XCSE78	Game Theory	3	0	0	3	3

VIII SEMESTER

Elective Code No	Course Title	L	T	P	C	H
XCSE81	Digital Image Processing	3	0	0	3	3
XCSE82	Information Retrieval	3	0	0	3	3
XCSE83	Wireless Sensor Networks	3	0	0	3	3
XCSE84	Embedded Systems and PLC	3	0	0	3	3
XCSE85	Service Oriented Architecture	3	0	0	3	3
XCSE86	Advanced Computer Architecture	3	0	0	3	3
XCSE87	Soft Computing	3	0	0	3	3

TOTAL CREDIT: 179

LIST OF ONE CREDIT COURSES

* Elective Code No.	Course Title	L	T	P	C	H
XCSXXX	Web Design using JOOMLA Content Management System	.5	0	.5	1	2
XCSXXX	R Programming	.5	0	.5	1	2
XCSXXX	Internet of Things	.5	0	.5	1	2

Board Of Studies Minutes

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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DATE: 15.4.2016

BOARD OF STUDIES (UG)

AGENDA

1. To approve the syllabi of B. Tech Computer Science and Engineering (Regular) Regulation 2015 from III Semester to VIII semester.
2. To approve the syllabi of Common Subjects XUME 706 Cyber Security and XUMC 706 Cyber Security.



BOARD OF STUDIES (UG)

**Minutes of the meeting for discussion on Curriculum and syllabus of
(Regulation 2015) B.Tech Computer Science and Engineering (Regular)**

Date : 9,4,2016
Venue : Babbage Hall, Periyar Knowledge Center, Periyar Maniammai University.

MEMBERS PRESENT:

1. Dr. V. Shanmuganeethi, Asst. Professor, Computer Center, NITTTR, Taramani, Chennai.
2. Mr. Vadivelan Ramalingam, Project Manager - QA in Cognizant Technology Solutions Chennai, India.
3. Ms. V. Hamsadhvani, Assistant Professor(SS) and Head of the Department, Dept. of Computer Science and Engg.
4. Prof. Dr. K. Lakshmi, Dean, School of Computing Sciences and Engg.
5. Prof. G. Thiruchelvi, Associate Professor, Dept. of Computer Science and Engg.
6. Mr. K. M. Arivuchelvan, Assistant Professor(SS), Dept. of Computer Science and Engg.
7. Mr. S. Sundarapandian, Assistant Professor, Dept. of Computer Science and Engg.
8. Ms. S. Suseela, Assistant Professor, Dept. of Computer Science and Engg.
9. Mr. M. Saravanan, Assistant Professor, Dept. of Computer Science and Engg.

Minutes:

1. The Department Vision and Mission, PEOs and POs are approved.
2. The Curriculum has been reviewed and approved.
3. The Syllabi for subjects of III Semester to VIII Semester of Regulation 2015 were reviewed, discussed and updated.
4. The external academic expert and the expert from industry suggested that
 - Additional Open Elective Subjects can be included

- Data Structures Lab should be divided into structure oriented programming (using C) and Object Oriented Programming(Using C++).
- Text and reference books should be of latest editions and latest year of publication. for applicable subjects.
- Suggested to use UNIX /Linux environment.
- Professional Electives in VI th semester, Instead of Programming Paradigms the subject of Python to be included.
- Spoken Tutorial website to be included in all appropriate Subjects.
- In XCS304 Object Oriented Programming, Vth unit will be focused on Inheritance and Polymorphism.
- In XCS404, Operating System, list of program to be added in general and Virtual Lab implemented with virtual box.
- In XCS604, Computer Networks, Case study on TCP/IP Architecture to be included in UNIT V.
- In XCS702, Software Engineering, the topic of cohesion and coupling to be included in unit II. Suggested to use the tools for testing and software development.
- In XCS XCSOE2 Web Design HTML 5, Joomla, Drupal tools can be included.

1. Mr.S.Sundarapandian

2. Prof.G.Thiruchelvi

3..Dr. K. Lakshmi

4. Ms.V.Hamsadhvani,

5. Mr.Vadivelan Ramalingam

6. Dr.V.Shanmuganeethi

Minutes of the Board of Studies held on 25.05.17 for B.Tech Computer Science and Engineering

Department of Computer Science and Engineering

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Minutes of the Board of Studies Meeting

Venue: Galileo Hall

Date : 25.05.17

Time : 11.00 AM

The Board of studies of the B.Tech Computer Science and Engineering (Full Time Regular) programme has been convened and various points have been discussed. The Committee has approved the Syllabus of Regulation 2015 Revision 2 (Semester III to VIII), and Regulation 2017 (Semester I to VIII) that comes in to effect from the Academic year 2017-2018 onwards.

Modification of Existing Syllabus for Regulation 2015 Rev 2

Existing Syllabus in Regulation 2015 Rev 1 has been replaced with some (Regulation 2015 Rev 2) changes, which will come in to effect from the academic year 2017-18.

To include and approve the introduction of the following One credit Courses

S.No.	Semester	Course Name
1.	V	Web Design
2.	VI	Internet of Things
3.	VII	R Programming

To modify and approve the course XCS502 Java Programming

The contents in XCS 502 Java Programming (Regulation 2015 Revision 2) can be reduced.

To modify and approve the course XCS702 Software Engineering

The contents in XCS702 Software Engineering (Regulation 2015 Revision 2) can be modified.

Curriculum and syllabus for Regulation 2017

The curriculum (Semester I to VIII) and syllabus (Semester I to VIII) for Regulation 2017 is framed, which will come in to effect from the Academic year 2017-18 onwards.

Notes:

To include and approve the introduction of XCS302 Data Communication

It is approved to include the course XCS302 Data Communication (In III Semester) instead of Computer Architecture.

To move and approve the XCS303 Digital Systems and Microprocessor (Lab Included)

It is approved to move the XCS303 Digital Systems and Microprocessor (Lab Included) from IV semester to III semester.

To include and approve the introduction of XCS302 OOPS with Java (Lab included)

To combine XCS303 OOPS (Regulation 2015 Rev 1) with XCS502 Java (Regulation 2015 Revision 1), which will come in to effect from the Academic year 2017-18 onwards.

To move and approve the XCS402 Computer Architecture

It is approved to move the XCS402 Computer Architecture from III semester to IV semester.

To move and approve the XCS502 Theory of Computation

It is approved to move the XCS502 Theory of Computation from IV semester to V semester.

To move and approve the XCS602 Data Warehousing and Data Mining

It is approved to move the elective course XCSE54 Data Warehousing and Data Mining from V semester to VI semester core course XCS602 Data Warehousing and Data Mining.

To include and approve the introduction of XCS603 Cloud Computing (Lab Included)

It is approved to include the course XCS603 Cloud Computing (Lab Included) in VI semester (Regulation 2017)

To include and approve the introduction of XCS703 Data Analytics (Lab Included)

It is approved to include the course XCS703 Data Analytics (Lab Included) in VII Semester (Regulation 2017)

To include and approve the introduction of the elective course XCSE62 Mobile Computing

It is approved to include the course XCSE62 Mobile Computing in VI Semester (Regulation 2017)

To include and approve the introduction of the elective course XCSE75 Ethical Hacking

It is approved to include the course XCSE75 Ethical Hacking in VII Semester (Regulation 2017)

To include and approve the introduction of the elective course XCSE78 Game Theory

It is approved to include the course XCSE78 Game Theory in VII Semester (Regulation 2017)

Modification of Existing Syllabus for Regulation 2017

To modify and approve the changes in the content of the open elective XCSE2 Web Design

We, the members present in the Board of Studies Meeting accepted to follow the Curriculum and Syllabus (Regulation 2017, Regulation 2015 Revision 2) for B.Tech Computer Science and Engineering(Full Time Regular) Programme offered by Periyar Maniammai University from the Academic year 2017-2018 onwards.

Chairperson and Head
(Dr.A.E. Narayanan)
Department of Computer Science and Engineering