KERALA TECHNOLOGICAL UNIVERSITY

Master of Technology

Curriculum, Syllabus and Course Plan

PALAKKAD CLUSTER - 08

SCHEME AND SYLLABI

FOR

M. Tech. DEGREE PROGRAMME

IN

COMPUTER SCIENCE AND ENGINEERING

(2015 ADMISSION ONWARDS)

VISION AND MISSION OF THE PROGRAMME

VISION

To become the frontiers of computer science and spearhead cost effective ICT solutions for the betterment of society.

MISSION

Impart quality education to the students in the domain of Computer Science and Engineering with a focus to create and disseminate the knowledge of problem solving using computers.

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

1. To empower the graduates with a strong and in-depth foundation in theory of computer science.
2. To draw the attention of the graduates towards new technologies and induce urge for research and new learning methods.
3. To develop professional skills by enabling them to solve large real world and computational problems
4. To equip the graduates with soft skills and inculcate managerial skills in them.
5. To inculcate professional ethics in graduates and make them a good social human who can contribute to development of society through their professional activities.

PROGRAM OUTCOME (POs)

A. Graduates will demonstrate the ability to apply computer science principles and computational tools for problem solving
B. Graduates will possess knowledge in core research areas and contemporary issues of dynamically changing technology
C. Graduates will possess the ability to effectively communicate and present new technical ideas and disseminate knowledge
D. Graduates will be able to develop complex and efficient software and computational tools
E. Graduates will exhibit the ability to analyze emerging research problems and find effective and efficient solutions
F. Graduates will be able to identify new trends in emerging technologies and evaluate them
G. Graduates will possess the skill to work with professional ethics for sustainable development

SEMESTER 1

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	08 CS 6011	Operating System Design	4-0-0	40	60	3	4
B	08 CS 6021	Advanced Data Structures	3-0-0	40	60	3	3
C	08 CS 6031	Advanced Database Technology	3-0-0	40	60	3	3
D	08 CS 6041	Mathematical Foundations of Computer Science	3-0-0	40	60	3	3
E	08 CS 6051	Elective I	3-0-0	40	60	3	3
S	08 GN 6001	Research Methodology	0-2-0	100			2
T	08 CS 6071(P)	Seminar I	0-0-2	100			2
U	08 CS 6081(P)	Advanced Data Structures Lab	0-0-2	100			2
		TOTAL	**16-2-4**	**500**	**300**	**-**	**22**

Note: Remaining 8 hours / week is meant for departmental assistance by students

TOTAL CONTACT HOURS : 22
TOTAL CREDITS : 22

Elective I

08 CS 6051(A) Computational Intelligence
08 CS 6051(B) Advanced Network Technologies
08 CS 6051(C) Web Services

SEMESTER 2

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	08 CS 6012	Advanced Compiler Design	4-0-0	40	60	3	4
B	08 CS 6022	Information Retrieval	3-0-0	40	60	3	3
C	08 CS 6032	Evolutionary Computing	3-0-0	40	60	3	3
D	08 CS 6042	Elective II	3-0-0	40	60	3	3
E	08 CS 6052	Elective III	3-0-0	40	60	3	3
V	08 CS 6062(P)	Mini Project	0-0-4	100			2
U	08 CS 6072 (P)	Data mining and Analytics Lab	0-0-2	100			1
		TOTAL	**16-0-6**	**400**	**300**	**-**	**19**

Note: Remaining 8 hours / week is meant for departmental assistance by students

TOTAL CONTACT HOURS : 22
TOTAL CREDITS : 19

Elective II

08 CS 6042(A) Advanced Language Technologies
08 CS 6042(B) Big Data Essentials
08 CS 6042(C) Algorithms and Complexity
08 CS 6042(D) Software Architecture and Design

Elective III

08 CS 6052(A) Cloud Computing
08 CS 6052(B) Data Compression
08 CS 6052(C) Bioinformatics

SEMESTER 3

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	08 CS 7011	Elective IV	3-0-0	40	60	3	3
B	08 CS 7021	Elective V	3-0-0	40	60	3	3
T	08 CS 7031(P)	Seminar II	0-0-2	100			2
W	08 CS 7041(P)	Masters Research Project Phase 1	0-0-12	50			0
		TOTAL	**6-0-14**	**230**	**120**	**-**	8

Note: Remaining 10 hours / week is meant for departmental assistance by students

TOTAL CONTACT HOURS : 20
TOTAL CREDITS : 8

Elective IV

08 CS 7011(A) Unix Internals

08 CS 7011(B) Crypto Complexity

08 CS 7011(C) Ethical Hacking

Elective V

08 CS 7021(A) Theoretical Computer Science

08 CS 7021(B) Semantic Web

08 CS 7021(C) Advanced Architecture

SEMESTER 4

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credit
					Marks	Duration (hours)	
W	08 CS 7012(P)	Masters Research Project Phase 2	0-0-21	70	30		18
		TOTAL	**0-0-21**	**70**	**30**	**-**	18

TOTAL CONTACT HOURS : 21
TOTAL CREDITS : 18

TOTAL NUMBER OF CREDITS: 67