

# St. Peter's University

Chennai – 600 054.

## M.E. (COMPUTER SCIENCE AND ENGINEERING) PROGRAMME

### **Regulations and Syllabi**

(Effective from 2008 – 2009)

- 1. Eligibility:** Candidates who passed B.E. / B.Tech.(CSE / IT / EEE / ECE / Electronics / E&I / ICE / Instrumentation)/M.C.A. / M.Sc.(Computer Science / Computer Technology / Software Engineering / Information Technology / Mathematics /Electronics) of the University or any other equivalent examination thereto are eligible for admission to Two Year M.E.(Computer Science and Engineering) Programme.
- 2. Duration:** Two Years Comprising 4 Semesters. Each semester has a minimum 90 working days with a minimum of 5 hours a day.
- 3. Medium:** English is the medium of instruction and examination.
- 4. Weightage for Internal and End Assessment:** The weightage for Internal Assessment (CA) and End Assessment (EA) be 25:75 unless the ratio is specifically mentioned in the scheme of Examinations.
- 5. Credit System:** Credit system be followed with 18 credits for each semester and each credit is equivalent to 25-30 hours of effective study provided in the Time Table.

## 6. Scheme of Examinations (for I to IV Semesters)

### I Semester

COURSE CODE	COURSE TITLE	CREDIT	MARKS		
			CA	EA	TOTAL
<b>THEORY</b>					
108CSPT01	Applied Mathematics	3	25	75	100
108CSPT02	Computer Architecture	4	25	75	100
108CSPT03	Data Structures and Algorithms	3	25	75	100
108CSPT04	Operating Systems	3	25	75	100
108CSPT05	Software Engineering Methodologies	3	25	75	100
<b>PRACTICAL</b>					
108CSPP01	Data Structures Lab	1	25	75	100
108CSPP02	Operating System Lab	1	25	75	100
<b>TOTAL</b>		<b>18</b>	<b>175</b>	<b>525</b>	<b>700</b>

### II Semester

COURSE CODE	COURSE TITLE	CREDIT	MARKS		
			CA	EA	TOTAL
<b>THEORY</b>					
208CSPT01	Database Technology	2	25	75	100
208CSPT02	Computer Networks	3	25	75	100
208CSPT03	Compiler Design	3	25	75	100
208CSPT04	Object Oriented System Design	2	25	75	100
208CSPT05	Web Technology	2	25	75	100
<b>ELECTIVES</b>					
208CSPE03	Network security	4	25	75	100
<b>PRACTICAL</b>					
208CSPP01	Networking Lab	1	25	75	100
208CSPP02	Database & Web Technology Lab	1	25	75	100
<b>TOTAL</b>		<b>18</b>	<b>200</b>	<b>600</b>	<b>800</b>

### III Semester

COURSE CODE	COURSE TITLE	CREDIT	MARKS		
			CA	EA	TOTAL
<b>ELECTIVES</b>					
308CSPE04	Software Project Management	2	25	75	100
308CSPE06	Multimedia System	2	25	75	100
308CSPE11	Mobile Computing	2	25	75	100
<b>PROJECT</b>					
308CSPP01	Project Work - Phase - I	12	50	150	200
<b>TOTAL</b>		<b>18</b>	<b>125</b>	<b>375</b>	<b>500</b>

### IV Semester

COURSE CODE	COURSE TITLE	CREDIT	MARKS		
<b>PROJECT</b>			<b>CA</b>	<b>EA</b>	<b>TOTAL</b>
408CSPP01	Project Work (Phase - II)	18	100	300	400
<b>TOTAL</b>		<b>18</b>	<b>100</b>	<b>300</b>	<b>400</b>

### List of Electives for II and III Semesters:

Course Code	Electives
<b>II Semester</b>	
208CSPE01	Theory of Computation
208CSPE02	Distributed Computing
208CSPE03	Network Security
208CSPE04	Ad hoc Networks
208CSPE05	Performance Evaluation of Computing Systems and Networks
<b>III Semester</b>	
308CSPE01	Soft Computing
308CSPE02	Software Quality Assurance
308CSPE03	Advanced Databases
308CSPE04	Software Project Management
308CSPE05	Component Based Technology
308CSPE06	Multimedia Systems
308CSPE07	Bio Informatics
308CSPE08	Embedded Systems
308CSPE09	Digital Imaging
308CSPE10	Visualization Techniques
308CSPE11	Mobile Computing
308CSPE12	XML and Web Services
308CSPE13	Grid Computing
308CSPE14	Data Warehousing and Data Mining
308CSPE15	Agent Based Intelligent Systems
308CSPE16	Special Elective

**7. Passing Requirements:** The minimum pass mark (raw score) be 50% in End Assessment (EA) and 50% in Internal Assessment (CA) and End Assessment (EA) put together. No minimum mark (raw score) in Internal Assessment (CA) be prescribed unless it its specifically mentioned in the scheme of Examination.

**8. Grading System:** Grading System on a 10 Point Scale be followed with 1 mark = 0.1 Grade point to successful candidates as given below.

$$\begin{aligned}
 \text{(a) Overall weighted Average Marks} &= \frac{\text{Sum of Weighted Marks}}{\text{Total Credits}} \\
 &= \frac{\sum (CA+EA)C}{\sum C}
 \end{aligned}$$

$$\begin{aligned}
 \text{Where Weighted Marks in each course} &= \text{Total Marks (CA and EA) multiplied by number of Credit} \\
 &= (CA+EA)C
 \end{aligned}$$

$$\begin{aligned}
 \text{(b) Overall Grade Point Average (OGPA)} &= \frac{\text{Sum of Weighted Grade Points}}{\text{Total Credits}} \\
 &= \frac{\sum (CA+EA)C}{\sum C}
 \end{aligned}$$

$$\begin{aligned}
 \text{Where Weighted Grade Points in each course} &= \text{Grade Points (CA and EA) multiplied by Credits} \\
 &= (CA+EA)C
 \end{aligned}$$

**The Overall Grade:** The Overall Grade and Classification of all successful candidates be arrived at from the Overall Grade Point Average as stipulated in the following conversion Table.

(1 mark = 0.1 Grade Point on a 10 Point Scale)

<b>Grade</b>	<b>Over all Grade Point Average(OGPA)</b>	<b>Over all weighted Average marks</b>	<b>Classification</b>
0	9.00 to 10.00	90.00 to 100	First Class
A	8.00 to 8.99	80.00 to 89.99	First Class
B	7.00 to 7.99	70.00 to 79.99	First Class
C	6.00 to 6.99	60.00 to 69.99	First Class
D	5.00 to 5.99	50.00 to 59.99	Second Class
<b>F</b>	0.00 to 4.99	0.00 to 49.99	<b>Fail</b>

The Grade Sheets of successful candidates provide particulars such as (1) Overall weighted Average Marks, (2) Overall Grade Point Average, (3) Overall Grade and (4) Overall classification.

**9. Pattern of the Question Paper:** The question paper for End Assessment will be set for three hours and for the maximum of 100 marks with following divisions and details.

**Part A:** 10 questions (with equal distribution to all units in the syllabus). Each question carries 2 marks.

**Part B:** 5 question with either or type (with equal distribution to all units in the syllabus). Each question carries 16 marks.

The total marks scored by the candidates will be reduced to the maximum prescribed in the Regulations.

## **10. Syllabus**

**Registrar**