SACRED HEART COLLEGE (AUTONOMOUS)

Tirupattur – 635 601, Tamil Nadu, S.India

Ready for Everv Good Work

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A Don Bosco Institution of Higher Education, Founded in 1951 * Affiliated to Thiruvalluvar University, Vellore * Autonomous since 1987

Accredited by NAAC (4th Cycle – under RAF) with CGPA of 3.31 / 4 at 'A+' Grade

M.Sc Computer Science

Sem	Code	Subject	L	T	P	C	CA	Sem	Total
I		Principles of Compiler Design	4	0	0	3	50	50	100
		Advanced Java Programming	4	1	0	3	50	50	100
		Desktop Applications	4	1	0	3	50	50	100
		Open Source Technologies	3	1	0	3	50	50	100
		Elective-I: a. Web Services b. Data Mining and Warehousing c. Business Intelligence	4	0	0	3	50	50	100
		Practical – I: Advanced Java Programming	0	0	2	2	50	50	100
		Practical –II: Desktop Applications	0	0	2	2	50	50	100
		Practical – III: Open Source Technologies	0	0	2	2	50	50	100
		Employability Skills	2	0	0	0	100	-	100
		MOOCs	-	-	-	**2#**	-	-	-
		Total	**21**	**3**	**6**	**21+2#**	-	-	**30**
II		Distributed Operating System	4	0	0	3	50	50	100
		Enterprise Java Programming	4	1	0	3	50	50	100
		Web Applications	4	1	0	3	50	50	100
		Programming in Python	3	1	0	3	50	50	100
		Elective-II: a. Object Oriented Analysis and Design b. Software Testing and Quality Assurance c. Wireless Sensor Networks	4	0	0	3	50	50	100
		Practical - IV: Enterprise Java Programming	0	0	2	2	50	50	100
		Practical - V: Web Applications	0	0	2	2	50	50	100
		Practical -VI: Programming in Python	0	0	2	2	50	50	100
		Technical Aptitude	2	0	0	-	100	-	100
		Skill Empowerment – I	0	0	0	1	100	-	100
		Department Domain – I (30 Hrs) / MOOCs	-	-	-	**2***	-	-	-
		Total	**21**	**3**	**6**	**22+2***	-	-	**30**
III		Internet of Things	4	0	0	3	50	50	100
		Artificial Intelligence	4	0	0	3	50	50	100
		Design and Analysis of Algorithms	4	1	0	3	50	50	100
		Mobile Applications	4	1	0	3	50	50	100

		Elective - III: a. Semantic Web and Applications b. Ethical Hacking & Cyber Forensics c. Cloud Computing	4	0	0	3	50	50	100
		Practical-VII: Design and Analysis of Algorithms	0	0	2	2	50	50	100
		Practical – VIII: Mobile Applications	0	0	2	2	50	50	100
		Software Project – I	0	0	2	2	50	50	100
		Career Building Skills	2	0	0	-	100	-	100
		Industrial Plant Training	0	0	0	2	100	-	100
		Skill Empowerment – II	0	0	0	1	100	-	100
		MOOCs	-	-	-	2*	-	-	-
		Total	22	2	6	24+2*	-	-	30
IV		Big Data Analytics	4	-	0	3	50	50	100
		Data Science with Python	4	1		3	50	50	100
		Machine Learning	4	1	0	3	50	50	100
		Elective-IV: a. Cryptography and Network Security b. Social Network Analysis c. Soft Computing	4	0	0	3	50	50	100
		Practical - IX: Data Science with Python	0	0	2	2	50	50	100
		Practical - X: Machine Learning	0	0	2	2	50	50	100
		Software Project – II	0	0	4	3	50	50	100
		Human Rights	2	0	0	2	50	50	100
		Research Investigation	2	0	0	1	100	-	100
		Skill Empowerment – III	0	0	0	1	100	-	100
		Department Domain – II (30 Hrs)	-	-	-	2#	-	-	-
		Total	20	2	8	23+2#	-	-	30
		Grand Total	84	10	26	90+4#+4*	-	-	120

15. <mark>SOFTWARE PROJECT</mark>

15.1 Regulations for third semester

- The Project work is carried out in a team; each team consists of maximum two members.
- Each team has to select an exclusive problem and the team has to develop an application to provide the solution to the problem.
- Each student in a team has to deal with a specific area in the problem and submit the report separately.
- Faculty members assigned to each group shall supervise the progress of the software project.
- After finalizing software project title with the guide, change of title is not allowed.
- The phases of the software project are project management, requirement analysis, design, implementation and testing.
- The report shall be in A4- size paper and in original. However, photocopies are accepted for reports and forms only.
- Plagiarism, when detected will result in zero marks, without the possibility for submission.
- In the course of the project development, each student must have regular consultations with the Guide. The consultation is meant to review the candidate's progress, besides advising on any project issues. A minimum of five consultations throughout the whole software project is essential to accept a software project for evaluation.
- During each consultation, the candidate must submit the intermediate deliverables to the guide for review. The deliverables will be assessed and marks will be allocated during the software project presentation. Each Consultation Report must reflect the detailed tasks completed for the week, problems encountered in the course of the software project and how he/she resolved them and the plan for the next phase.
- A copy of the software project report is to be submitted by the prescribed time announced by the department.
- A student shall be declared to be successful in the project if he/she secures 50% or above in the semester examinations and 50% or above in the aggregate of CIA & Semester examinations. If a candidate fails, he/she has to improve his/her software project and re-submit in the following year.
- Viva Voce is compulsory for all the candidates who have submitted the software project. If a candidate is absent for viva-voce then his/her absence is treated as absent for the semester examination.

Evaluation

The software project will be evaluated on the following components.

CA   - 50 Marks

1.	**First Review**	**25 Marks**

	First Review should cover the following artifacts
	
	  1. Requirement analysis
	  2. Design	

2.	**Second Review**	**25 Marks**

	Second Review should cover the following artifacts
	
	  1. Implementation
	  2. Testing	

Semester Examination   - 50 Marks

1. **Evaluation of Project Work   40 Marks**
   a. Software   - 20 Marks
   b. Testing   - 10 Marks
   c. Documentation - 10 Marks

2. **Viva – Voce   10 Marks.**

- The semester evaluation is carried out by the external and internal examiner individually. The average of both evaluations is awarded as the final mark for software project.

15.2 Regulations for the Final Semester

- A Coordinator will be appointed by the Head of the Department to coordinate the software project.
- Internal guides from the department will be assigned to the students.
- The software project shall be an independent one. Combined projects are not allowed.
- After finalizing software project title with the guide, change of title is not allowed.
- The phases of the software project are project management, requirement analysis, design, implementation and testing.
- Plagiarism, when detected will result in zero marks, without the possibility for submission.
- In the course of the project development, each student must have regular consultations with the Guide. The consultation is meant to review the candidate's progress, besides advising on any project issues. A minimum of five consultations throughout the whole software project is essential to accept a software project for evaluation.
- During each consultation, the candidate must submit the intermediate deliverables to the guide for review. The deliverables will be assessed and marks will be allocated during the software project presentation. Each Consultation Report must reflect the detailed tasks completed for the week, problems encountered in the course of the software project and how he/she resolved them and the plan for the next phase.
- A copy of the software project report is to be submitted by the prescribed time announced by the department.
- Two Reviews will be conducted before the Final Viva-Voce.
- The report shall be in A4- size paper and in original. However, photocopies are accepted for reports and forms only.
- Two copies of the project report to be submitted at prescribed time announced by the department.
- A student shall be declared to be successful in the project if the candidate secures 50% or above in the Examination and 50% or above in the aggregate of CA and Semester Examination. If a candidate fails he/she has to improve their project work and re-submit in the following even semester.
- Viva-Voce is compulsory for all the candidates who have submitted the project work. If a candidate is absent for viva voce, and then his absence will be treated as absence for the semester examinations.

Evaluation

The Software Project work will be evaluated on the following components.

CA **- 50 Marks**

1.	**First Review**	**25 Marks**
	First Review should cover the following artifacts 1. Requirement analysis 2. Design	
2.	**Second Review**	**25 Marks**
	Second Review should cover the following artifacts 1. Implementation 2. Testing	

Semester Examination - 50 Marks

1. **Evaluation of Project Work** **40 Marks.**
   a. Software   - 20 Marks
   b. Testing   - 10 Marks
   c. Documentation - 10 Marks

2. **Viva – Voce** **10 Marks**

- Two examiners will evaluate the project work report separately and the average is calculated as a final mark for the Semester examination

INDUSTRIAL PLANT TRAINING (IPT)

REGULATIONS

1. Students need to undergo an industrial training during the summer vacation after the completion of the first year.

2. The duration of the training programme can be four weeks.

3. Requisition for a bonafide certificate can be arranged through a coordinator designated by the department for the IPT course.

4. On applying for industrial training the student has to submit review form along with industrial training acceptance letter from the respective company to the department industrial training Coordinator.

5. On completion of the training the student has to submit a report at the time fixed by the department.

6. The report will be evaluated by a committee of one internal faculty and a supervisor of the department.

7. The student has to make an oral presentation for about 15 minutes including question and answer sessions.

8. There is no external examination.

9. Viva-Voce will be conducted at the end of the III semester by two internal faculty members.

Evaluation

Evaluation of the IPT Report	**-**	**80 Marks**
i. First Week Report	- 15 Marks	
ii. Second Week Report	- 15 Marks	
iii. Third Week Report	- 15 Marks	
iv. Presentation	- 15 Marks	
v. Documentation	- 20 Marks	
Viva-Voce	**-**	**20 Marks**
Total	**-**	**100 Marks**