



Anekant Education Society's

Tuljaram Chaturchand College, Baramati

(Autonomous)

Two Year M.Sc. Degree Program in Computer Science

(Faculty of Science & Technology)

CBCS Syllabus

M.Sc.(Computer Science) - II Sem- IV

For Department of Computer Science

Tuljaram Chaturchand College of Arts, Science & Commerce, Baramati

Anekant Education Society's
**Tuljaram Chaturchand College of Arts, Science and Commerce,
 Baramati, (Autonomous)**

M.Sc.(Computer Science)Academic Year 2019-2020

M.Sc. (Computer Science) I - Credit Structure

Subject	Semester I	Semester II	Total
Paper – I	4	4	8
Paper – II	4	4	8
Paper – III	4	4	8
Paper - IV	4	4	8
Paper – V	4	4	8
Practical	4	4	8
Practical (Project)	---	4	4
Intro. to Cyber Security – I& II	2	2	4
Human Rights	2	--	2
Certificate Course- I	--	2	2
Total =====	28	32	60

M.Sc. (Computer Science) II - Credit Structure

Subject	Semester III	Semester IV	Total
Paper – I	4	Industrial Training Project / Internship (IT) 16	4
Paper – II	4		4
Paper – III	4		4
Paper - IV	4		8
Paper – V	4		8
Practical / Paper VI (Sem IV)	4		8
Practical (Project)	4		8
Certificate Course- II	2	-----	2
Skill Development I & II	2	2	4
			2
Total =====	32	18	50

Extra Credits:

1	Human Rights	2 Credits
2	Cyber Security Module I & II	4 Credits
3	Certificate Courses I & II	4 Credits
4	Skill Development I & II	4 Credits
Total Extra Credits =		14 Credits

Total Credits: Academic Credits (24+28+28+16 = 96) + Extra Credits (14) =110

Paper wise Course Structure For M.Sc. (Computer Science) (2019 Pattern)

No	Class	Sem	Code	Paper	Paper Title	Credit	Exam	Marks
1	M.Sc. - I	I	COMP4101	Theory	Principles of Programming Languages (C)	4	I/E	60 + 40
2			COMP4102	Theory	Cryptography and Network Security (C)	4	I/E	60 + 40
3			COMP4103	Theory	Database Technologies (C)	4	I/E	60 + 40
4			COMP4104	Theory	Design and Analysis of Algorithms (C)	4	I/E	60 + 40
5			COMP4105	Theory	Programming with DOT NET (C)	4	I/E	60 + 40
6			COMP4106	Pract.	Lab Course on DOT NET, PPL & Database Technologies (C)	4	I/E	60 + 40
7			HR-101	----	Human Rights – I	2	----	----
8			CYS-101	----	Introduction to Cyber Security – I	2	----	----
Note: Credit: 24. Core subjects is compulsory and Extra credits (2+2=4) is also compulsory.								
9	M.Sc. - I	II	COMP4201	Theory	Digital Image Processing (C)	4	I/E	60 + 40
10			COMP4202	Theory	Data Mining and Data Warehousing (C)	4	I/E	60 + 40
11			COMP4203	Theory	Python Programming (C)	4	I/E	60 + 40
12			COMP4204	Theory	Advanced Operating System (EI)	4	I/E	60 + 40
13			COMP4205	Pract.	Lab Course on Python Programming and Advance Operating System (C)	4	I/E	60 + 40
14			COMP4206	Pract.	Project (EII)	4	I/E	60 + 40
15			COMP4207	Theory	Artificial Intelligence (EIII)	4	I/E	60 + 40
16			CC-12	----	Certificate Course – I	2	----	---
17			CYS-102	----	Introduction to Cyber Security – II	2	----	----
Note: : Credit: 28. Core subjects is compulsory and Extra credits (4) is also compulsory.								
18	M.Sc. - II	III	COMP5301	Theory	Mobile Technologies (C)	4	I/E	60 + 40
19			COMP5302	Theory	Soft Computing (C)	4	I/E	60 + 40
20			COMP5303	Theory	Web Services (C)	4	I/E	60 + 40
21			COMP5304	Theory	Software Architecture & Design Pattern (EI)	4	I/E	60 + 40
22			COMP5305	Pract.	Lab Course-on Mobile Technologies and Web Services (C)	4	I/E	60 + 40
23			COMP5306	Pract.	Project (EII)	4	I/E	60 + 40
24			COMP5307	Theory	Recent Trends in IT (Internet of Things) (EIII)	4	I/E	60 + 40
25			CC-23	----	Certificate Course – II	2	----	----

26			SD-23	----	Skill Development – I	2	----	----
Note: Credit: 28. Core subjects is compulsory and Extra credits (2+2) is also compulsory.								
27	M.Sc. - II	IV	COMP540 1	Project	Industrial Training/ Institutional Project (IT) (Core)	16	I / E	60 + 40
28			SD-24	----	Skill Development – II	2	----	----
Note: Credit:16. Core subject is compulsory,								
Total Credits:Academic Credits(24+28+28+16 = 96) + Extra Credits (14) = 110								

M.Sc. (Computer Science)-II

Semester – IV

Syllabus

(2019 Pattern)

w.e.f. A.Y.2020-21

2019 Pattern	
Paper Code	Paper Title
COMP5401	Industrial Training (Internship)/ Institutional Project (IT) -- 16 Credits
SD24	Skill Development – II – 02 Credits

Teaching Scheme: 4 hours/week

The Industrial Training /Institutional project is equivalent to 4 theory courses of 4 credits each. Marks per 4 credits = 100. The total weightage for Industrial/Institutional training is 400 marks.

- Workload:**
1. One mentor (Project Guide) to be assigned for 10 students.
 2. 4 hours /week to be allotted for 10 students

Guidelines:

- Each student must individually complete minimum 4/5 months full time Industrial training / Institutional project in the 4th semester.
- College should assign a student mentor to every student. The mentor will monitor the progress of the student throughout the semester for continuous assessment.
- Student should submit a valid offer letter and synopsis within two weeks of starting the internship.
- There will be continuous assessment of the work done by the student during the internship period.
- Continuous assessment guidelines:
 1. Student should submit a weekly report in the college to the mentor.
 2. The report should contain the following details:

Name of student, project title, company name, company mentor, daily activities and results/output, proposed work for next week.
 3. The weekly report should be duly signed by the student and company mentor/ institute Guide.
 4. Student Mentor should maintain weekly attendance record for every student.
 5. Two presentations should be conducted for each student (first presentation after first month and second presentation after 3rd month)
 6. Student Mentor should take feedback from the Company mentor regarding overall performance of the student.
- At the end of the internship period, each student should prepare a report which should conform to international academic standards.

The report should follow the style in academic journals and books, with contents such as:

Abstract, background, aim, design and implementation, testing, conclusion and full references, Tables and figures should be numbered and referenced to in the report.

Examination and Evaluation guidelines:

- The project done during internship period will be evaluated in the following manner:

IA - 100 marks + EA-300 marks.

- The final presentation and documentation will be evaluated by three examiners:

1. Student mentor (appointed by respective college)
2. External examiner (appointed by the college)
3. IT expert (appointed by respective college)

IA (100 marks)		
Weekly Attendance and Report	Pre-Presentation	Documentation
30	30	40

EA (300 marks)		
Mentor	IT Expert	External Examiner
100	100	100

The above evaluation will be converted into GPA (Grade Point Average)

Recommended Documentation contents:

Title page

Company / Institute certificate

Internship completion certificate

Abstract

Introduction: - -motivation, -problem statement. -purpose/objective and goals, -literature survey, -project scope and limitations.

System analysis: -

-Comparative study of Existing systems, - scope and limitations of existing systems, -project perspective, features, - stakeholders, -Requirement analysis, - Functional requirements, performance requirements, security requirements etc.

System Design: -

- Design constraints, - System Model: UML diagrams, - Data Model, -User interfaces.

Implementation details: - -Software/hardware specifications, etc.

Reports

Testing: - Test Plan, Black Box Testing or Data Validation Test Cases, White Box Testing or Functional Validation Test cases and results

Conclusion and Recommendations

Future Scope

Bibliography and References

Class: M.Sc.(Computer science) (Semester-IV)

Paper Code: PSCS241

Title of Paper: Industrial Training (Internship) / Institutional Project (IT) Paper: I (IT Project)

Credit:16

No.of Practicals:12

- The Project can be platform, language and technology independent.
- Project will be evaluated by the project guide.
- Assessment will be done weekly in the respective batch guide.
- Evaluation will be on the basis of weekly progress of project work, progress report, oral, results and documentation and demonstration.
- You should fill your status of project work on the progress report and get the signature of project guide regularly.
- Progress report should sharply focus how much time you have spent on specific task? You should keep all sign progress report.
- Project will not be accepted, if progress report is not submitted and all the responsibilities remain with student.

The format of Progress Report is:

Roll No. & Name of Student:	
Title of the Project:	
Project Guide Name:	

Sr. No.	Date	Details of Project Work	Project Guide Sign (With Date)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Head

Department of Computer Science