

BHARATI VIDYAPEETH UNIVERSITY

Syllabi for two years - Master of Computer Science Degree Course (M.Sc. – Computer Science)

The M.Sc. degree course will be of two years duration.

The M.Sc. degree of two years duration has been designed and is to be implemented from the academic year 2008-2009.

Rules & Regulation for M.Sc. course :

Eligibility for Admission to M.Sc. (Computer Science) course :

A candidate who has passed the B.Sc.(Comp.Sci.) degree at principal level (from recognized university) shall be eligible for admission to the First Year M.Sc.(Comp.Sci.) degree course.

Scheme of Teaching :

- a) The M.Sc. (Computer Science) course will be of 2 years duration. Each year will be of 2 semesters - Thus the entire course will be of 4 semesters.
- b) First three semesters will comprise of 5 theory papers , 1 practical courses and 1 minor project.

Scheme of teaching (including subject wise workload per week in terms of number of lectures, Tutorials etc.)

Sr.No.	Class	Subject	Work (Per course) Theory Periods	Practical load per batch *
1	M.Sc. I	701	4	--
	M.Sc. I	702	4	--
	M.Sc. I	703	4	--
	M.Sc. I	704	4	--
	M.Sc. I	705	4	--
	M.Sc. I	706	--	16 hrs
	M.Sc. I	707	4	--
	M.Sc. I	708	4	--
	M.Sc. I	709	4	--
	M.Sc. I	710	4	--
	M.Sc. I	711	4	--
	M.Sc. I	712	--	16 hrs
2.	M.Sc. II	713	4	--
	M.Sc. II	714	4	--
	M.Sc. II	715	4	--
	M.Sc. II	716	4	--
	M.Sc. II	717	4	--
	M.Sc. II	718	--	16 hrs
	M.Sc. II	Internship	--	120 hrs

Examination :

1. A candidate shall not be admitted to the semester examination unless he / she has satisfactorily kept terms for the courses at the respective department of this university.
2. An application (which must be in the prescribed form and accompanied by the prescribed fee) for admission to any of the examination of M.Sc. (Computer Science Degree course shall be submitted by a candidate to the Registrar through the Head of the Institution attended by him / her on or before the prescribed date along with a certificate from the Head of the Institution of his / her having attended the course and kept the terms in the various subjects and of having satisfied the other conditions laid down by the university and of his / her being fit candidate for the examination.
3. **Internal Assessment :**
Three Tutorials will be conducted through out the semester for each theory course and marks out of 20 per course will be submitted to the university as Internal marks. Internal marks for the practical course will be based on the continuous assessment of the daily work and attendance. Students will be assessed for 20 marks for each practical course.
4. **Annual Examination :**
 - i) **Theory** : An annual examination will be held at the end of every semester for theory which shall be called. Annual Examination. The Annual Examination of each subject will be of 80 marks and will be of three hours duration. The final result of the students in each subject will be based on aggregate marks obtained by the students for the internal assessment and Annual Examination.
 - ii) **Practical** ; There shall be Annual practical examination of 100 marks for 1st year and 2nd year for each course. The practical examination will be conducted for courses 706,712 and 718 at the end of each semester. The assessment for the said courses will be as follows.
 - 30 marks - actual project work - Assessment by the external examiner.
 - 10 marks presentation of the project - Assessment by the external examiner.
 - 20 marks - Assessment by the guide - day to day project work.
 - 40 marks will be allotted to the lab course presented in the first ,second and third semesters .
 - iii) **Project Work** : Students have to undertake a small project so as to learn research methodology and presentation of work. The project shall carry 100 marks which will be allotted as follows:
 - 30 marks - actual project work - Assessment by the external examiner.
 - 10 marks presentation of the project - Assessment by the external examiner.
 - 20 marks - Assessment by the guide - day to day project work.
 - 40 marks will be allotted to the two seminars (10 marks per seminar) presented in the fourth semester on the project work.
 - iv) **Internship** : Students are supposed to undertake an IT project in IT industry for the fourth semester. This project will be assessed for 200 marks at the end of the semester.
 - 140 marks - actual project work - Assessment by the external examiner.
 - 20 marks presentation of the project - Assessment by the external examiner.
 - 20 marks - Assessment by the guide - day to day project work.
 - 20 marks will be allotted to the two seminars (10 marks per seminar) presented in the fourth semester on the project work.

5. Rules regarding ATKT to second year M.Sc. Computer Science course.
A student will be allowed to keep terms at the second year of the M.Sc. course if her / his terms for the first year have been granted.
6. Standard of Passing :
- The candidate who has secured 40 marks out of 100 shall be declared to have passed in the paper.
 - The candidate who has not secured at least 32 marks in a particular paper in the Annual Examination will have to secure at least 32 marks in the subsequent examination in the particular paper.
 - The university shall conduct the 'Supplementary Annual Examination' in October / November for repeater students.
 - The internship of fourth semester follows the grade system. The grades are awarded as follows:-

i) Marks 140 and above	-	A Grade
ii) Marks 120 and above but less than 140	-	B Grade
iii) Marks 100 and above but less than 120	-	C Grade
iv) Marks less than 100	-	FAIL
7. Award of class :
A class should be awarded to the students of M.Sc. degree on the aggregate marks in the first and the second year examination. The award of class shall be as follows.
- Aggregate 70% and above - First class with distinction
 - Aggregate 60% and above but less than 70% - First class
 - Aggregate 55% and more but less than 60% - Higher second class
 - Aggregate 50% and more but less than 55% - Second class
 - Aggregate 40% and more but less than 50% - Pass class
 - Below 40% - Fail

University terms:

The dates for the commencement and conclusion of the first and second terms shall be fixed by the University authorities. The terms can be kept by students, who have registered their names with the university.

COURSE STRUCTURE FOR THE PROPOSED M.Sc.(Comp.Sci.) TO BE EFFECTIVE FROM 2007-08

SR.NO.	SEMESTER I	SEMESTER II	SEMESTER III	SEMESTER IV
1.	ALGORITHM DESIGN PATTERNS	SOFTWARE ARCHITECTURES	OPERATING SYSTEM	
2.	PARADIGM OF PROGRAMMING LANGUAGES	NETWORK SECURITY	INTELLIGENT SYSTEMS	
3.	ADVANCED DATA STRUCTURES	ADVANCED DATABASE MANAGEMENT SYSTEMS	DESIGN OF LANGUAGE PROCESSORS	INTERNSHIP
4.	MFC INTERNALS	JAVA APPLICATION	.NET	

		PROGRAMMING	TECHNOLOGIES	
5.	ELECTIVE I	ELECTIVE II	ELECTIVE III	
6.	LAB COURSE AND MINOR PROJECT-I	LAB COURSE AND MINOR PROJECT-II	LAB COURSE AND MINOR PROJECT-III	

The following is the semester wise structure of the M.Sc.(Computer Science) programme.

SEMESTER I:-

SUBJECT CODE	TITLE	MODE OF EVALUATION	WEIGHTAGE OF INTERNAL ASSESSMENT	WEIGHTAGE OF EXTERNAL ASSESSMENT
701	ALGORITHM DESIGN PATTERNS	INTERNAL & UNIVERSITY	20	80
702	PARADIGM OF PROGRAMMING LANGUAGES	INTERNAL & UNIVERSITY	20	80
703	ADVANCED DATA STRUCTURES	INTERNAL & UNIVERSITY	20	80
704	MFC INTERNALS	INTERNAL & UNIVERSITY	20	80
705	ELECTIVE I	DEPARTMENTAL	100	-
706	LAB COURSE AND MINOR PROJECT- I	UNIVERSITY	100	-

ELECTIVE:-

SEMISTER I:

- A) COMPUTER GRAPHICS
- B) THEORY OF AUTOMATA

SEMESTER II:-

SUBJECT CODE	TITLE	MODE OF EVALUATION	WEIGHTAGE OF INTERNAL ASSESSMENT	WEIGHTAGE OF EXTERNAL ASSESSMENT
707	SOFTWARE ARCHITECTURE	INTERNAL & UNIVERSITY	20	80
708	NETWORK SECURITY	INTERNAL & UNIVERSITY	20	80
709	PRINCIPLE OF OBJECT ORINTED AND DISTRIBUTED DATABASE MANAGEMENT SYSTEM	INTERNAL & UNIVERSITY	20	80
710	JAVA APPLICATION PROGRAMMING	INTERNAL & UNIVERSITY	20	80
711	ELECTIVE II	DEPARTMENTAL	100	--
712	LAB COURSE AND MINOR PROJECT –II	UNIVERSITY	100	--

ELECTIVE:-

SEMESTER II:

- C) PARALLEL PROCESSING
- D) EMBEDDED COMPUTING

SEMESTER III:-

SUBJECT CODE	TITLE	MODE OF EVALUATION	WEIGHTAGE OF INTERNAL ASSESSMENT	WEIGHTAGE OF EXTERNAL ASSESSMENT
713	OPRATING SYSTEM	INTERNAL & UNIVERSITY	20	80
714	INTELLIGENT SYSTEMS	INTERNAL & UNIVERSITY	20	80
715	MOBILE TECHNOLOGIES	INTERNAL & UNIVERSITY	20	80
716	.NET TECHNOLOGIES	INTERNAL & UNIVERSITY	20	80
717	ELECTIVE III	DEPARTMENTAL	100	--
718	LAB COURSE & MINOR PPROJECT -III	UNIVERSITY	100	--

ELECTIVE:-

SEMESTER III:

- E) SOFT COMPUTING AND DATA MINING
- F) SOFTWARE PROJECT MANAGEMENT

SEMESTER IV:-

SUBJECT CODE	TITLE	MODE OF EVALUATION	WEIGHTAGE OF INTERNAL ASSESSMENT	WEIGHTAGE OF EXTERNAL ASSESSMENT
719	INTERSHIP	INTERNAL & UNIVERSITY	40	60