MASTER OF SCIENCE IN INFORMATION TECHNOLOGY
(A Choice Based Credit System Effective from 2018-21)

1. Duration of the Course

The Master of Science in Information Technology programme will be of four semesters duration under Choice based Credit system which will be conducted in two years. Each semester will be of approximately 5 months (minimum 90 working days in a semester) duration.

2. Eligibility:

Candidates seeking admission to the first semester of M.Sc.(CBCS) Information Technology must have a B.Sc. or equivalent/B.C.A degree (10+2+3 scheme) with minimum 48% marks and also must have studied Mathematics in their degree programme from a recognized university.

3. **Admissions**:

Admissions to the first year of M.Sc.(IT) will be made as per admission rules for M.Sc.(CBCS)

4. Medium of Instruction

The medium of instruction and examination shall be English.
5. **No. of Seats:** As given in the Information bulletin

6. Curriculum

6.1 M.Sc.(IT) programme has a two year , four semester prescribed course structure which in general terms is known as curriculum. It prescribes courses to be studied in each semester as given below

6.2 M.Sc.(IT) programme shall have a curriculum and course contents (syllabi) for the courses recommended by the committee courses in Informatics and Computational Sciences and approved by the academic council of the university.

6.3 The programme shall follow Choice Based Credit System(CBCS) and will be governed by the Common Rules and Regulations of Masters programme under CBCS approved by the Academic Council of the University.

7. Courses of Study and Examination (2018-21)

Semester – I

course	Paper Name	L-T-P	No.of credits	Max. Marks		Total
				University Exam.	Internal Assessment	
1	2		3	4	5	6
M1MIT01-CT01	Computer Architecture	3-1-0	4	80	20	100
M1MIT02-CT02	Introduction to Programming	3-0-2	4	80	20	100
M1MIT03-CT03	Data Structure	3-1-0	4	80	20	100
M1MIT04-CT04	Discrete Mathematics	3-1-0	4	80	20	100
M1MIT05-CP01	Practical-I Data Structure Programming	0-0-8	4	80	20	100
M1MIT06-CP02	Practical-II Web Development Using HTML & CSS	0-0-8	4	80	20	100
M1MIT07-SP01	Communication & Presentation Skill	0-0-4	2AC	80	20	100
	TOTAL		24(26)			

Courses of Study and Examination (2018-21)

Semester – II

course	Paper Name	L-T-P	No.of credits	Max. Marks		Total
				University Exam.	Internal Assessment	
1	2		3	4	5	6
M2MIT01-CT05	Database Systems	3-0-2	4	80	20	100
M2MIT02-CT06	Operating System	3-0-2	4	80	20	100
M2MIT03-CT07	Algorithms	3-0-2	4	80	20	100
M2MIT04-CT08	Object Oriented Programming using C++	3-0-2	4	80	20	100
M2MIT05-CP03	Practical-I: Algorithm Implementations	0-0-8	4	80	20	100
M2MIT06-EP01X	Practical-II: **Elective Lab-I : Web Application Development** A. Web Development using Dot NET B. Web Development using PHP& MYSQL	0-0-8	4	80	20	100
M2MIT07-EP02X	Practical-III:Minor Project or Elective skill Enhancement Course- I	0-0-6	3	80	20	100
	Total		27			

Courses of Study and Examination (2018-21)

Semester – III

course	Paper Name	L-T-P	No.of credits	Max. Marks		Total
				University Exam.	Internal Assessment	
1	2		3	4	5	6
M3MIT01-CT09	Computer Networks	3-1-0	4	80	20	100
M3MIT02-CT10	Java Programming	3-0-2	4	80	20	100
M3MIT03-ET01X	Elective -1 A.Introduction to Data Science B. Computer Graphics	3-0-2	4	80	20	100
M3MIT04-ET02X	Elective-2 A. Software Engineering B. Image Processing	3-0-2	4	80	20	100
M3MIT05-EP03X	Practical-I: **Elective Lab-II** A. Android Programming B. Microprocessor & Micro-controller Programming	0-0-8	4	80	20	100
M3MIT06-EP04X	Practical-II: **Elective Lab-III** A. Big Data Analytics B. Cloud Computing C. Web Application Project	0-0-8	4	80	20	100
M3MIT07-EP05X	Practical-III: Minor Project OR Elective Skill Enhancement Course- II	0-0-6	3	80	20	100
M3MIT08-SP02X	Elective Skill Enhancement Course- III	0-0-4	2AC	80	20	100
	Total		27(29)			

Courses of Study and Examination (2018-21)Semester – IV

course	Paper Name	L-T-P	No.of credits	Max. Marks		Total
				University Exam.	Internal Assessment	
1	2		3	4	5	6
M4MIT01-PW01	Project Work	0-0-36	18	80	20	100
Total Credits: Final Semester Project External Examination will be conducted at the University Department/Computer Centre by a Committee						

Fourth Semester

Course PW01 : Project Work

Only the projects submitted by the candidates as per following guidelines will be evaluated
.
1. Project to be selected by the student at the end of fifth Semester
2. The project must be of approximately 400 man hours and so certified by the supervisor of the project
3. The project must be submitted in the form in consonance with the format enclosed
4. Monthly progress report must be submitted through supervisor in the enclosed format.
5. Project must be submitted before the prescribed last date .
6. Candidates are required to make a presentation of their project work during their project examination
7. Students whose Projects graded as unsatisfactory will given one more chance to undertake another project under another supervisor /organization.
8. The project work of the candidates whose monthly progress report is not submitted will be considered as incomplete and may be terminated within two weeks from the prescribed due date.
9. Students will be allowed to undertake project works only at the bonafide organizations.
10. Students are required to give two seminars during the project work, one at the end of 2nd month and another at the end of 4th month. However, candidates working for their project in organizations outside the state need to give only one seminar during the entire project period.
11. Examination of the project work will be conducted by a committee consisting of at least two internal examiners and one external examiner.

Guidelines for Project in partial fulfillment of the requirement of M.Sc.(IT)course

(a) The project will consist of two parts:

- Documentation; and

-   Viva-voce

(b) The source-code and the executable code have to be submitted on CD and student must demonstrate working of the software.

(c) Project shall be original and not copied from the existing material from any source and a certificate, as per format given will be provided with the Project, duly countersigned by the supervisor.

(d) Project will be submitted only when the candidate completes all papers though he or she may start the projects earlier.

(e) Presentation of the Project will be in the accepted norms; as laid down in various text-books; IEEE standard/ ISO standards etc., are some models to follow.

(f) As far as possible, the Project should be of real life value.

(g) Though the Project is given 480 hours, the student is expected to use his/her discretion to ensure that it is large enough to be of practical value.

(h) The number of hours will not include the hours for writing and documentation of the Project.

(i) During the presentation of the Project at via-voce the candidate is advised to have a computer based or an overhead project presentation material handy.

PERFORMA FOR CERTIFICATE

This is to certify that this is a bonafied record of the Project entitled
_____ was done satisfactory at
_____ by Mr./Ms
_____ in partial fulfillment of M.Sc.(IT) course. He/ She has successfully completed all the subjects.
This report had not been submitted for any other examination and does not form part of any other course undergone by the candidate.
PLACE:

DATE: SIGNATURE

                                                                                                              NAME:
                                                                                                  DESIGNATION:
                                                                      (Name & Seal of organization of Supervisor)

PROFORMA FOR THE PROJECT REPORT

1. Title of the Project

2. Objectives

3. Input to the Project

4. Output generated

5. Details of Hardware Platform used

6. Details of Software Tools used

7. Implementation Issues (Clearly defining the area of Application).

8. Miscellaneous

9. Signature of the Candidature.

GUIDELINES FOR THE CHAPTERS AND SECTIONS

1. Microscopic Summary

2. Details of candidate and Supervisor along with certificates of :

- Original Work;

- Assistance if any;

- Credits.

3. Aims and Objectives

4. Approach to Project and Time Frame

5. Project Design Description with Appendices to cover:

- Flow Charts/Data Flow Diagram-Macro/Micro level

- Source Code

- Hardware Platform

- Software Tools

- Security measures

- Quality Assurance

- Auditability

6. Test Data and Result.

The project report must be prepared for the external examination. Monthly report of the students must be taken to monitor progress and must be placed for evaluation by external examiner. Projects submitted by the students shall be evaluated during external evaluation to ensure independent contribution and proficiency acquired by the students
.
Note: Students must be allotted projects in the beginning of the session. Candidates submitting ready made projects/copied/ projects developed by professionals in the market etc shall be awarded zero marks.

Two copies of the project report and the software developed must be submitted to the external examiner. One copy of the project shall be returned to the student with the signature of external examiner.

Skill Oriented Elective Course: Information and Communication Technology

(This course may be offered also as Separate Certificate Course by Colleges/Departments to award Certificate Course in ICT
Eligibility: Students of UG and PG classes admitted to MohanlalSukhadiaUniversity,Udaipur)
Detailed Syllabus for Information and Communication Technology Certificate and Skill based course (Students of M.Sc. (IT) and MCA are not eligible to offer this course).

1.   Study of various components of a Personal Computer System: identifying the system unit, different Input units, output units. Looking inside a system unit: Block diagram of a typical mother board, various components: CPU, memory, chipsets, Bus slots, various ports,SMPS, Hard disk drives, CD/DVD drives, various connectors

      (This practical must be carried out by first explaining the block diagram of typical motherboard, reviewing basic concepts about CPU, memory, storage, input out put systems, explaining specifications of a typical PC and then demonstration of identification of various motherboard components).

2.   Study of input and output ports of a PC, USB Cable, Network cable and its pin connections, Blocking and permitting access of Devices attached to USB ports.

3.   Operating System Software: Brief survey of Windows OS, its components. Creating Folders, files, backing and restoring files, Working with Notepad and Word pad, Understanding and working with Control panel components, understanding and working with BIOS options.

4.   Word processing: Creating and editing a document, creating reports and tables, changing view of the document, formatting a document, use of mail merge. Converting word file to a PDF file and printing files.

5.   Electronic Spread Sheet: Creating and editing work book, various operations with Cells, use of formulae, formatting, creating charts ,pivotal tables and managing work book, Various saving options. Use of MS Excel to create an address book

6.   Database system: MS Access, Creating a database, modifying table, creating forms, Queries and reports, importing and exporting options. Using MS access to create a Telephone directory

7.   Creating a Power point presentation, Modifying and Refining Presentation. Use of advance features of Power point. Creating a good multimedia presentation

8.   Internet connectivity , testing and setting internet connection to a PC, Use of Google and understanding various searching options, use of google drive and Drop box , creating email account , Creating web pages using HTML, hosting web pages, Creating web pages of your resume and hosting it.

9.   Using Personal Information manager, use of calendar for managing various tasks, Antivirus protection, compressing files, encrypting and decrypting files. Online filling of forms.

10. (a) Preparation of a 10 page report consisting various type of contents like tables, scientific formulae, pictures, text matter in English as well as in Hindi

(b) Preparation of expenditure accounts using MS Excel with text matter in Hindi and English

(c) Preparation of a database of 50 library book catalogue using MS access

(d) Preparation of a Power point presentation in a topic of your choice

Seats: Not exceed 40 in a batch. One computer /student must be made available.

Examination: Practical examination for 4 hrs duration to test skills acquired by the candidate. Either manual or Computerized online test may also be conducted to test typing speed and efficiency of the candidate in Word processing.

Only candidates having a minimum level of skill in the use office automation tools to carry out the job of an office assistant. The grades or marks awarded must reflect the skills acquired by the candidate.

Marks: external 80, Internal:20

Certificates will be issued for candidates opted for Certificate Course. Fee recommended: Rs 2000/- under SFS programme. For candidates opting this course as an elective skill course will be awarded credits as per rules of Choice Based Credit System.