

## Suresh Gyan Vihar University

### Program Project Report : Two Year Post Graduate Degree Course in Master of Computer Application (M.C.A.)

#### Category: Both

- a. Open and Distance Learning (ODL)
- b. Online Learning

1. (a) **Program mission and objectives:** The mission is “to facilitate Students who wish to pursue a career in the field of IT and secure top positions in Technology based MNCs and other Organizations such as E- commerce companies, Banks, Government agencies, Networking Companies, Stock Exchanges etc. besides enhancement of Gross Enrolment Ratio (G.E.R.)”.

- To provide a foundation extensive base as well as interdisciplinary educational foundation.
- . Produce knowledgeable and skilled human resources which are employable in IT and ITES.
- Impart knowledge required for planning, designing and building complex Application Software Systems as well as provide support to automated systems or application.
- Produce entrepreneurs who can develop customized solutions for small to large Enterprises.
- To provide higher education to the working personnel and accelerate in their respective career.

The Master of Computer Applications Programme Educational Objectives aims to:

1. MCA graduates who will have successful careers based on their understanding of formal and practical methods of Application Development using the concepts of computer programming, software and design principles.
2. MCA graduates will demonstrate analytical and design skills including the ability to generate creative solutions and foster team-oriented, professionalism through effective communication in their careers.

3. MCA graduates who will exhibit effective work ethics and be able to adapt to the challenges of a dynamic job environment.

**(b). Relevance of the programme with HEI's mission and goals :** Suresh Gyan Vihar University is the logical outcome of a great dream, and meticulous research and development. The foundation stone of Gyan Vihar was laid down on 19th February 1994 by the great academician and thinker Acharya Shri Purushottam Uttam. The University offers diversified programs in various disciplines. Keeping in view our educational background, Master of Computer Application (M.C.A.) to be offered through ODL mode and in Online mode is very pertinent to the HEI's mission and goals as it endeavors to endow with excellence to the aspiring students who are destitute of higher education because of the inadequate quantity of seats in the conservative approach of education in various Universities.

**(c). Nature and target group of learners:**

The curriculum of M.C.A. is designed in such a way that it helps the students to become not only more employable but also encourage them to become better citizens for the society.. Primarily the target group of learners will be :

- those deprived of admission in the regular mode due to limited intake capacity.
- those employed in various organizations who desire to pursue higher education as a passion or as a means for movement up the promotional ladder.
- drop outs primarily due to social , financial and economic compulsions as well as demographic reasons.
- population of any age and those living in remote areas where higher education institutes are not easily accessible.

Students would be able to enter any one of following roles in their career:

- Software and Web Developments Executives / Managers
- System Analyst
- Entrepreneur

- Further study for Higher education like Ph.d

**(d). Appropriateness of the program to be conducted in the ODL mode along with Online Mode for acquiring specific skills and competence-**

M.C.A in ODL mode and in Online Mode shall help the Students in the following ways :

- To increase reach and penetration of education, particularly in the midst of the rural population.
- Aptitude construction amongst the rural habitants.
- To facilitate access of myriad possibilities interdisciplinary perceptions offer to prospective Students.
- To comprehend that fundamental approach should be oriented towards knowledge acquisition, dissemination and production.
- To apply skills and knowledge in a placement knowledge.
- To make prospective Students good citizens of the country.

**(e). Instructional Delivery Mechanism:**

- Curriculum Design:** The curriculum is designed by a committee comprising experts from the parent department of the SGVU and Industry experts, keeping in view the needs of the diverse groups of learners. The same is developed as per the four quadrant approach of UGC.
- Detailed Syllabus:** As per the Under graduate course offered in the regular mode by Suresh Gyan Vihar University.
- Duration of the Program:** MCA - Minimum 2 years. Nevertheless, the students would have to complete the program as per UGC guidelines.

**iv. Student Support Service:**

(a) Students can avail all the information through our website Website: [www.sgvu.edu.in](http://www.sgvu.edu.in)

(b) Learning Management System (L.M.S.): **SGVU** has a dedicated dynamic LMS for students where they can get all access to its study material, programmes, up-coming events, examination results etc.

The learning resources for each course / subject is as per the four-quadrant approach of the UGC norms.

Quadrant	Quadrant Type	Learning Resource Type	Type	Delivery Format
1	E – Tutorial	Tutorials: Recorded Videos	Chapter Level	MP4 (Audio Video Content)
		Animation / Gamified Module	Chapter Level	SCORM File
		Simulated Case Study	Subject Level	SCORM File
2	e-Content	E-book	Chapter Level	PDF/ Notes
		Study Guide	Chapter Level	PPT / Bullet Notes
		Web Resources	Chapter Level	Articles and Reference Videos from Swayam, NPTEL and other platforms
3	Discussion Forum	Discussion Forum	Chapter Level	Real Time Technology
		Synchronous Interactive Sessions – Live Sessions	Chapter Level	Real Time Technology
4	Assessment	FAQ	Chapter Level	Excel Based System Upload for Objective Assessment and Document Upload for Subjective questions in assessment in form of Assignments
		MisConception	Chapter Level	
		Practice Assignment	Chapter Level	

The students would get the following learning resources for every course /subject:

- Self-Learning Material
- E-Books
- Study Guide
- Practice Test through LMS – Gamified Module
- Audio / Video Component in Learning Management System - Tutorials
- Reference Material – Web Resources for research purpose

- Simulated Case Study
- FAQ and Misconceptions for each course/subject
- Self-Assessment Question (Essay Questions)
- Discussion Forums through LMS
- Live Interactive Synchronous Sessions would be conducted through the Learning Management System
- Assignments (MCQ based and Essay type submitted through Assignment Response Sheet with Plagiarism check provision)
- Virtual Lab environment provided for students in LMS
- Project Guidelines
- Our State of art library, “The House of Wisdom” and additional obtainable amenities for education in distance mode shall be made available to distance learners also. Further, in order to successfully execute the programme, the provision for online access to various web based resources have been provided for research purpose for student in Online Mode.

**Student Support:**

Students would have the access to connect with university team for support services in case of any queries during the learning process. A ticketing system integrated on the university website would help the learner to connect with the university team for support services. A help desk for students would help the students to call / email and connect with our support team or communicate through ticketing system.

v. **Staff :** Apart from other staff members for the department One Program Co-ordinator, Course Co-ordinator for each course and one mentor for every 250 students would be deployed for the said program.

vi. **Media :** Print, Audio/Video, Online & Student Support System.

vii. **Program Structure and Credits Mapping:**

Semester	Course Code	Paper	Credit	Contact Hours in ODL	Marks		
					Internal	External	Total
1	DCA – 501	Database Management System	4	12	30	70	100
1	DCA – 502	Object Oriented Prog With C++	4	12	30	70	100
1	DCA – 503	Software Engineering	4	12	30	70	100

1	DCA – 504	Operating System Concepts	4	12	30	70	100
1	DCA – 505	Data Communication & Computer Network	4	12	30	70	100
1	DCA – 506	Lab - Object Oriented Prog With C++	1	30	30	70	100
2	DCA – 507	Enterprise Resource Planning	4	12	30	70	100
2	DCA – 508	Advance Database Management System	4	12	30	70	100
2	DCA – 509	M.I.S.& Business Intelligence	4	12	30	70	100
2	DCA – 510	Design & Analysis of Algorithm	4	12	30	70	100
2	DCA – 511	Data Structure Using C++	4	12	30	70	100
2	DCA – 512	Lab - Data Structure Using C++	1	30	30	70	100
3	DCA – 513	Elective 1	4	12	30	70	100
3	DCA – 514	Elective 2	4	12	30	70	100
3	DCA – 515	Elective 3	4	12	30	70	100
3	DCA – 516	Elective 4	4	12	30	70	100
3	DCA – 517	Elective 5	4	12	30	70	100
3	DCA – 518	Elective 6	4	12	30	70	100
3	DCA – 519	Elective 7	1	30	30	70	100
4	DCA – 520	Elective 8	4	12	30	70	100
4	DCA – 521	Elective 9	4	12	30	70	100
4	DCA – 522	Elective 10	4	12	30	70	100
4	DCA – 523	Elective 11	4	12	30	70	100
4	DCA – 524	Elective 12	4	12	30	70	100
4	DCA – 525	Elective 13	1	30	30	70	100
4	DCA - 526	Project	6	24	30	70	100

- Students to select any one elective bucket as provided below:

**Electives:**

Electives	Data Science	Full Stack Development & DevOps	Data Analytics	Cloud Computing
Elective 1	Essentials of Data Science	Introduction to Linux	Big Data Analytics	Linux Administration
Elective 2	Machine Learning	HTML, CSS and Javascript	Data Analytics Using	Introduction to

	concepts using Python		Python	Cloud Computing
Elective 3	Lab - Big Data Hadoop	User Interface, Experience, Design	SQL for Data Analytics	Introduction to Amazon Web Services
Elective 4	Business Application of Machine Learning	DevOps -1 (GIT, Jenkins, Docker)	Web Analytics	Introduction to Microsoft Azure services
Elective 5	Statistics and Python in Machine Learning	Software Architecture	Digital Media Analytics	Cloud Programming
Elective 6	Time Series Analysis and Forecasting Techniques	Prototyping	IOT and Data Analytics	Cloud Virtualization
Elective 7	Lab - Big Data Hadoop	Lab - Prototyping	Lab - Big Data Analytics	Lab - Cloud Programming
Elective 8	Deep Learning and NLP	Web Services-Rest API, ReactJS and NodeJS Development	Data Analytics using R	Introduction to Google Cloud services
Elective 9	IOT Cloud and Watson Analytics	DevOps-2 (Ansible, Puppet, Nagios)	Data Analytics for Decision Making	Introduction to Google Cloud services
Elective 10	Web, Social Analytics and Visualization	Python Programming	Data Analytics for Business	Introduction to IBM Cloud Services
Elective 11	Spark on Azure HD Insight	Version Control System	Google Analytics	Cloud Computing for Businesses
Elective 12	Basic R Programming	Software Deployment	Marketing Analytics	Cloud Networking
Elective 13	Lab - R Programming	Lab - Python Programming	Lab - Data Analytics	Lab - Cloud Security

\* One Credit of Lab Course would have 30 hours of lab based practical. Similarly project work would need 30 hours of project based activities for project preparation.

Course delivery in case of Online Mode would be as per UGC norms.

**(f). Procedure for Admissions, Curriculum transaction and Evaluation-**

The minimum eligibility for M.C.A. program of Duration 2 Year is graduation who has passed or appearing for final year degree examination in any discipline (Science, Commerce, Arts, Engineering from any approved University) is eligible to apply. Candidates must have

mathematics as a subject in their 10+2 course or any one year of graduation. B.C.A. qualified candidates can also pursue M.C.A.

Students would need to complete the aadhar authentication process through web portal and submit the web application form along with all documents online; for verification and admission purpose.

Students would pay the fees through Online Payment Gateway through the web portal.

Post verification of documents the student would be provided with enrolment numbers. Admission Cycle and timelines as per UGC norms.

The curriculum is delivered through the Printed Self Learning Materials (SLMs) supported by various learning resources including audio-video aids through learning management system (as per four quadrant approach) along with the online contact hours with discussion forums and synchronous live interactive sessions conducted through LMS as per the UGC norms for course delivery.

The evaluation and assessment of the admitted students to this program would be conducted based on their assignments and performance in the end semester examination.

Weightage for Continuous Evaluation – 30%

- Two assignments as part of continuous evaluation are required to be submitted by students. This is Aadhar based Authentication process wherein students need to validate before appearing for continuous evaluation. The subjective continuous assessments would have a plagiarism tool in LMS through which students need to submit their response sheet and only content with 10% similarity would be accepted for evaluation.

Weightage for Semester End Examination – 70%

- Semester end examinations are mix of subjective type and objective type of questions which students need to attempt.



Provision for Online Remote Proctored Assessments is done for Students opting for Online Programs along with all security features which includes image capturing of students during exams, navigation control for exam screen during exam apart from online proctor monitoring. Students from Rajasthan (under ODL mode) would give their exams from university campus.

Projects: Project in the last Semester. Students shall be required to undergo one software development project by choosing a real-life problem from the Industry. The report will have an evaluation at the end of the semester.

Passing per subject:

For PG Program average of (Continuous and Semester End) would be 46% per subject

Grading system would be as per ongoing University practice as per the UGC norms.

**Course Fee for 2 Year MCA in ODL mode :**

Fees in Lump Sum – Rs. 1,49,500/-

Fees in Instalment – Rs. 1,75,056/-

**Course Fees in Online Mode:**

Fees in Instalment – Rs. 1,75,056/-

**(g). Requirement of laboratory support and Library Resources :** The Students have access to 4 well – equipped Computer Labs, each Lab housing top-of-the-line Computer systems.

The Central Library, christened as “House of Wisdom” has over 1.5 Lac. square feet plinth area, stretched in four floors. It has escalator and elevator facilities for Library users. The Library has over 4 Million Print and E-Resources with subscription of DELNET, N-LIST and World eBook Library.

It’s the only Library with an Android Application of its own available on Google Play Store by the name “House of Wisdom”. It is completely digitized with KOHA. Approximately 500 users visit the Library per day

(h). **Cost Estimate of the Program & the Provision:** The Estimate of Cost & Budget could be as follows (all figures on Annual basis):

- i. Salaries : Rs. 30,00,000/- (Approx)
- ii. Travel : Rs. 30,000/- (Approx)
- iii. Seminars : Rs. 40,000/- (Approx)
- iv. SLM Preparation, Printing, Distribution : Rs. 3,00,000/- (Approx)
- v. Library : 1,25,000/- (Approx)
- vi. Courier/Transportation : Rs. 50,000/- (Approx)
- vii. Infrastructure : Rs. 1,50,000/- (Approx)
- viii. Computer Labs & Leased Line : Rs. 1,00,000/- (Approx)

(i). **Quality Assurance Mechanism and Expected Program outcome:** The university has its established IQAC, which is responsible for assessing and monitoring the quality of the all the courses through monitoring, mentoring. The Quality Assurance Cell includes the Deans of the different Faculty, Nominated Heads of the concerned departments. Student feedback mechanism through our support system and interaction with students would enable us to take corrective measures during the learning process. The program should equip the learners to effectively handle the corporate dynamism and professionally grow ahead in their career in the technology space.