

PROGRAMME PROJECT REPORT (PPR)

PROGRAMME- MASTER OF SCIENCE IN COMPUTER SCIENCE [M.SC. (CS)]

A) Programme's Mission & Objectives-

Mission-

Dr. C. V. Raman University's Institute of Open & Distance Education focuses on providing quality education through distance learning, matching with the parameter of regular programme and producing capable leaders in the field of information technology, who are prepared with the necessary skills to make high-quality applications and able to work with in multinational IT companies.

Mission of this programme is to produce high quality, skilled IT professionals to fulfill the need of IT industry and improve the knowledge of computer science for academic and research purpose, in Chhattisgarh state, in our country as well as for abroad. This programme is to distribute knowledge of computers and communication technology along with its applications across the learners, so they can serve as IT technical's, computer professionals and software developers to provide quality services in multinational organizations with reliability in the field of computer science and information technology.

Objectives-

Our objective is to provide distance learning facilities for learners through learning center and give positive attitude and strength to the young talents. We provide skill based computer program for learners of rural and tribal areas to enhance their skills to establish themselves in society.

- To provide complete knowledge of computers and its application to the learner.
- To develop study skills among the learners so as to help them to cope with courses available in this programme.
- To develop opportunities to learner through provide proper training and lab programs so they can able to work everywhere with computers.
- To provide necessary practical exposure of self study methods so as equip learners with knowledge acquire abilities.
- To develop positive attitude into the learners and motivate them by exploring new ideas and knowledge and update their experience with new programs with the help of new domain in the fields of computer science.
- To provide well acquired knowledge to the learners of tribal areas and their development in the fields of computer science, IT and trends.
- To meet the demands of multinational organization.
- To offer degree and certification to the learners this will open the furthest future opportunities for them.

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B) Relevance of the Program with University's Mission and Goals-

Dr. C. V. Raman University aims to provide high standard of liberal education to its students, catering to their intellectual growth, personality development & nurtures them to be responsible adults committed to high ethical standards through various courses offered from different fields like commerce & management, science, arts, etc in regular mode as well as Open & Distance Learning mode.

This programme specially offers for rural and tribal areas learners as per the university mission. It provides easy opportunities to the learners for getting advance ICT based technological studies for enhancement of higher education. It fulfills the university mission to promote research based activities in the emerging areas of technology convergence and motivate learners in research areas. This programme is designed for the graduate's computer science, computer application and Information Technology learners who enhance their knowledge in the field of computer science.

C) Nature of Prospective Target Group of Learners-

This program is specifically designed to cater the need of learner's that is not able to study through regular mode. Working Professional, Housewives, Students from rural area, Students who do not wish to prefer regular courses due to various reasons & Students who cannot afford costly regular courses are target group learners. The targeted learner's group of the program is urban, rural and tribal area who passed their Graduation in computer science and want to learn about computer technology and its uses in our daily life as well as in the industries. This programme targeted those learners who opt computer science degree in higher studies and become software professionals or researchers in private as well as government sector.

D) Appropriateness of Programme to be conducted in Open and Distance Learning Mode to Acquire Specific Skills and Competence-

M.Sc. (C.S.) programme always very high in demand as new innovations are take place all the time in the field of computer science. This programme provides specialization in the field of research like data mining, soft computing, software engineering; advance network etc. Learners are flexible to achieve degree of this programme through distance learning mode. There are some following qualities of this programme-

- It provides skill based software professional in the field of IT.
- This programme is used new tools and technology due to new innovations and growing demand of computer education.
- There is a wide range of scope and opportunities for learners like industries and research organizations from private and government sectors. Several organizations like Wipro, TCS, Tech. Mahindra, Reliance, Infosys and etc. recruits for software development and testing.

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- It provides practical and theoretical knowledge to prepare them for higher studies like M. Phil., Ph. D. and post doc.

E) Instructional Design-

Curriculum Design, Program Structure & Duration of Program-

M.Sc. (C.S.) is two year post graduation programme in computer science. The eligibility of course is Bachelor in computer applications/B. Sc. (CS/IT)/ B.Sc. (Mathematics up to 10+2/ B.Sc. with additional course mathematics in M.Sc. (C.S.)). The minimum duration of this programme is two years (4 semester), although student may complete the programme gradually within a maximum period of 5 years.

Credit Points-

All courses offered by us carry a certain value in terms of credit-points. A credit point is a way of expressing the learning hours required to study a certain unit, in a book or a course. Generally, one credit point is considered equivalent to about 30 learning hours. These learning hours could mean the time you spend in face to face counseling, self study, practical, assignment, project, participating in discussions on the topic, listening to audios, viewing especially prepared videos, etc. That means for 2 credit points student has to undertake 60 hours of learning per subject & for 3 credit points student has to undertake 90 hours of learning. M.Sc. (C.S.) is two years program in which it has four semesters. It has total 64 credits where odd semesters have 14 credits and even semesters have 18 credits individually. Following is the program structure of M.Sc. (CS) programme.

Proposed Scheme of Examination

Course Code	Name of the Course	Credit	Total Marks	Theory		Practical Marks /Project Marks		Assignments	
				Max	Min	Max	Min	Max	Min
FIRST SEMESTER									
1MSCCS 1	Fundamentals of Computers & Information Technology	2	100	70	25	-	-	30	11
1MSCCS 2	Operating System	3	150	70	25	50	18	30	11
1MSCCS 3	Programming Methodology & Programming in C	3	150	70	25	50	18	30	11
1MSCCS 4	Computer Networks &	3	100	70	25	-	-	30	11

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	Internet								
1MSCCS 5	Computer Architecture	3	100	70	25	-	-	30	11
Total aggregate required to pass		14	600	350	14 0	100	40	150	60
SECOND SEMESTER									
2MSCCS 1	Objects Oriented Programming with C++	3	150	70	25	50	18	30	11
2MSCCS 2	DBMS & SQL (With MS Access / MS SQL Server)	3	150	70	25	50	18	30	11
2MSCCS 3	Discrete Mathematics	3	100	70	25	-	-	30	11
2MSCCS 4	Programming with VB.Net	3	150	70	25	50	18	30	11
2MSCCS 5	DATA STRUCTURE WITH C++	3	150	70	25	50	18	30	11
2MSCCS 6	Minor Project	3	100	70	-	-	25	30	11
Total aggregate required to pass		18	800	420	16 8	200	100	180	72
THIRD SEMESTER									
3MSCCS 1	Compiler Design	2	100	70	25	-	-	30	11
3MSCCS 2	Java Programming	3	150	70	25	50	18	30	11
3MSCCS 3	Software Engineering	3	100	70	25	-	-	30	11
3MSCCS 4	Multimedia Tools And Application	3	150	70	25	50	18	30	11
3MSCCS 5	Artificial Intelligence And Expert System	3	100	70	25	-	-	30	11
Total aggregate required to pass		14	600/60 0	350	14 0	100/10 0	36/40	150	60
FOURTH SEMESTER									
4MSCCS 1	Computer Graphics	3	100	70	25	-	-	30	11
4MSCCS 2	Data warehousing & Mining	3	100	70	25	-	-	30	11
4MSCCS 3	Advanced Java Programming	3	150	70	25	50	18	30	11

4MSCCS 4	RESEARCH METHODOLOGY	3	100	70	25	-	-	30	11
4MSCCS 5	Major Project	6	200	-	-	150	54	50	19
Total aggregate required to pass		18	650/70 0	280	11 2	200/25 0	80/10 0	170	68

Evaluation Scheme -

1. 36% in each theory, practical, project, dissertation & internal assessment but the total aggregate for passing is 40%.
2. Total project work carrying 300 (Major Project + Minor Project) marks has to be done under the guidance of a Project supervisor. Learners have to prepare project report under the guidance of project guide allotted by the university. Viva-voce will be conducted in the presence of an external examiner.

Duration -

This programme has duration of two year although student may complete the programme gradually within a maximum period of 5 year.

Medium -

English/Hindi shall be the medium of instruction and the examination may be written in Hindi or English.

Requirement of Faculty and Support Staff -

For M.Sc. (CS) programme we have two faculty members (full time-dedicated for ODL courses) has the level of Associate and Assistant Professor. Supporting staffs will be deputed at the learner support centre as per need of the course curriculum.

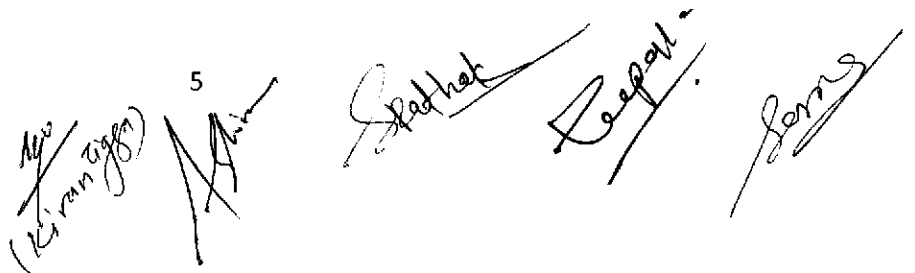
Instructional Delivery Mechanism & Usage of Media for Distance Learning-

The methodology of instruction in the distance learning mode in the university is different from that of the conventional regular programs. The system adopted for this more learner oriented and the learner is an active participant in the pedagogical process. Most of the instructions are imparted through distance education methodology and face to face mode as per requirement.

The programme delivery methodology used in the distance learning mode follows a multimedia approach for instructions, which comprises-

- **Self Instructional Written Material-** The printed study material (written in self instructional style) for both theory and practical components of the programs is supplied to the learners in batches for every course.

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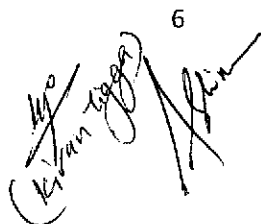
- **Audio-Visual Material Aids-** The learning package contains audio and video CDs which have been produced/adopted by the University for Better Clarification and enhancement for understanding of the course material given to the learners. A video programme is normally of 25-30 minutes duration. The video cassettes are screened at the learner support centre during specific sessions which are duly notified for the benefit of the learners.
- **Counseling Sessions-** Normally counseling sessions are held as per schedule drawn by the IODE DR. C. V. RAMAN UNIVERSITY. These are mostly held outside the regular working hours of the learner support centre.
- **Teleconferences-** Live teleconferencing sessions are conducted via Internet/ satellite through interactive Video Conferencing facility (available at some places) from the University studios, the schedule of which is made available at the learner support centre.
- **Industrial Training/Practical/Project work-** Some programmes have industrial training/practical/ project component also. Practical are held at designated institutions for which schedule is provided by the learner support centre. Attendance at practical is compulsory. For Project Work, comprehensive project guide, in the form of booklet, is provided to the student along with the study material.
- The printed study materials will be dispatched periodically to the enrolled students for each paper of study. These materials will be as guide for the students for effective learning. The assignment for internal assessment shall also be dispatched along with the study material. Online modules are also available for some courses. These are in progress and as and when available, these will be available on the website of the students for registered candidates.
- The counseling sessions will be of 30 days duration for a course in a year. The actual schedule and place of contact program shall be announced and communicated to students in – time.

Nature of Contact Classes –

During the contact sessions, the counselors are supposed to guide/discuss with the learner's, based on the course material. The learner's can solve their difficulties by discussing with their colleagues as well as with the counselor during contact sessions. Apart from this contact sessions, learners will have to attend practical as well as various training schedule conducted by the respective learner support centre.

Learner Support Services -

Dr. C. V. Raman University Institute of Open And Distance Education has a fully fledged Learner Support Division (LSD) to provide guidance and help to its students. Necessary information is passed on to the registered student through modern means of communication as SMS, website and e-mail. For the convenience of learner, computer,

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photocopy machine, internet, WIFI facilities have also been provided. The learner support division has a web centre and SMS No. 56161 where learner can message their problems and seek answer. Bulk SMS are sent to learners regarding their registration detail, dispatch of study, material time table for contact class, submission of examination forms, examination schedule etc. from time to time. Important information and necessary material are also sent through e-mail and through regular post. University's website www.cvr.u.ac.in also provides information about the various programmes being offered by the institute of open and distance education, the syllabus, assignment, programme guide.

Counseling & Study Structure -

Entire M.Sc. (CS) course has been divided into counseling & study structure in terms of hour. Total study hours required for subject of 2 credits are 60 hours & for subject of 3 credits are 90 hours per semester. Study structure of M.Sc. (CS) programme is as below-

STUDY STRUCTURE

Course Code	Name of the Course	Credit	TOTAL STUDY HOURS	Counseling and Study Structure (hours)			
				FACE TO FACE	SELF STUDY	P[R]ACTICAL	ASSIGNMENT
FIRST SEMESTER							
1MSCCS1	Fundamentals of Computers & Information Technology	2	60	8	34	-	18-
1MSCCS2	Operating System	3	90	12	33	18	27
1MSCCS3	Programming Methodology & Programming in C	3	90	12	33	18	27
1MSCCS4	Computer Networks & Internet	3	90	12	51	-	27
1MSCCS5	Computer Architecture	3	90	12	51	-	27
SECOND SEMESTER							
2MSCCS1	Objects Oriented Programming with C++	3	90	12	33	18	27
2MSCCS2	DBMS & SQL (With MS Access / MS	3	90	12	33	18	27

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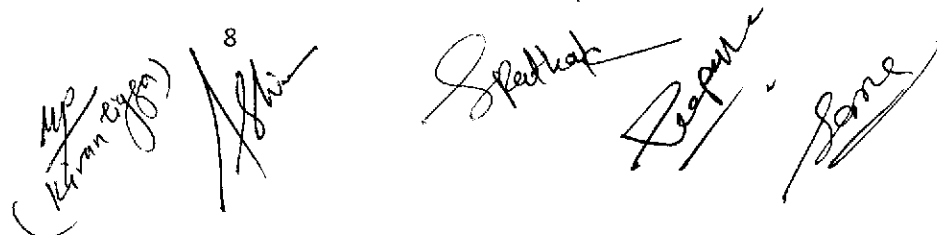
	SQL Server)						
2MSCCS3	Discrete Mathematics	3	90	12	51		27
2MSCCS4	Programming with VB.Net	3	90	12	33	18	27
2MSCCS5	DATA STRUCTURE WITH C++	3	90	12	33	18	27
2MSCCS6	Minor Project	3	90	12	-	-78	
THIRD SEMESTER							
3MSCCS1	Compiler Design	2	60	8	34	-	-18
3MSCCS2	Java Programming	3	90	12	33	18	27
3MSCCS3	Software Engineering	3	90	12	51	-	27
3MSCCS4	Multimedia Tools And Application	3	90	12	33	18	27
3MSCCS5	Artificial Intelligence And Expert System	3	90	12	51	-	27
FOURTH SEMESTER							
4MSCCS1	Computer Graphics	3	90	12	51		27
4MSCCS2	Data warehousing & Mining	3	90	12	51		27
4MSCCS3	Advanced Java Programming	3	90	12	33	18	27
4MSCCS4	RESEARCH METHODOLOGY	3	90	12	51		27
4MSCCS5	Major Project	6	180	-	-	-	180
Total aggregate required to pass		18	540				

F) Procedure for Admissions, Curriculum Transaction & Evaluation-

Admission Policy for M.Sc. (CS) with minimum eligibility & fee structure-

Admission to M.Sc. (CS) programme shall be through merit and/or, entrance test as per rules of the university. The minimum eligibility for admission into this programme for the candidates is having passed graduation in computer science from recognized university. All the procedure of admission for the programme will be done through online mode. Application will be invited by the university with it stipulated time period where students have to apply for the same with all their testimonials and required fees.

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Fees Structure-

Sl.	Course	Duration	Fee Charged for Complete Programme
1.	M.Sc. (CS)	2 Years	52800

Financial Assistance -

The University also offers e-scholarship to SC/ST students as per norms of the Govt. of Chhattisgarh authorized schemes.

Evaluation System -

The system of evaluation in open and distance learning system has a multi-tier system of evaluation.

1. Self-assessment exercise within each unit of study.
2. Continuous evaluation mainly through assignments which are tutor-marked practical assignments and seminar/workshop/extended.
3. The term-end examinations.
4. Project work.

The evaluation of learners depends upon various instructional activities undertaken by them. A learner has to write assignment responses compulsorily before taking term-end examination from time to time to complete an academic programme. A learner has to submit TMA responses to the learner support centre established by IODE Dr. C. V. Raman University. A learner should keep duplicate copies of assignments responses of TMA that may be required to be produced at Student Evaluation Division on demand. Term-end examination will be conducted at various examination centre approved by institute of open and distance education Dr. C. V. Raman university spread all over the Chhattisgarh. The weightage for Term End Examination will be 70% and weightage for Internal Assessment will be 30 % for this programme.

(A) Internal Assessment (Continuous Assessment i.e. Home Assignment)- 30% weightage .

(B) Term End Examination - 70% weightage

Term End Examination	70
Internal Assessment	30

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Total Marks	100
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The University conducts Term-end Examination in semester system and held in the month of Nov/Dec and May/June every year. Students will be permitted to appear in term-end examination subject to the conditions that-

- 1) Registration for the courses, in which they appeared is valid,
- 2) Minimum Time to pursue these courses is elapsed.
- 3) Submission of required number of assignment in respective courses by the due date.

(C) Project Work -

Project work carrying 300 marks has to be done under the guidance of a Project supervisor. Learners have to prepare project report under the guidance of project guide allotted by the university. Viva-voce will be conducted in the presence of an external examiner.

G) Requirement of the laboratory support and library resource -

Laboratory is required as a part of this curriculum with well equipped computer systems with high speed of connectivity to provide practical approach to the learner's with the help of new applications and technological trends of IT. Resources in the form of reference books and journal will be made available to the learners in the university central library as well as in departmental reference library, which they can access for gaining knowledge.

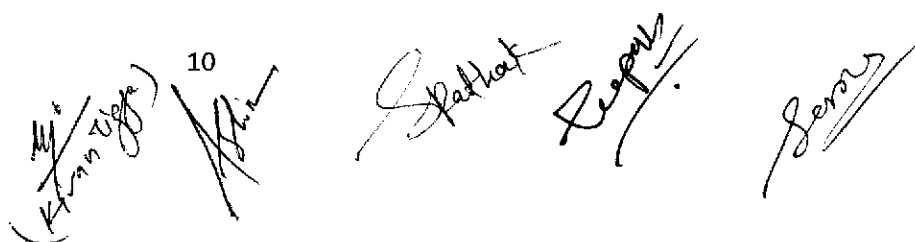
H) Cost estimates of the programme and the provision -

This programme was already designed and developed in the year 2009-10. In this process of development considering today's scenario, the current cost estimate which includes developmental cost, delivery cost & maintenance cost for this programme comes to amount of Rs.914200 and provision is made of Rs. 930000.

I) Quality assurance mechanism and expected programme outcomes -

The centre for internal quality assurance and department of information technology of university is accountable for regular monitoring of programme by continuous updating of the curriculum and syllabus. The feedback all stakeholders in term of relevance and appropriateness in catering to the need of society, economy and environment are also considered in these key aspects. According to the feedback provided stakeholders including learners on continuous basis, a suitable action plan for M.Sc. (CS) programme will be developed and duly incorporated into the teaching and delivery system.

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The bottom of the page features several handwritten signatures and initials in black ink. From left to right, there is a signature that appears to be 'K. Anand', followed by a signature that looks like 'A. Anand', then a signature that looks like 'S. Patil', then a signature that looks like 'R. Patil', and finally a signature that looks like 'S. Patil'. The number '10' is written in the center above the signatures.

Outcome -

“At the end of the programme expected outcomes”

- To acquired a general knowledge, principles and mechanisms of Computer.
- To prepare the learners for employability.
- To acquired a basic knowledge of Subjects.
- To acquire techniques relevant of subjects taught.
- To provide the practical expose and knowledge acquiring skill.
- To crate and develop the presentation skill in seminar/conference.
- To develop skill to E-library software and internet resources independently.

M. S. Singh
(M. S. Singh)

M. S. Singh
HOD
Institute of I.T.
Dr. C.V. Raman University
Aargi Road Kota - Bilaspur

S. K. Singh

Rajendra

Soni

Arvind Tiwari

(Arvind Tiwari)

G. S. Singh

(Gaurav Singh)

D. R. P. Singh

(D. R. P. Singh)