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SOCIS

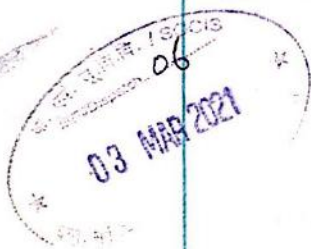
IGNOU/SOCIS/52ndSB/2021  
March 2, 2021

- Sub: 1. Credit Transfer Policy of Master of Computer Applications (MCA) Programme to MCA (New) Programme**
- 2. MCA (New) Programme Delivery and Evaluation related matters**
- Software Requirements
  - Theory and Practical Sessions
  - Compulsory practical attendance
  - Evaluation Scheme
  - Academic Counsellor's Mapping

Please find attached extract of the minutes of 52nd School Board of SOCIS held on 18th February, 2021(virtual). The above mentioned items approved by the School Board vide item No. 52.7 and 52.9 are circulated for necessary action by respective division(s) as mentioned below:

Register (SRD) & Registrar (SED)	To make the Credit Transfer Form based on the Credit Transfer Policy for MCA Programme to MCA (NEW) Programme as approved by the School Board vide Item No. 52.7.
Registrar (SED)	To note and prepare the appropriate software of the Evaluation Scheme and make the Grade Card as approved by the School Board vide item no. 52.9.4 and finalize in consultation with SOCIS.
Director (RSD)	To take the action and communicate to all Regional Centers (IGNOU) as approved by the School Board vide Item No.52.7, 52.9.1, 52.9.2, 52.9.3, 52.9.4 and 52.9.5.

RSD/6075  
3/3/21



*Akshay Kumar*  
(Akshay Kumar)  
Associate Professor &  
Programme Coordinator (MCA)

Director (SOCIS)

*WJW*  
2/3/21  
प्रो. वी. वी. सुब्रह्मण्यम  
Prof. V. V. Subrahmanyam  
निदेशक (क. एवं सू. वि. वि.) / Director (SOCIS)

To:

- Registrar (SRD)
- Registrar (SED)
- Director (RSD)

Cc to: Dr. Hema Pant, Dr. K. D. Prasad and Dr. Bhanu Pratap (RSD)

VCO : For kind information please

PVC(RPD)

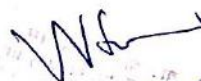
*DO (KOP) Copy may be sent to all R.C.s - (A)*  
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**Minutes  
of the  
52<sup>nd</sup> Meeting  
of  
School Board  
of  
SOCIS  
held on  
Feb 18, 2021**



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES  
INDIRA GANDHI NATIONAL OPEN UNIVERSITY  
MAIDAN GARHI, NEW DELHI**

  
प्रो. वी. वी. सुब्रह्मण्यम  
Prof. V. V. Subrahmanyam  
निदेशक (क. एवं सू. वि. वि.) / Director (SOCIS)



## IGNOU SOCIS

### Minutes of the 52<sup>nd</sup> Meeting of the School Board of School of Computer & Information Sciences

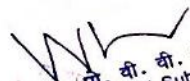
The 52<sup>nd</sup> Meeting of the School Board of SOCIS was held on Feb 18, 2021 at 11.00 a.m. through online mode on Google Meet.

The following members were present in the virtual meeting:

- |   |   |                 |
|---|---|-----------------|
| 1. Prof. V.V. Subrahmanyam, Director, SOCIS               | - | Chairperson     |
| 2. Prof. T.V. Vijay Kumar, JNU, New Delhi                 | - | Member          |
| 3. Prof. Ela Kumar, IGDTUW, New Delhi                     | - | Member          |
| 4. Prof. Manoj Kumar, NSUT East Campus, New Delhi         | - | Member          |
| 5. Mr. Milind Mahajani, Impressico Business Solutions     | - | Member          |
| 6. Prof. Nawal Kishore, SOMS, IGNOU                       | - | Member          |
| 7. Prof. Parmod Kumar, SOH, IGNOU                         | - | Member          |
| 8. Dr. Mita Sinhamahapatra, SOA, IGNOU                    | - | Member          |
| 9. Prof. P. V. Suresh, SOCIS                              | - | Member          |
| 10. Dr. Shashi Bhushan Sharma, Associate Professor, SOCIS | - | Member          |
| 11. Sh. Akshay Kumar, Associate Professor, SOCIS          | - | Member          |
| 12. Dr. Sudhansh Sharma, Assistant Professor, SOCIS       | - | Member          |
| 13. Mr. M.P. Mishra, Associate Professor, SOCIS           | - | Special Invitee |

Prof. S.K. Gupta and Prof. S.R. Jha could not attend the meeting.

At the outset, Chairperson welcomed and thanked all the members of the Board for sparing their valuable time for making it convenient to attend the meeting. Following this, he briefed about various developments that took place since last meeting of the School Board. He mentioned that in the first week of January-2021 IGNOU is accredited with A++ grade by NAAC and IGNOU has received 5 – star rating from MoE's Innovation Cell. Also apprised that CIT (online) programme and CMAD programme were launched from July-2020 admission cycle and also appreciate the efforts made by all the Faculty, SOCIS and the external experts who had participated in the recording of 120 videos for three theory courses of CIT. Later, he briefed about online support provided by the faculty of SOCIS School of Computer and Information Sciences

  
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during the pandemic using social media tools, Gyandarshan, Gyanvani etc.. Further, he informed the members that on account of 35<sup>th</sup> Foundation Day of IGNOU, SOCIS has received Best Certificate Programme award for CIT programme and Sh. M. P. Mishra, Associate Professor has received Best Research Paper award in the Science and Technology category. After the due approvals from the statutory bodies SOCIS has launched 2 years MCA (New) with revised eligibility criteria and PGDCA( New) programmes from the Jan-2021 admission cycle onwards. Prof. V.V. Subrahmanyam was nominated as the Channel Coordinator of Channel-19 (Professional and Vocational Education) of SWAYAMPRAKASH-DTH. Following this, the agenda was taken up.

**Item No. 52.1 To confirm the minutes of the 51<sup>st</sup> Meeting of the School Board of School of Computer & Information Sciences held on July 13, 2020.**

**Discussion** The minutes of the 51<sup>st</sup> Meeting of the School Board of SOCIS held on July 13, 2020 were circulated among members/participants for their comments/suggestions. No comment/suggestion was received. The minutes were placed before the Board for confirmation.

**Decision** The School Board confirmed the Minutes (Annexure - 52.1.1) of the 51<sup>st</sup> Meeting of the School Board of School of Computer & Information Sciences held on July 13, 2020.

**Item No. 52.2 Action Taken Report on the Minutes of the 51<sup>st</sup> Meeting of the School Board of SOCIS.**

**Discussion** Action Taken Report was submitted for consideration of the Board.

Item No.	Details	Action Taken
Item No. 51.6	To consider and recommend change in duration of MCA Programme from 3 years to 2 years w.e.f 2020-21 as per AICTE Notification dated: 3rd July, 2020 for the MCA programme to be offered from July-2020 session onwards.	Approved in 52 <sup>nd</sup> Academic Council Standing Committee and also in 74 <sup>th</sup> Academic Council. It is also reflected in the MCA(New) Programme Notification
Item No. 51.7 51.7.1 51.7.2	To consider and approve the matters relating to MCA revision:  To consider and recommend the Programme Revision Form (PRF) of Master of Computer Applications (MCA)..  To consider and recommend the eligibility criteria and modalities of MCA Programme.	Approved in 52 <sup>nd</sup> Academic Council Standing Committee and also in 74 <sup>th</sup> Academic Council.  MCA(New) Programme Notification received and the admissions are in progress for Jan-2021 session
Item No. 51.8	To consider and approve the matters relating to Post Graduate Diploma in Computer	Approved in 74 <sup>th</sup> Academic Council

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51.8.1	Applications (PGDCA) revision	Standing Committee and also in Academic Council.
51.8.2	To consider and recommend the Programme Revision Form (PRF) of Post Graduate Diploma in Computer Applications (PGDCA)	MCA(New) Programme Notification received and the admissions are in progress for Jan-2021 session
Item No. 51.11	To consider and recommend the eligibility criteria and modalities of PGDCA Programme / Additional Bridge courses.	
	To re-consider and recommend the Programme Development Form (PDF) and the Programme Project Report (PPR) of Diploma in Mobile Application Development (DMAD).	PDF and PPR of Modular DMAD were approved by Academic Council in its 74th meeting. Programme Launch Form of CMAD was approved by the Competent Authority and the decision is ratified by APC in its 60th meeting.

**Decision**

The School Board noted the action taken report.

**Item No. 52.3**

**To report the Minutes of the Meeting conducted via email on Sep 02, 2020 relating to the Feedback Analysis Reports for NAAC Accreditation.**

**Discussion**

The Chairperson reminded the members that a Meeting was conducted with them on Sep 02, 2020 via email relating to the Feedback Analysis Reports for NAAC Accreditation whose Minutes are placed before the School Board for information purpose only.

**Decision**

The School Board noted down the Minutes of the Meeting conducted via email on Sep 02, 2020 relating to the Feedback Analysis Reports for NAAC Accreditation.

**Item No. 52.4**

**To report the Minutes of the School Board of SOCIS approved by the members by circulation through email on Dec 18, 2020.**

**Discussion**

The Chairperson reminded the members that the Minutes of the School Board of SOCIS were approved by them by circulation through email on Dec 18, 2020. The same Minutes are placed before the School Board for information purpose only.

**Decision**

The School Board noted down the Minutes approved by the School Board of SOCIS through email on Dec 18, 2020 by circulation.

**Item No. 52.5**

**To consider and approve the Minutes of 36<sup>th</sup> Meeting of Doctoral Research Committee of School of Computer & Information Sciences held on September 29, 2020**

Prof. V. V. Subrahmanyam  
Director (S.C.I.S.)

**Discussion** The Minutes of the 36<sup>th</sup> Meeting of the Doctoral Research Committee of School of Computer and Information Sciences held on September 29, 2020 among members/participants for their comments/suggestions. No comment/suggestion was received. The minutes were placed before the School Board for consideration and approval.

**Decision** School Board considered and approved the Minutes (Annexure-52.5.1) of 36<sup>th</sup> Meeting of the Doctoral Research Committee of School of Computer & Information Sciences held on September 29, 2020.

**Item No.52.6** To consider and approve the Minutes of 37<sup>th</sup> Meeting of Doctoral Research Committee of School of Computer & Information Sciences held on Dec.15, 2020.


**Discussion** The Minutes of the 37<sup>th</sup> Meeting of the Doctoral Research Committee of School of Computer and Information Sciences held on Dec 15, 2020 among members/participants for their comments/suggestions. No comment/suggestion was received. The minutes were placed before the School Board for consideration and approval.

**Decision** The School Board considered and approved the Minutes (Annexure-52.6.1) of 37<sup>th</sup> Meeting of the Doctoral Research Committee of School of Computer & Information Sciences held on Dec 15, 2020.

✓ **Item No. 52.7** To consider and approve the Credit Transfer Policy of Master of Computer Applications (MCA) Programme to MCA (New) Programme.

**Discussion** The following credit transfer policy for MCA (offered from 2005 to 2020) to MCA (New) Programme is proposed for consideration and approval of the School Board:

Credit Transfer from MCA (3yrs) to MCA New (2yrs)						
Course Code	Title of the Course	Credit	Credit Transfer (CT)	Course Code	Title of the Course	Credit
MCS-031	Design and Analysis of Algorithms	4	CT	MCS-211	Design and Analysis of Algorithms	4
MCS-013 & MCS-033	Discrete Mathematics & Advanced Discrete Mathematics	2+2=4	CT	MCS-212	Discrete mathematics	4

  
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MCS-034	Software Engineering	3	CT	MCS-213	Software Engineering	4
MCS-042	Data Communication and Computer Networks	4	CT	MCS-218	Data Communication and Computer Networks	4
MCS-032	Object Oriented Analysis and Design	3	CT	MCS-219	Object Oriented Analysis and Design	4
MCS-051	Advanced Internet Technologies	3	CT	MCS-220	Web Technologies	4
MCS-035	Accountancy and Financial Management	3	CT	MCS-225	Accountancy and Financial Management	4
MCSP-060	Project	16	CT	MCSP-232	Project	12

**Decision**

The School Board discussed thoroughly and approved the credit transfer policy for present MCA(offered from 2005 to 2020) to MCA (New) Programme.

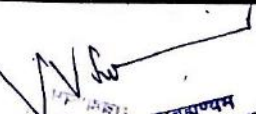
**Item No. 52.8**

To consider and approve the Credit Transfer policy of Post Graduate Diploma in Computer Applications (PGDCA) Programme to PGDCA (New) Programme.

**Discussion**

The following credit transfer /exemption policy from PGDCA to PGDCA (New) was placed before the School Board for consideration and approval.

Credit Transfer/Exemption from PGDCA to PGDCA (New)						
Course Code	Title of the Course	Credit	Credit Exemption (CE)/ Credit Transfer (CT)	Course Code	Title of the Course	Credit
MCS-011 and MCSL-017	Problem Solving and Programming  C and Assembly Language Programming Lab	3 + 2	Credit Exemption(CE)	MCS-201	Programming in C and Python	4
MCS-012	Computer Organization and Assembly language Programming	4	CT	MCS-202	Computer Organisation	4
MCS-022	Operating System Concepts and	4	CT	MCS-203	Operating Systems	4

  
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	Networking Management					
MCS-024 and MCSL-025	Object Oriented Technologies and Java Programming  Lab (based on MCS-021, 022, 023 & 024)	3 + 4	CT	MCS-206	Object Oriented Programming Using Java	4
MCS-23 and MCSL-025	Introduction to Database Management Systems  Lab (based on MCS-021, 022, 023 & 024)	3 + 4	CT	MCS-207	Database Management Systems	4
MCS-021	Data and File Structures	4	CT	MCS-208	Data Structures and Algorithms	4

**Decision**

The School Board considered and approved the Credit Transfer policy of Post Graduate Diploma in Computer Applications (PGDCA) Programme to PGDCA (New) Programme.

**✓ Item No. 52.9**

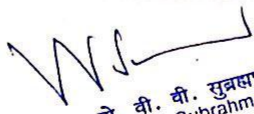
**To consider and approve the MCA (New) Programme Delivery and Evaluation related matters**

**Discussion**

The Course Coordinator informed the Board that admission for MCA (New) programme for January 2021 admission cycle has started from February 2021. The curriculum of MCA (New) is being well appreciated by the academia & industry. One of the main query on MCA admission relates to the eligibility criteria - "obtained at least 50% marks in the qualifying examination (45% in case of consolidated belonging to reserved category)". In addition, keeping in view of change of eligibility criteria, in case of non-computer science graduates who are required to do PGDCA of IGNOU prior to joining MCA, it was stated that the admissions for the January 2021 and July 2021 cycle of MCA may decrease, however, the admission in the subsequent admission cycles are expected to rise again.

The MCA Programme Coordinator then briefed about the MCA (New) programme delivery and evaluation related matters as given below to the School Board Members and placed before the School Board for consideration and approval.

**52.9.1 Software Requirements****52.9.2 Theory and Practical Sessions**

  
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52.9.3 Compulsory practical attendance

52.9.4 Evaluation Scheme

52.9.5 Academic Counsellors' Mapping

## 52.9.1 Software Requirements:

The following are the software requirements for the MCA(New) Programme:

## SOFTWARE REQUIREMENTS FOR MCA (NEW) PROGRAMME

Course Code		Proposed Software
<b>Semester I</b>		
MCSL-216	DAA and Web Design Lab	<b>For DAA</b> (1) Compilers of C/C++ for Windows or Linux.  <b>For Web Design</b> (2) HTML (latest version), CSS (latest version), Java Script, Notepad++
MCSL-217	Software Engineering Lab	(1) Software Cost Estimation : EZEstimate (2) Project Planning : StarTeam (Borland or Micro Focus) / Microsoft Project (3) Analysis: Gatherspace / IBM Rational Requisite Pro / Caliber RM (4) Design: IBM Rational Software Modeler / Together (Borland or Micro Focus) (5) Testing: IBM Rational Functional Tester / Silk Test (Borland or Micro Focus) (6) Web Software Engineering : Microsoft Office Project Web access or IBM Rational Software Architect Designer (extensible UML, BPMN, sketching tools, and other graphical tools and notations for visualization, comprehension, modeling, design, development, and deployment of complex software solutions) Note: Any other software whose functionality is equal or more than the above prescribed software can also be used. Please ensure that terms and conditions governing the software license are strictly adhered to
<b>Semester II</b>		
MCSL-222	OOAD and Web Technologies Lab	<b>For Web Technologies( J2EE Programming) : NetBeans IDE for Java</b>

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		EE Developers/ Eclipse IDE for Java EE Developers <b>For OOAD(UML Diagrams) :</b> AgroUML/StarUML/BOUML/Dia/Visual Paradigm/Edraw-Max/Smart Draw/MS-Visio/Rational UML/ IBM Rational Software Architect Designer
MCSL-223	Computer Networks and Data Mining Lab	<b>For Computer Networks :</b> Compilers of C/C++ for Windows or Linux; NS2 or any other open source network simulator. <b>For Data Mining :</b> RapidMiner/R/Python/IBM SPSS Models/WEKA/ Apache Mahout/Knime/ or any other popular open source tool for R programming/ Excel Miner
<b>Semester III</b>		
MCSL-228	AI and Machine Learning Lab	Anaconda (open source software for Python)/ R Studio/ Jupyter Notebooks/ Google Colabs
MCSL-229	Cloud and Data Science Lab	<b>Cloud Computing :</b> KVM in Linux based systems, Oracle VirtualBox in windows based systems, CloudSigma, Open stack, Cloudsim <b>For Data Science :</b> R-Studio or any other open source tool for R Programming


**Note :** Any other software whose functionality is equal or more than the above prescribed software can also be used. Please ensure that terms and conditions governing the software license are strictly adhered to.

The LSC should use latest versions of the software as far as possible.

All Study Centres / Programme Study Centres should possess the **licensed software**. *Beta* versions of the software should not be entertained. Enough licenses as per number of machines for a 1:1 ratio. The Regional Directors / Asst Regional Directors should visit and cross-check all the study centres whether they possess the licensed software before they give permission as study centres / PSC's for MCA (New) programme. Most of the recommended software is open source software

#### 52.9.2 Theory and Practical Sessions

- For a 2-credit theory course there will be 3 counselling sessions of 2 hours duration each.
- For a 4-credit theory course there will be 6 counselling sessions of 2 hours duration each.
- There will be 20 practical sessions for every 2 credit lab course, each session being of 3 hours duration.

  
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## COUNSELLING SESSIONS FOR MCA (NEW) PROGRAMME

MCA 1<sup>st</sup> Semester Schedule


Course	Theory/Practical	Credits	No. of Theory Counselling Sessions	Hrs	No. of Practical Counselling Sessions	Hrs
MCS-211	Theory Sessions	4	6	12	-	-
MCS-212	Theory Sessions	4	6	12	-	-
MCS-213	Theory Sessions	4	6	12	-	-
MCS-214	Theory Sessions	2	3	6	-	-
MCS-215	Theory Sessions	2	3	6	-	-
MCSL-216	Practical Sessions	2	-	-	20	60
MCSL-217	Practical Sessions	2	-	-	20	60

MCA 2<sup>nd</sup> Semester Schedule

Course	Theory/Practical	Credits	No. of Theory Counselling Sessions	Hrs	No. of Practical Counselling Sessions	Hrs
MCS-218	Theory Sessions	4	6	12	-	-
MCS-219	Theory Sessions	4	6	12	-	-
MCS-220	Theory Sessions	4	6	12	-	-
MCS-221	Theory Sessions	4	6	12	-	-
MCSL-222	Practical Sessions	2	-	-	20	60
MCSL-223	Practical Sessions	2	-	-	20	60

MCA 3<sup>rd</sup> Semester Schedule

Course	Theory/Practical	Credits	No. of Theory Counselling Sessions	Hrs	No. of Practical Counselling Sessions	Hrs
MCS-224	Theory Sessions	4	6	12	-	-
MCS-225	Theory Sessions	4	6	12	-	-
MCS-226	Theory Sessions	4	6	12	-	-
MCS-227	Theory Sessions	4	6	12	-	-

  
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MCSL-228	Practical Sessions	2	-	-	20	60
MCSL-229	Practical Sessions	2	-	-	20	60

**MCA 4<sup>th</sup> Semester Schedule**

Course	Theory/Practical	Credits	No. of Theory Counselling Sessions	Hrs	No. of Practical Counselling Sessions	Hrs
MCS-230	Theory Sessions	4	6	12	-	-
MCS-231	Theory Sessions	4	6	12	-	-
MCSP-232	Project	12	4	8	-	-

- \* Theory counselling sessions is of 2 Hr duration.
- \* Practical counselling sessions is of 3 Hr duration.

Semester	No. of Sessions		No. of Hours	
	Theory	Practical	Theory	Practical
I	24	40	48	120
II	24	40	48	120
III	24	40	48	120
IV	12 + 4 sessions for discussions on Project	-	24 + 8	-
TOTAL	84	120	176	360

**Total Computer time = Practical time = 120 Sessions = 360 Hours**

**Note: 75% attendance is compulsory in Practical Lab Sessions.**

- (iv) **Counsellor-student ratio:** Theory counseling – 60 students to one counsellor  
Practical counseling – 30 students to one counselor
- (v) Student to machine ratio should be 2:1

**52.9.3 Compulsory Practical Attendance**

The following issues regarding the attendance for the practical sessions are to be considered:

- (i) 75% attendance is compulsory in the practical sessions for each lab course. This is a pre-requisite for taking the term-end practical examination in that course.
- (ii) A student who fails to fulfill the 75% attendance requirements for a lab course should be allowed to re-register for the same course. The pro-rata fee for a lab course will be changed as per the University norms.
- (iii) Students are required to prepare a separate lab record for each lab course. This lab record will be duly signed by the counselor of practical session after each session.
- (iv) Student's attendance should be recorded coursewise at the Learner Support Center (LSCs)

**52.9.4 Evaluation Scheme**

The evaluation for each course covers two aspects:

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52<sup>nd</sup> MEETING OF SCHOOL BOARD-MINUTES

- (a) Continuous evaluation (b) Term-end examination

The following evaluation scheme for MCA (New) programme is proposed:

Type of Course	Continuous Evaluation (only one assignment)	Term End Examination
Theory	30%	70%
Practical / Lab	30%*	70%**

Each assignment will be worth 100 marks and weightage will be 30%. Theory assignment will consist of 80% marks for assignment questions and 20% marks for viva-voce. A student must appear for viva-voce in order to pass the assignment. The lab course assignment will consist of 40% marks for lab records, 40% marks for assignment questions and 20% marks for viva-voce.

\* A student cannot appear for the term-end practical examination of a lab course unless s/he has 75% attendance in the lab / practical course.

**Criteria for successfully completing a course**

For the MCA (New) programme, it is proposed that the students should achieve a **minimum of 40% in each component** (both in the assignment as well as in the TEE) and overall 40% in each course to successfully complete the course. This criteria is same as that of present MCA. For project course a student must obtain 40% marks in Viva and 40% marks in project report evaluation to pass the project course.

#### Duration of TEE

The School proposes the term-end examination duration as follows:

Term-end theory examination for 4-credit courses:	3 hrs, 100 marks.
Term-end theory examination for 2-credit courses:	2 hrs, 50 marks.
Term-end practical examination for 2-credit courses:	2 hrs, 50 marks.

The Evaluation scheme is given below:

#### EVALUATION SCHEME FOR MCA (NEW) PROGRAMME

Seme-ster	Course Code	Course Title	Credits	Continuous Evaluation		Term End Examination		
				Assignment (Weightage – 30%)		Theory OR Practicals* (for Lab courses only) (Weightage – 70%)		
				Max Marks	Min. Marks	Duration	Max. Marks	Min. Marks
I	MCS-211	Design and Analysis of Algorithms	4	100	40	3	100	40
	MCS-212	Discrete Mathematics	4	100	40	3	100	40
	MCS-213	Software Engineering	4	100	40	3	100	40
	MCS-214	Professional Skills and Ethics	2	100	40	2	50	20
	MCS-215	Security and Cyber Laws	2	100	40	2	50	20
	MCSL-216	DAA and Web Design Lab	2	100	40	2	50	20
	MCSL-217	Software Engineering Lab	2	100	40	2	50	20
II	MCS-218	Data Communication and Computer Networks	4	100	40	3	100	40

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	MCS-219	Object Oriented Analysis and Design	4	100	40	3	100	40
	MCS-220	Web Technologies	4	100	40	3	100	40
	MCS-221	Data Warehousing and Data Mining	4	100	40	3	100	40
	MCSL-222	OOD and Web Technologies Lab	2	100	40	2	50	20
	MCSL-223	Computer Networks and Data Mining Lab	2	100	40	3	50	20
III	MCS-224	Design and Analysis of Algorithms	4	100	40	3	100	40
	MCS-225	Accountancy and Financial Management	4	100	40	3	100	40
	MCS-226	Data Science and Big Data	4	100	40	3	100	40
	MCS-227	Cloud Computing and IoT	4	100	40	3	100	40
	MCSL-228	AI and Machine Learning Lab	2	100	40	2	50	20
	MCSL-229	Cloud and Data Science Lab	2	100	40	2	50	20
IV	MCS-230	Digital Image Processing and Computer Vision	4	100	40	3	100	40
	MCS-231	Mobile Computing	4	100	40	3	100	40
	MCSP-232	Project	12	Report – 150 (Min. 60) and Viva 50 (Min. 20) (Total = 200 marks)				

- \* Practical examination will be conducted for the lab courses only. The letter 'L' in the course code represents the lab course. Pass in each and every part in the practical course of Term End Practical Examination is compulsory in order to get it declared successful in the respective course.
- \*\* The Project consist of 2 components namely project report evaluation and viva. Viva-voce is compulsory and forms part of evaluation. A student in order to be declared successful in the project must secure 40% marks in each component of project evaluation i.e. (i) Project Evaluation and (ii) Viva-voce.

Details of term-end practical examination for lab courses are given below:

### Evaluation of Term-end Practical exam for Lab Courses

(Practical questions – 80 % and Viva-voce – 20 %)

Course Code	Duration of term-end practical examination (Each section gets equal time)	Term-end practical examination and viva-voce	
		Marks of Section-1	Marks of Section-2
MCSL-216 (2 credits)	2 hours	20 (P) + 5(V) = 25 marks	20(P) + 5(V) = 25 marks
MCSL-217 (2 credits)	2 hours	40(P) + 10 (V) = 50 marks	#
MCSL-222 (2 credits)	2 hours	20(P) + 5(V) = 25 marks	20(P) + 5(V) = 25 marks
MCSL-223 (2 credits)	2 hours	20(P) + 5(V) = 25 marks	20(P) + 5(V) = 25 marks
MCSL-228 (2 credits)	2 hours	40(P) + 10 (V) = 50 marks	#
MCSL-229 (2 credits)	2 hours	20(P) + 5(V) = 25 marks	20(P) + 5(V) = 25 marks

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P- Problems given in the exam paper, V –viva-voce for that section.

### 52.9.5 Academic Counselors' Mapping

The counsellor should have relevant teaching experience in the related course. The mapping of some of the present courses to new courses is shown in the following table. For all other course new counsellors may be appointed through the due process of appointment of counsellors.

Academic Counsellor's Mapping				
Counsellor of MCA		Approved For	MCA(New)	
Course Code	Title of the Oourse		Course Code	Title of the Course
MCS-031	Design and Analysis of Algorithms		MCS-211	Design and Analysis of Algorithms
MCS-013 or MCS-033	Discrete Mathematics or Advanced Discrete Mathematics		MCS-212	Discrete mathematics
MCS-034	Software Engineering		MCS-213	Software Engineering
MCS-042	Data Communication and Computer Networks		MCS-218	Data Communication and Computer Networks
MCS-032	Object Oriented Analysis and Design		MCS-219	Object Oriented Analysis and Design
MCS-051	Advanced Internet Technologies		MCS-220	Web Technologies
MCS-035 & MCSL-036	Accountancy and Financial Management & Lab course (Part 3)		MCS-225	Accountancy and Financial Management

\* Subject to fulfilment of the minimum eligibility criteria as per the IGNOU Academic Counsellor Norms / UGC ODL regulations 2020. For all the remaning courses of MCA-New, new counsellor's having qualifications as per the UGC regulations 2020 with relavant experience of teaching the related courses, may be appointed through the due process of appointment of counsellors.

#### Decision

The members of School Board reiterated that the 50% marks (45% in case of reserved category) in qualifying examination (graduation marks in case of IGNOU as there is no entrance test for MCA) for admission to MCA are essential.

The School Board considered and approved the Software Requirements, Theory and Practical Sessions, Compulsory practical attendance and the Evaluation Scheme presented (52.9.1 to 52.9.5) as the part of MCA (New) Programme Delivery and Evaluation related matters.

WGS  
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