

PROGRAMME GUIDE
FOR
CERTIFICATE IN MOBILE
APPLICATION DEVELOPMENT (CMAD)

July, 2021
session



SCHOOL OF COMPUTER AND INFORMATION
SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY MAIDAN GARHI,
NEW DELHI - 110 068

<http://www.ignou.ac.in>

eProgramme Guide:

July, 2021. This is a Programme Guide for CMAD Programme offered by IGNOU from July, 2021 admission cycle.

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Further information on the Indira Gandhi National Open University courses can be obtained from the University's office at Maidan Garhi, New Delhi-110 068 or from its Regional Centres spread across the length and breadth of the country.

CONTENTS

	Page No.
Message from the CMAD Programme Coordinator	5
1. Basic Information	7
1.1 CMAD Programme Objectives	
1.2 Duration of the Programme	
1.3 Medium of Instruction	
1.4 Credit System	
1.5 CMAD Programme Structure	
1.6 Recognition	
1.7 Student Support Services	
1.8 How to contact the CMAD Programme Coordinator	
1.9 iGram	
2. Instructional System	8
2.1 Self-instructional Material	
2.2 AudioVideo Material and CDs	
2.3 Counselling Sessions	
2.4 Web Based Support	
3. Browsing IGNOU's Website	14
4. CMAD Syllabus	16
5. Evaluation Scheme	17
5.1 Assignments and Term-end Examination	
5.2 Instructions for Assignments	
5.3 Guidelines Regarding Submission of Assignments	
5.4 General Guidelines Regarding Term-end Examination	
6. Other Useful Information	25
6.1 Reservation of Seats	
6.2 Scholarships and Reimbursement of Fee	
6.3 Change / Correction of Address	
6.4 Change of Regional centre and Study Centre	
6.5 Procurement of Official Transcript	
6.6 Duplicate Grade Card	
6.7 Self instructional material for your Programme of Study	
6.8 Disputes on Admission and other University Matters	
7. Some Useful Addresses	27
8. Link to Old Question Papers	28
9. Links to Forms and Enclosures	29

- Change of Address (Form No. 1)
- Assignments Remittance-Cum-Acknowledgement Card (Form No.2)
- Link to Latest Assignment(s)
- Link to Online Term end Examination form
- Link to form for early declaration of result
- Link to form for obtaining photocopy of the answer script
- Link to form for Re-evaluation of Answer script
- Link to Application form for improvement in Division/Class
- Link to form for obtaining Duplicate Grade Card / Mark-sheet
- Link to form for issue of Official Transcript
- Link to form for issue of Migration Certificate

MESSAGE FROM THE PROGRAMME CO-ORDINATOR

Dear student,

Welcome to the family of distance learners and IGNOU's Certificate in Mobile Application Development Programme. It is a 6 month programme during which you will study topics related to Mobile Applications Development. You will receive support from IGNOU through your Regional Centre (RC), Learner's Support Centre (LSC) (was called Study Centre) and IGNOU's website. We expect you to be directly in contact with your RC, LSC, and your peers through the Internet. You may also write to us at the email address given below. This document also includes information about IGNOU and various student support services apart from CMAD. So, not every piece of information included is applicable to CMAD.

This Programme Guide contains instructional system of IGNOU CMAD (6 Months) programme, syllabus of CMAD (6 Months) programme, details of evaluation scheme and links to assignments, other important information and important forms. The course material will be uploaded on eGyankosh Website. No printed course material shall be made available. You can download the assignments from IGNOU website (<http://www.ignou.ac.in>). Each course contains at least one assignment that will be assessed by a counsellor at your LSC. All these assignments are to be submitted at your LSC within the stipulated last date of submission mentioned against each assignment. For latest updates, please refer to IGNOU website always. You must also submit the assignments of every course before the due date to be eligible to appear for the related Term-end Examination. Keeping in view of pandemic and consequent restrictions, not all student support services may be provided the way they are mentioned in the document.

It is to be noted that the payments that are mentioned in various proformas/forms are as on date and is subject to revision from time to time. You are advised to check these proformas/forms from IGNOU website/LSC/RC for any revision/ modification. Some useful forms and formats (or the link to useful forms and formats) are also given at the end of this booklet. The Programme Guide, forms and formats are also available on the IGNOU website. Please confirm the fees with the RC / LSC / Website before you pay.

As a distance learner, you may have several queries. You will find answers to many of them in this booklet. This booklet is a very important guide for you. Read it and preserve it until you successfully complete the CMAD programme. This Programme Guide contains the information related to the CMAD programme. However, during your studies, if you have any feedback, suggestions and comments to make, please write/email to us immediately.

Learners are advised to be in touch with their Regional centre/LSC for advice and day-to-day information. Alternatively, you may visit the IGNOU website.

I wish you All the Best,

Prof.P.V.Suresh

CMAD Programme Coordinator

cmad@ignou.ac.in

1. BASIC INFORMATION

1.1 CMAD Programme Objectives

The programme aims at providing knowledge to the learners about the architectures of Android and iOS, Design and implement databases for user requirements, Develop mobile apps using Android, Do programming using Python. Any person who is interested in mobile apps and know Java Programming can join the programme.

1.2 Duration of the Programme

(Minimum – 6 Months, Maximum - 2 Years)

To fulfill the requirements for acquiring the CMAD, a student may successfully complete all the courses in a minimum of 6 months and a maximum of 2 years.

1.3 Medium of Instruction

The medium of instruction is **English**. The course material is in English.

1.4 Credit System

The University follows the ‘Credit System’ for its programmes. Each credit is worth 30 hours of student learning time comprising all the learning activities. Thus, a four-credit course involves 120 study hours. This helps the student to understand the academic effort one has to put for successful completion of a course. **Successful completion of the programme requires successful completion of both assignments and the Term-End Examination of each course of the programme.**

1.5 CMAD Programme Structure

The following is the Programme Structure of CMAD:

CMAD Programme Structure

Course Code	Course Title	Theory/ Practical	Credits
BCS-091	Introduction to Mobile Architecture	Theory	4
BCS-092	Introduction to Databases	Theory	3
BCS-093	Introduction to Android	Theory	2
BCS-094	Programming using Python	Theory	2
BCSL-091	Laboratory Course ((Includes practicals of BCS-092, BCS-093, and BCS-094)	Practical	5

No. of Theory Courses – 4

No. of Practical Courses -1 Total Credits: 16

1.6 Recognition

IGNOU is a Central University established by an Act of Parliament in 1985 (Act No.50 of 1985) IGNOU Degrees/Diplomas/Certificates are recognized by all member Universities of Association of Indian Universities (AIU) and are at par with Degrees/Diplomas/Certificates of all Indian Universities/Deemed Universities/Institutions vide UGC Circular No. F1-52/2000 (CPP-II) dated 5 May, 2004 & AIU Circular No. EV/B (449)/94/177115 dated January 14, 1994, and UGC's letter no. UGC/DEB/2013 dated 14.10.2013, and UGC notification on UGC website F.No. 1-18/2018 (DEB-I) dated 21-02-2019, list Master of Computer Application of IGNOU as one the programme recognised from 2018-19 to 2022-23. You may download all the recognition related information from the following web links.

<http://www.ignou.ac.in/ignou/aboutignou/division/srd/new>

<http://ignou.ac.in/ignou/aboutignou/division/srd/Recognition>

1.7 Student Support Services

In order to provide individualised support to its learners, the University has created a number of Learner Support Centres (LSCs) throughout the country for this Programme. These are administratively coordinated by the Regional Centres (RCs). The LSCs are the contact points for the students on all major aspects of the Programme. These include counselling sessions, practical sessions, reference library facilities, disseminating information and advice, facilities for audio-visual training aids and teleconferencing.

The University may not always be able to communicate to all the students individually. All the important communications are sent to the Regional Directors who in turn will intimate them to the LSC Coordinators. The Coordinators display such Circulars / Notifications on their notice boards for the benefit of the students. You are, therefore, advised to be in touch with your LSC Coordinator on a more regular basis so as to get the latest information about assignments, submission schedules (assignments and examination forms), declaration of results, etc.

1.8 How to contact the CMAD Programme Coordinator?

Students may contact the CMAD Programme Coordinator by sending a communication through post CMAD Programme Coordinator, SOCIS, Vishveswaraiah Bhavan, C-Block, IGNOU Academic Complex, IGNOU, Maidan Garhi, New Delhi – 110068, or can send an

email to cmad@ignou.ac.in

1.9 iGram

With the objective of putting in place a system for quick resolution of students problems IGNOU has developed iGRAM. For quick response and redressal you may send your query/grievance on iGRAM at <http://igram.ignou.ac.in/>

2. **INSTRUCTIONAL SYSTEM**

The methodology of instruction in this University is different from that of the conventional universities. The Open and Distance Learning (ODL) University system is more learner-oriented, and the student has to be an active participant in the teaching-learning process. Most of the instruction is imparted through distance mode with only a small component of face-to-face communication. The University follows a multi-channel approach for instruction. It comprises a suitable mix of:

- ☞ self-instructional material in pdf
- ☞ audio-video programmes transmitted through GYAN DARSHAN channel
- ☞ face-to-face counselling at LSC by academic counselors
- ☞ compulsory practical sessions at the LSCs
- ☞ reference library eGyankosh
- ☞ web based academic support
- ☞ assignments
- ☞ Gyan Darshan Channel, including teleconferencing,
- ☞ Gyan Vani.
- ☞ SWAYAMPRAKASH-DTH (channel-19)

However, not all the above components will be part of every programme. Also, there may be changes to any of the above components. Always, be in touch with your LSC (Learner Support Center), email, Regional Center, IGNOU Website for latest updates. Always, rely only on information on record.

2.1 Self-instructional Material

Self-instructional materials are the primary form of instructional materials. These are supplied to the learners in the form of several booklets called blocks. Each block consists of several units. The size of a unit is such that the material given therein may be expected to be studied by a student in a session of about 4 to 6 hours of study. This self-instructional material is made available in printed form or in electronic form through IGNOU eContent App and eGyankosh website. However, the fast pace of computer industry necessitates that students must do some additional readings. Students are advised to study reference books without fail. Studying the self-instructional material alone may not be sufficient to write assignments and prepare for the Term-end Examinations. Some reference books are available at your RC/LSC.

2.2 eGyankosh, SWAYAMPBHA-DTH (Channel-19) and IGNOU eContent App

eGyankosh (www.egyankosh.ac.in) is a digital repository consists of the reference links Self instructional materials, recorded videos, youtube-video archives etc. Various links for the eGyankosh related to SOCIS are:

eGyankosh Homepage: <http://www.egyankosh.ac.in/>

Self Learning Material: <http://www.egyankosh.ac.in/handle/123456789/70868>

The **SWAYAM PRABHA-DTH Channel-19** (Professional and Vocational Education) is funded by MoE, Govt of India and Coordinated by IGNOU, New Delhi. This is an exclusive channel covering IGNOUs' Professional and Vocational Education Programmes. This channel broadcasts visually high-quality and graphically enriched video content of IGNOUs' Certificate/Diploma/PG Diploma/PG Certificate/Under Graduate/Post Graduate courses pertaining to Computer Science/Application, Management Studies, Vocational Education, Engineering & Technology, Law Extension and Development Studies, Social Work, Journalism and New Media Studies, Performing Arts and Health Sciences. The scope is very wide and covers courses from 10 Schools of IGNOU through this channel. Gradually, IGNOU is recording and pooling the videos on Channel-19

SWAYAM PRABHA homepage: <https://www.swayamprabha.gov.in/>

Professional and Vocational Education (Channel-19):

https://www.swayamprabha.gov.in/index.php/program/current_he/19

Archive Video: https://www.swayamprabha.gov.in/index.php/program/archive_he/19

IGNOU eContent App

The self instructional course material of various programmes of IGNOU are made available through **IGNOU eContent APP** also

<https://play.google.com/store/apps/details?id=ac.in.ignou.Viewer&hl=en>

2.3 Counselling Sessions

The details of the theory and practical counselling sessions are given in the following sections.

Theory Sessions

In distance education, face-to-face contact between the learners and their tutors/counsellors is relatively less. The purpose of such a contact is to answer some of your questions and clarify your doubts that may not be possible through any other means of communication. It also provides you with an opportunity to meet your fellow students.

There are academic counsellors at the LSC to provide counselling and guidance to you in the courses that you have chosen for study. Normally, these sessions will be held at the LSC on Saturdays and Sundays. However, it may not always be the case.

You should note that the counselling sessions would be very different from the classroom

teaching or lectures. Counsellors will not be delivering lectures as in conventional teaching. They will try to help you to overcome difficulties that you face while studying for the CMAD programme. In these sessions, you must try to resolve your subject-based difficulties and any other related problems.

Practical Sessions

The practical sessions will be held in the computer centres / labs of the LSC. In these computer labs, the participants will have the facility to use the computer and software packages relevant to the syllabus. The following points regarding the practical attendance must be noted:

- i) Student attendance will be recorded at the study centre.
- ii) Strictly follow the guidelines given in the Lab manuals for the respective lab courses.
- iii) Computer to Student ratio in a practical session would be 1:2. (2 students would be sharing a machine)

Before attending the counseling session for each course, please go through your course material as per the session schedule and make a plan of the points to be discussed. Unless you have gone through the content, there may not be much to discuss and a counselling session may not be fruitful.

Counselling Schedule

The following is the counselling schedules for CMAD. The respective study centres will communicate you the exact dates of the Schedule.

CMAD Schedule

Course	Nature of the Course	Credits	No. of Theory Counselling Sessions*	Hrs	No. of Practical Counselling Sessions**	Hrs
BCS-091	Theory	4	8	16	-	-
BCS-092	Theory	3	6	12	-	-
BCS-093	Theory	2	4	8	-	-
BCS-094	Theory	2	4	8	-	-
BCSL-091	Practical	5	-	-	50 (Introduction to Databases (10), Introduction to Android (20), Introduction to Python (20))	150 (30,60,60)

***1 Theory counselling session is of 2 Hr duration.**

****1 Practical counsessling session is of 3 Hr duration.**

CMAD Counseling Schedule**BCS-091 : Introduction to Mobile Architecture****Counselling Sessions**

Sessions	Session Number	Topics to be Concerned
Theory Counselling	1	All topics of Unit-1, and Unit-2 of Block-1
	2	All topics of Unit-3 of Block-1 and Unit-4 of Block-2
	3	All topics of Unit-5 and Unit-6 of Block-2
	4	All topics of Unit-7 of Block-2 and Unit-8 of Block-3
	5	All topics of Unit-9 and Unit-10 of Block-3
	6	All topics of Unit-11 of Block-3 and Unit-12 of Block-4
	7	All units of Unit-13 and Unit-14 of Block-4
	8	All units of Unit-15 of Block-4

BCS-092 : Introduction to Databases**Counselling Sessions**

Sessions	Session Number	Topics to be Concerned
Theory Counselling	1	All topics of Unit-1 and Unit-2 of Block-1
	2	All topics of Unit-3 , Unit-4 and Unit-5 of Block-1
	3	All topics of Unit-6 , Unit-7 and Unit-8 of Block-2
	4	All topics of Unit-9 and Unit-10 of Block-2
	5	All topics of Unit-11 and Unit-12 of Block-3
	6	All topics of Unit-13 and Unit-14 of Block-3

BCS-093 : Introduction to Android**Counselling Sessions**

Sessions	Session Number	Topics to be Concerned
Theory Counselling	1	All topics of Unit-1, Unit-2, Unit-3 and Unit-4 of Block-1
	2	All topics of Unit-5, Unit-6, Unit-7 and Unit-8 of Block-2
	3	All topics of Unit-9, Unit-10, Unit-11 and Unit-12 of Block-3
	4	All topics of Unit-13, Unit-14, Unit-15 and Unit-16 of Block-4

BCS-094 : Programming using Python**Counselling Sessions**

Sessions	Session Number	Topics to be Concered
Theory Counselling	1	All topics of Unit-1, Unit-2, Unit-3 and Unit-4 of Block-1
	2	All topics of Unit-5 of Block-1 and Unit-6, Unit-7, Unit-8 of Block-2
	3	All topics of Unit-9, and Unit-10 of Block-3 and Unit-11, Unit-12 of Block-4
	4	All topics of Unit-13, Unit-14, Unit-15 of Block-4

BCSL-091 : Laboratory Course (Introduction to Databases, Introduction to Android, and Programming using Python)**Counselling Sessions**

Sessions	Session Number	Topics to be Concered
Practical Counselling	1 - 10	All topics of BCS-092 (Introduction to Databases)
	11-30	All topics of BCS-093 (Introduction to Android)
	31-50	All topics of Block-094(Programming using Python)

2.4 Web Based Support

The learners can have access to IGNOU's website at the following address (URL): ***http://www.ignou.ac.in***. You can download assignments, old question papers, circulars, etc. from the website. The Programme Guide is also available at the website. The following section gives you how to browse the IGNOU's website.

3. BROWSING IGNOU'S WEBSITE

The IGNOU's website is a dynamic source of latest information and is subject to continuous updates. Thus, various pages shown here may change in future. IGNOU itself is continuously changing to bring about improvement in quality of its services. You must visit IGNOU website for all the latest information, filling up or downloading various form, downloading of assignments, results etc.

Navigation from Home Page

The learners can have access to IGNOU's website at the following address (URL) ***http://www.ignou.ac.in***. As students get connected to this site, the following page displays the Home Page of IGNOU's web site (Figure 1). Students need to click on various options to get the related information.

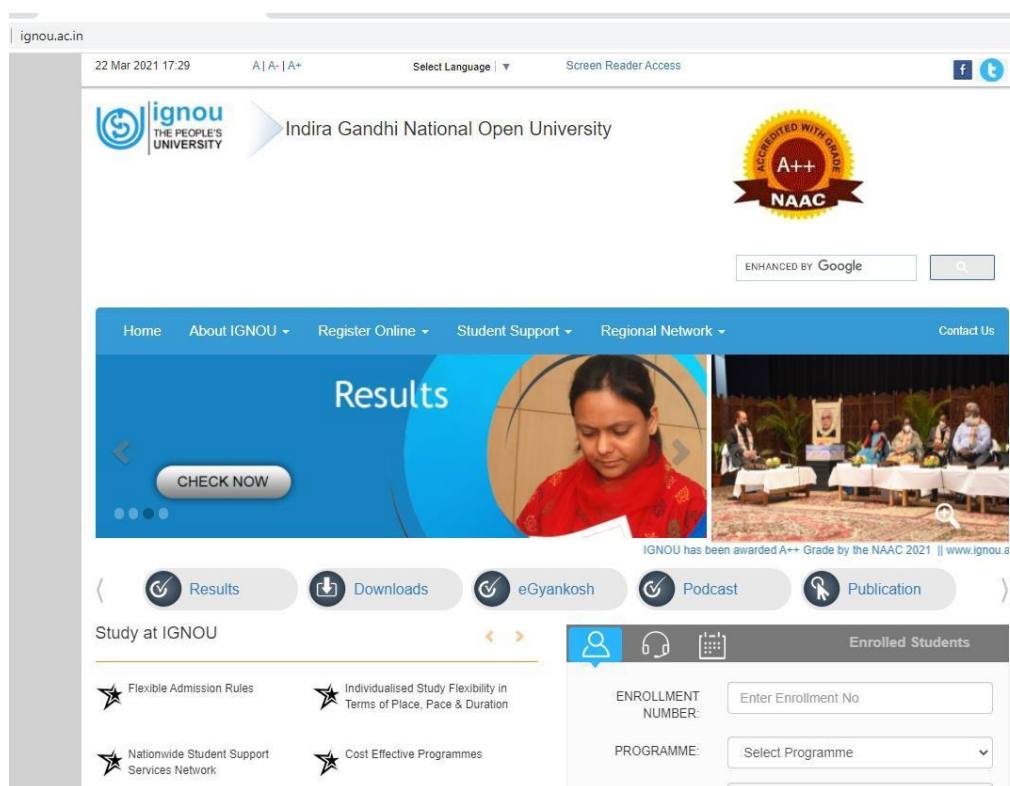


Figure 1: IGNOU Website

From this **Home page** Select **About IGNOU** which will display an Option List select **School of Studies**. It will show you a page of all the Schools of studies of IGNOU, Select **School of Computer and Information Sciences (SOCIS)** to display page of SOCIS (Figure 2). School of Computer and Information Sciences (SOCIS) offers PhD in Computer Science, CMAD,

BCA , CIT and CMAD programmes. You can click on **Programmes** link on SOCIS page to get the list of programmes on offer as shown in Figure 2.

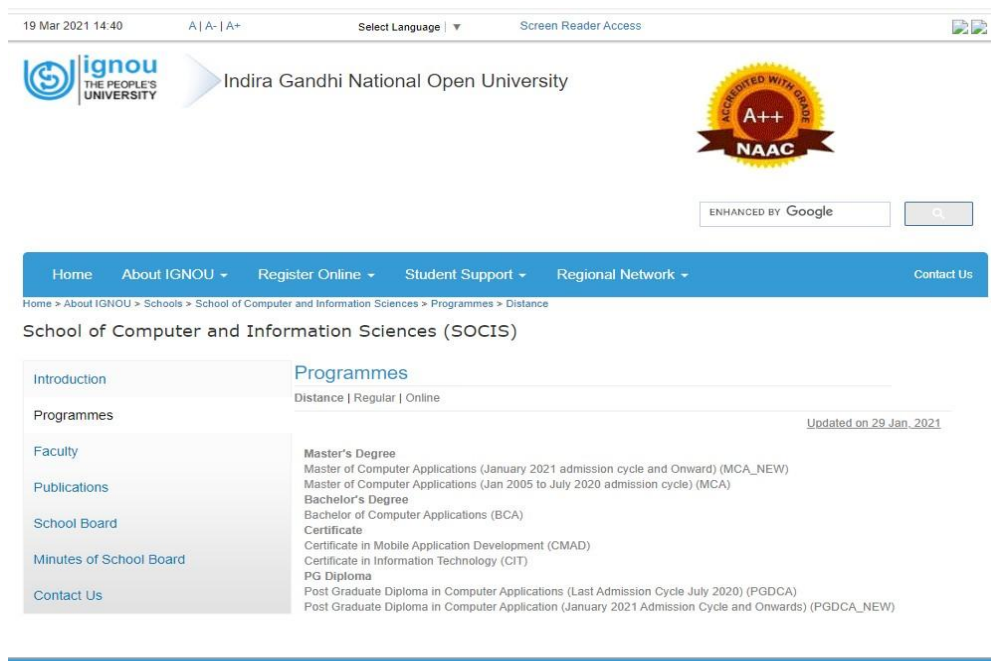


Figure 2: SOCIS Programmes

One of the most important link for students is Student Zone which can be reached from Home page by selecting Student Zone option on the Student Support Option List (Link address: <http://www.ignou.ac.in/ignou/studentzone>). Figure 3 displays the options of the Student Zone page. Please note that the design of website may change time to time. So, the above screenshots may also be different when such design changes occur.

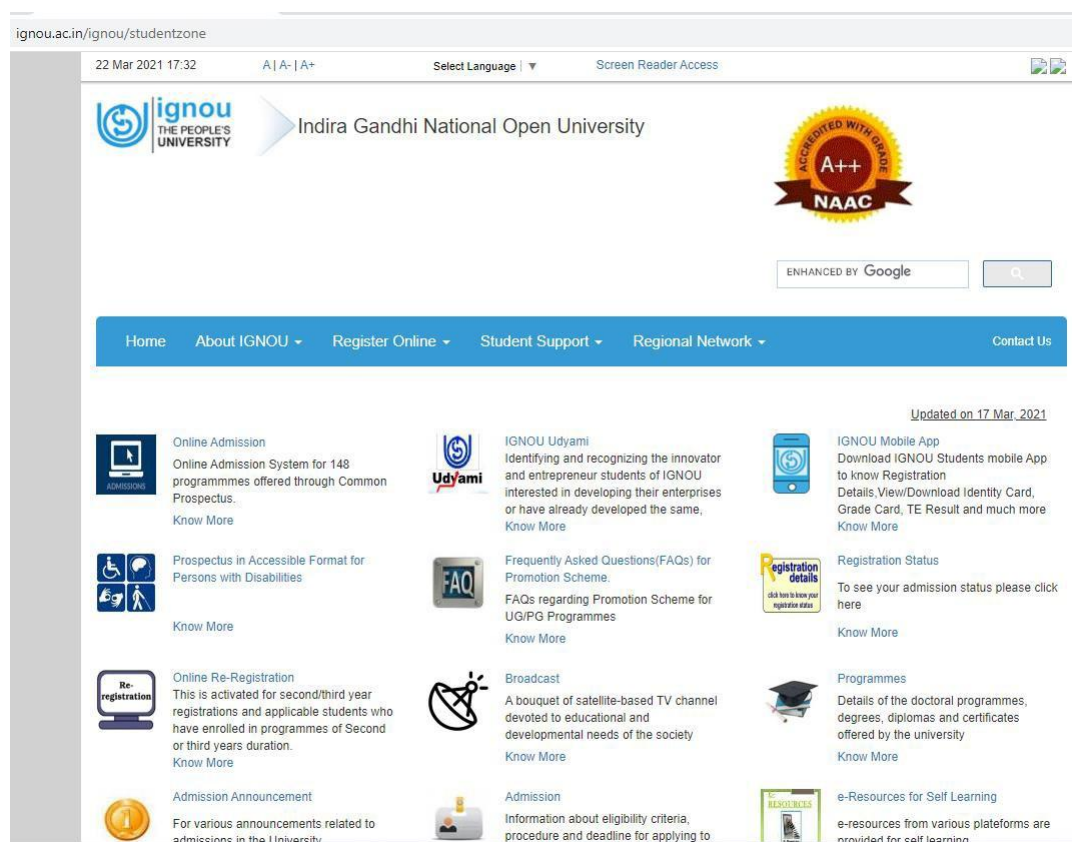


Figure 3: Student Zone page

4. CMAD SYLLABUS

BCS-091 Introduction to Mobile Architecture Credits:4

Introduction to Mobile Applications, Components of a Mobile Application, Basics of Mobile Application Design, Introduction to Mobile Operating Systems, Basics of Android, Basics of Ios, Basics of Windows Mobile, Mobile Processors, Memory, Sensors, I/O, Native Development Tools, Cross Platform Development Tools, Publishing Tools and Developer Program, Monetization, etc.

BCS-092 Introduction to Databases Credits:3

Introduction to Database Systems, Database History, Data Modeling, Entity Relationship Model, Integrity Rules and Constraints, Relational Database Design and Redundancy, Functional Dependencies, Normalization, SQL, DDL , DML, Join Statements, Introduction to SDLC, etc.

BCS-093 Introduction to Android Credits:2

Introduction, History, Features, Categories of Android applications, Architecture, Android application fundamentals, Android development platforms, Configuring Android Development Environment,

Basic Android APP components, Additional components, Android Manifest, Android Development, Device Compatibility, Device features, Platform versions, Screen configuration, UI design, Creating GUI for Android Application, Design of UI with Layout Editor, Managing Touch Events in a ViewGroup, Setting up testing environment and testing an Android Application, Debugging, Logcat, Integrating Multimedia into Android Application development (AAD), Camera functions in AAD, Saving Data on Android Devices, Android sensor framework, Making an APP Location-Aware, Connecting devices wirelessly, Performing network operations, Publishing an Android APP, Performance profiling of an Android APP, Security concerns, etc.

BCS-094 **Programming using Python** **Credits:2**

Basic Programming Concept, Features of Python, Variables, Expressions and Statements, Data types, Comments, Debugging, Control structures, Arrays, Linked Lists, Queues, Functions, Strings, Methods, Classes, Operator Overloading, Inheritance, Data Encapsulation, Polymorphism, Exception Handling, Software Testing, Black Box Testing, White Box Testing, Profilers, Introduction to SQLite, SQL CRUD statements, Role of Python in Mobile Application Development, Open Source Python Libraries, Introduction to Kivy, Kivy Buidozier, Packaging, Kivy Launcher, Kivy Android Virtual Machine, GUI development, Tkinter, Creating GUI for Python with Tkinter and wxPython, Development examples using Kivy, etc.

BCSL-091 **Laboratory Course** **Credits:5**

Includes practicals of following courses: Introduction to Databases, Introduction to Android, Programming using Python)

Practical Counseling sessions in Databases, Android and Python

Note: Students may be recommended resources on the web etc. to pursue their learning. Sometimes, theory and practical counseling may be disturbed due to circumstances prevailing.

Software Requirements for CMAD

BCSL-091 (Laboratory Course) :

MySQL, Android Software Development Kit, Android Studio, Eclipse, KIVY, BUILDZER Tool, TKINTER, WXPYTHON, KV Language

5. EVALUATION SCHEME

Completion of the programme requires successful completion of both assignment component and the Term-end Examination component for each course in the programme. The total numbers of courses in this CMAD programme are 5 (including Laboratory Course) and the total number of credits are 16.

Evaluation for each course (except project course) covers two aspects:

- a) Continuous evaluation through Assignment for each of the courses will carry a maximum of 25 marks (please refer to the table below)
- b) Term-end examination for each course will carry a maximum of 75 marks (please refer to the table below)

Note: *A learner should not apply for appearing at the term-end examination of any course without getting registered for the same and that if s/he does so, her/his result would not be declared and the onus shall be on her/him.*

5.1 Assignments and Term - End Examinations

The main purpose of assignments is to test student's comprehension of learning the materials they receive from the University and also to help them get through the courses by providing feedback to them. The information given in the course materials should be sufficient for answering the assignments. However, as Computer Science is an ever enhancing area, the students should make an attempt and work with extra reading material, which is easily available at the Study Centre / Regional Centre libraries or through websites, for working on the assignments. This will enhance your learning capabilities. Mostly the assignments are designed in such a way as to help you concentrate mainly on the course material, exploit their personal experiences and apply the knowledge gained from various sources.

Assignments

There will be **one assignment for each course worth 25 marks**. The set of all the assignments are uploaded on the IGNOU's website.

The table shown below provides the detailed marking scheme for the CMAD courses.

Duration of CMAD (1 Semester)	Course Code	Course Title	Credits	Assignment (Max. Marks)	TEE (Theory) (Max. Marks)	TEE (Practical) (Max. Marks)
	BCS-091	Introduction to Mobile Architecture	4	25	75	-
	BCS-092	Introduction to Databases	3	25	75	
	BCS-093	Introduction to Android	2	25	75	
	BCS-094	Programming using Python	2	25	75	
	BCSL-091	Laboratory Course (Includes practicals of following courses: Introduction to Databases, Introduction to Android, Programming using Python)	5	25		75

Note: 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.

All the assignments and term-end exams will be scored on a **numerical marking scheme**. Any component that has not been attempted would be treated as having a score of zero marks. The requirement for passing would be at least **40% in continuous evaluation (assignment) and 40% in the term-end examinations**, with an **overall average of 40% for a pass in the course**. Student needs to reappear only in failed components in the case of Term End Examination for Laboratory course. The duration of all TEE (Theory) will be of 3 hours. The duration of TEE(Practical) will be of 3 hours.

Unfair means in attempting the assignments

If the learners copy the assignments, which is an important component of the ODL system, such assignments will be awarded “zero” and such students will be directed to re-attempt the fresh assignments pertaining to the next year which will indirectly delay the award of degree by a semester/ year.

Additional guidelines for BCSL-091 Assignment and Term End Examination (TEE)

The following are the evaluation guidelines for the lab courses.

- (i) Student needs to secure at least 40% in the BCSL-091 Assignment. There are three sections in the assignment for a total of 25 marks. So, in total, a student needs to secure a minimum of 10 marks to be successful in the assignment.
- (ii) **Evaluation of term-end practical exam for Lab Courses**

The term-end examination of the practical course (BCS-091) consists of three sections. Each section will be evaluated separately. The viva-voce for each section will also be separate. The following table shows the details:

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

Course Code	Duration of term-end practical exam. (Each section gets equal time)	Term-end practical examination and viva-voce		
		Marks Section-1	Marks Section-2	Marks Section-3
BCSL-091 (5 Credits)	3 hours	20 (P) + 5(V) = 25 marks	20 (P) + 5(V) = 25 marks	20 (P) + 5(V) = 25 marks

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

A student needs to obtain a minimum of 40% in each section of the term-end practical examination for successful completion of that particular section. In case a student does not secure the minimum passing marks in a section, s/he needs to appear for the term-end practical examination again for that section only.

5.2 Instructions for Assignments

While answering Assignments, the following guidelines are required to be followed:

You will find it useful to keep the following points in mind:

- i) **Planning:** Read the assignment carefully. Go through the units on which they are based. Make some points regarding each question and rearrange these in logical order.
- ii) **Organisation:** Be a little more selective and analytical before drawing up a rough outline of your answer. In an essay-type question give adequate attention to your introduction and conclusion. The introduction must offer brief interpretation of the question and how you propose to develop it. The conclusion must summarize your response to the question. Make sure that your answer:
 - a) is logical and coherent;
 - b) has clear connection between sentences and paragraphs;
 - c) is written correctly giving adequate consideration to your expression, style and presentation;
 - d) does not exceed the number of words indicated (if any) in your questions.
- iii) **Presentation:** Once you are satisfied with your answers, you can write down the final version for submission, writing each answer neatly and underlining the points you want to emphasize.

2. The following format is to be followed for submission of the assignment:

The top of the first page of your response sheet for each assignment should look like this:

PROGRAMME TITLE :	ENROLMENT No. :
COURSE CODE :	NAME :
COURSE TITLE :	ADDRESS:.....
ASSIGNMENT CODE :	SIGNATURE :
STUDY CENTRE :	DATE :

3. Read instructions for submission of assignments given here. The assignments response sheets should be hand written. However, the software coding, snapshots, test cases, etc. can be in the printed form. Students should not reproduce their answers from the units sent to them by the University. If they reproduce from the units, they will get poor marks for the respective question.
4. The students should write each assignment separately. All the assignments should not be written in continuity.
5. **The students should write the question number with each answer. Photocopy of the submitted assignment is to be retained by the student for his or her own record and future reference, if any.**
6. The students should use only A4 size paper for their response and tag all the pages carefully. Avoid using very thin paper. They should allow a 4-cm. margin on the left and at least 4 lines in between each answer. This may facilitate the evaluator to write useful comments on the margins at appropriate places.

7. **The students should not copy the assignments from others. If copying is noticed, the assignments of such students will be rejected, and disciplinary action will be taken against the students as per rules of the University.**
8. **The completed assignment response should be sent to the Coordinator of the Study Centre. Under no circumstances should they be sent to the SED Division or the School at Headquarters,** for evaluation. After submitting the assignment at the Study Centre in person, the students should get the acknowledgement from the Co-ordinator on the prescribed assignment-cum-acknowledgement card (**Form No. 1**); otherwise, the assignment response should be sent under certificate of posting through post.
9. In case the student has requested for a change of LSC, s/he should submit her/his assignments only to the original LSC until the University effects the change of LSC.

5.3 Guidelines Regarding the Submission of Assignments

1. It is compulsory for the students to submit all the prescribed assignments. They will not be allowed to appear for the term-end examination of a course if they do not submit the specified number of assignments in time for that course.
2. Students should download the latest assignment from the IGNOU website.
3. The assignment responses should be complete in all respects. Before submission, the students should ensure that they have answered all the questions in all assignments. Incomplete answer sheets bring poor grades.
4. The Coordinator of the LSC has the right to reject the assignments received after the due date. Therefore, the students are advised to submit their assignments before the due date.
5. Students should enclose a self-addressed stamped assignment remittance-cum-acknowledgement card (**Form No. 2**) with each assignment response to ensure the delivery of assignments before the last dates prescribed for submission of assignments.
6. In case any student fails to submit the assignments or fails to score minimum qualifying marks, s/he has to wait for fresh assignments meant for the current batch of students.
7. For their own record, students should retain a photocopy of all the assignment responses, which they submit to the Coordinator of their LSC. If they do not get back their duly evaluated assignment within a month after submission, they should try to get it from their LSC personally. This may help them to improve upon future assignments.
8. As per the University norms, once the student's scores pass marks in an assignment, they cannot re-submit it for improvement of marks.
9. Assignments are not subject to re-evaluation except for factual errors, if any. The discrepancy noticed by the students in the evaluated assignments should be brought to the notice of the Coordinator of the LSC, so that he forwards the correct score to the SED at the Headquarters.

- 10 The students should not enclose or express doubts for clarification, if any, along with the assignments. They should send their doubts in a separate cover to the Registrar, SED, Indira Gandhi National Open University, Maidan Garhi, New Delhi - 110 068. While doing so they should give their complete Enrolment number, name, address, programme code.

Note : Please submit your Assignments on or before the due date at your LSC. Always, please check IGNOU website for any instructions regarding submission of Assignments

11. In case of not successfully completed or missed; the assignments should be demanded only if your registration for that course is valid.
12. Assignments should not be demanded to improve your score if you have secured minimum qualifying score in a course.
13. Please do not submit your assignment responses twice either at the same LSC or at different LSC for evaluation.
14. There is no provision for reevaluation of Assignments, practical examination and project evaluation.

5.4 General Guidelines Regarding the Term-End Examination

1. To be eligible to appear the Term-end Examination in any course, the students are required to fulfil the following conditions:
 - a) registration for the courses, in which they wish to appear is valid,
 - b) they should have opted and pursued the prescribed courses
 - c) minimum time to pursue these courses is elapsed
 - d) they have also submitted the required number of assignment(s), if any.
 - e) they have submitted the online examination form of IGNOU and have paid the requisite examination fees.
2. The University conducts term-end examination twice a year, in June and December. The student can take the examination only after the minimum period prescribed for the course of study has elapsed.
3. Examination schedule indicating the date and time of examination which is available at IGNOU website www.ignou.ac.in for each session i.e. June/December.

4. The online examination form is to be filled up from IGNOU website about 2-3 months prior to examination. (You MUST visit IGNOU website for actual cutoff dates. The details of late fee are also displayed on the website.). You are required to pay examination fee per course at the time of filling up of the form. For June 2019 term-end examination this fee was @150/- per course for theory courses and @150/- per course for practical courses. You can pay online using CreditCard / Debit Card /Net Banking while filling up the form. It may also be noted that in case, examination fee needs to be returned to student due to technical reasons, the fee will be refunded to the same account (Credit card/ Debit card/ Net Banking) from which the payment was made.

The link to online Examination form, in general, is put on the HOME page of IGNOU website.

YOU MUST READ and FOLLOW all the instructions very carefully. You can save these instructions for any future reference. These instructions relates to:

- Dates for the Submission of Online Term End Examination form
- Prerequisite for the submission of the Term End Examination Form
- Process to submit Term End Examination Form
- Examination fee and Mode of Payment
- Un-successful Submission of Exam Form
- Related to Refund excess Examination Fee
- Hall Ticket for Term End Examination
- Contact Details

Important Guidelines and instructions for submission of Term End Examination form and other forms (Please note that guidelines and fee for forms may change, therefore, you are advised to read guidelines and fee details as per latest forms available online or on the IGNOU website)

1. Please ensure that you have already submitted the assignments as applicable for the courses you are filling in the Examination Form. You are required to pay examination fee for every course of theory as well as practical.
2. Students are requested to check the result status before filling examination form.
3. Select and enter Programme code and Examination Centre Code from the options available. If the centre opted by the student is not activated as examination centre or not allotted for any other reason, alternative examination centre will be allotted.
4. Select courses carefully. Courses for theory as well as practical need to be selected separately from the list appearing on the screen.
5. Students will be allowed to appear in Term-end Examination for the course(s) for which registration is valid and not time-barred and assignment(s) is/are submitted. Examination Fee once submitted will not be refunded.

6. Students should carry their **Identity Card and intimation slip** (download hall ticket from IGNOU website indicating Centre & Date of Examination) to the Examination Centre.
7. In case a student fails to receive the intimation slip/Hall ticket may please contact at SED (SE-II) <http://www.ignou.ac.in/ignou/aboutignou/division/sed/contact> branch.
8. Students must carry IGNOU Identity-Card in the Examination Hall for writing Examination. In case, students do not have IGNOU Identity card due to various reasons, they must get it issued (i.e. duplicate copy of IGNOU Identity card) from Regional Centre concerned well before the start of the Examination. Students are required to contact the RC in person (by post) and get the duplicate Identity card for attending Examination.
9. The students will be entitled to appear for the examination only at the examination centre allotted to them and **NOT** at any other centre without specific permission from the University. The Examination Centre once opted for in a form shall not be changed.
10. Although all efforts will be made to declare the results in time, there will be no binding on the University to declare the results of the last examination before the commencement of next examination. The students may, therefore, fill up the examination form without necessarily waiting for the result and get it cancelled at a later date, if so desired. In case the student gets result after filling up the exam form, s/he should not re-appear in the course qualified by her/ him with a view to improve the qualified score.
11. Students who fail to complete the minimum required number of course(s) prescribed for the Programme within the allotted period of study shall cease to be on the rolls of this University for that programme till they re-enroll themselves, if they wish to do so. Such students are advised to get in touch with the Regional Director concerned.
12. **Obtaining Photocopy of Answer Scripts:** After the declaration of result, if the students are not satisfied with the marks awarded, they can request the University for Photocopy of Answer Scripts on payment of ₹ 100/- per course. The request for obtaining Photocopy of Answer Scripts by the student must be made within 30 days from the date of declaration of result to the Evaluation Centre concerned in the prescribed format along with the fee of ₹ 100/- per course in the form of Demand Draft in favour of IGNOU payable at the city where submitting the request for Photocopy. Format is available on the IGNOU website: www.ignou.ac.in
13. **Early Declaration of Results:** In order to facilitate the students who have got offer of admission and or selected for employment etc and are required to produce marks-sheet/grade card by a specified given date may apply for early process of their answer-scripts and declaration of the results for this purpose. The students are required to apply in the specified format available on the University website with a fee of ₹ 1000/- per course through Bank Draft drawn in favour of IGNOU along with the attested photocopy of the offer of admission/employment offer. The students can submit their requests for early declaration before the commencement of the Term-end Examination i.e., before 1st

June and 1st December respectively. The University in such cases will make arrangements for processing the answer-scripts and declare the results as a special case.

14. **Re-evaluation of Answer-script(s):** The University has replaced the scheme of rechecking with the re-evaluation whereby the answer-scripts will be re-evaluated by another Evaluator in case the students are not satisfied with the marks/grades secured by them in Term-end Examination. Such students can apply for re-evaluation within one month from the date declaration i.e. the date on which the results are made available on the University Website on payment of ₹750/- per course in the prescribed application form available on the University Website. The better of the two courses or original marks/grades and re-evaluated marks/grades will be considered and the revised marks/grades shall be incorporated in the students' record as applicable and the revised grade card/marks sheet will be sent to the students within one month from the receipt of application. Re-evaluation is not permissible for Projects, Practical, Assignments and Seminars etc.
15. **Improvement of Division/Class:** Keeping the interest of students who have completed their Bachelors Degree and Masters Degree Programmes, but falling short of 2% marks for securing 1st Division/2nd Division the university has made a provision for allowing such students to improve their performance. The improvement is permissible only in theory papers and the students may apply for improvement of their performance on the prescribed application format along with a fee of ₹750/- per course through a Bank Draft drawn in favour of IGNOU payable at Delhi and submit the application and fee to the Registrar, SRE Division, IGNOU, Maidan Garhi, New Delhi. The improvement is not permitted to those students who have completed their maximum duration of the programme. The students will be given only one opportunity to improve the marks/grades and they can apply for improvement a maximum of 25% of the credits for successful completion of the respective programme. However, the ceiling for the number of courses in which the student can improve is five courses. The better of the two examinations i.e., marks already awarded and the marks secured in the improvement examination will be considered.

6. OTHER USEFUL INFORMATION

6.1 Reservation of Seats

The University provides reservation of seats for Scheduled Castes, Scheduled Tribes and Physically Handicapped students as per the Government of India rules.

6.2 Scholarships and Reimbursement of Fee

Reserved Categories, viz., Scheduled Castes, Scheduled Tribes and Physically Handicapped students etc. have to pay the fee at the time of admission to the University along with other students. Physically Handicapped students admitted to IGNOU are eligible for Government of India scholarships. They are advised to collect scholarship forms from the respective State

Government Directorate of Social Welfare or Office of the Social Welfare Officer and submit the filled-in forms to them **through the Regional Director of IGNOU concerned.**

Similarly, SC/ST students have to submit their scholarship forms to the respective State Directorate of Social Welfare or Office of the Social Welfare Officer, **through the Regional Director of IGNOU concerned for suitable reimbursement.**

6.3 Change/Correction of Address

There is a proforma (**Form No. 1**) for change/correction of address available in this programme guide. This form duly filled in is to be submitted to the **Regional Director concerned.** Students are advised not to write letters to any other officer in the University in this regard. Normally, it takes 4-6 weeks to effect the change. Therefore, the students are advised to make their own arrangements to redirect the mail to the changed address during this period.

6.4 Change of Regional Centre and Study Centre

Counselling facilities are not available for all the programmes at all the Study Centres. As such, students are advised to make sure that counselling facilities are available, for the subject s/he has chosen, at the new centre opted for. Request for change of Study Centre is acceded to subject to availability of seats for the programme at the new centre asked for only on compelling grounds. Students are required to get a NOC from the Regional center where they are willing to get themselves transferred in view of the practical sessions involved in CMAD.

When a student wants transfer from one region to another, s/he has to write to that effect to the Regional Centre from where s/he is seeking a transfer marking copies to the Regional Centre where s/he would like to be transferred to and also to Registrar, Student Registration Division (SRD) , IGNOU, Maidan Garhi, New Delhi-110 068. Further, s/he has to obtain a certificate from the Coordinator of the Study Centre from where s/he is seeking transfer from, regarding the number of assignments submitted. The Regional Director from where the student is seeking the transfer will transfer all records including details of fee payment to the Regional Centre where the student is going, under intimation to the Registrar, SRD and the student. The transfer will be permitted only if seats are available at the new Study Centre.

6.5 Procurement of Official Transcripts

The University provides the facility of obtaining official transcripts on request, made by the learners in prescribed application form for official transcript, which provides details of fee, where to apply etc. Link to this form is given in the Section 9.

6.6 Duplicate Grade Card

The learner can apply for obtaining duplicate Grade Card in case the same has been lost/misplaced/damaged, by making a request in prescribed application form for Duplicate Grade card, which provides details of fee, where to apply etc. Link to this form is given in the Section 9 on print of Rs.200/-

6.7 Self instructional Materials of Your Programme of Study

- Self instructional material will be available through eGyankosh, IGNOU

eContent App . No printed course material shall be dispatched.

- You should visit Learner Support Centre (LSC) concerned with ID card for schedule of classes/lab

6.8 Disputes on Admission and other University Matters

In case of any dispute, the place of jurisdiction for filing of a suit/plaint/petition will be only at New Delhi / Delhi.

7. SOME USEFUL ADDRESSES

For your information, the following officers deal with different educational aspects:

(i) Student Registration Related issues	Registrar, SRD, Indira Gandhi National Open University , Maidan Garhi, New Delhi -110068, 011-29532741 (SRD), 1302/1316 (SRD), Email: : registrarsrd@ignou.ac.in
(ii) Exam Centres, Results, Re-checking of answer-scripts, Discrepancies in Result, marks update, etc.	Registrar, SED, Indira Gandhi National Open University , Maidan Garhi, New Delhi -110068, Phone No: 011-29535828/2482 (SED), 011-29572204/2205(SED), FAX No.011-29534429 068
(iii) Admission , Fees, Scholarship,Change of Address/Study Centre/Regional Centre, Change of Course/Programme, Issue of Bonafide Certificate, Migration Certificate, Duplicate Identity Card	Regional Director of the Regional Centre concerned.
(iv) Academic Matters	CMAD Programme Coordinator SOCIS, C-Block, New Academic Complex IGNOU, Maidan Garhi, New Delhi - 110 068 Phone: 011-29572902 Email:CMAD@ignou.ac.in
(v) Administrative and counselling matters missing score of TMAs/Project assignments/Practical assignments, Assessment Sheets	Co-coordinator of your Study Centre/Regional Director of the Regional Centre concerned
(vi) Issue of Degree/ Diploma/ Certificate, Dispatch of returned Degrees, Verification of Degree	Dy. Registrar (Exam-1) Examination –1 Indira Gandhi National Open University, Maidan Garhi New Delhi -110068, Phone No.011-29535438 011-29572224/2213 e-mail exam1@ignou.ac.in
(vii) Issue of Provisional Certificates and Grade Cards	Dy Registrar (Exam-3) Phone No: 011-29536743; Intercom No. 2201

(ix) Declaration of pending results of TEE, Incorporation of practical marks, Verification of provisional certificate and grade card, Issue of transcripts	Dy. Registrar (Exam-3) Phone No: 011-29536103/6743 011-29572201/2211
(x) Non incorporation of assignment marks	Assistant Registrar (Assignment) Phone No: 011-29532294 Intercom No. 1319/1325 E-mail: assignments@ignou.ac.in
(xi) Online students grievances Portal	http://igram.ignou.ac.in/
(xii) Students' General Enquiries	Student Support Centre Indira Gandhi National Open University, Maidan Garhi New Delhi -110068, Phone: 011-29535714, 29572512, 29572514, 29533869 and 29533870 e-mail : ssc@ignou.ac.in

Telephone numbers of the Divisions/ Schools are also provided on the website under the “Contact Us” option. Students are advised to be in touch with their LSCs for advance/timely/day-to-day information or visit the website with URL www.ignou.ac.in

8. LINK TO OLD QUESTION PAPERS

For the first admission for CMAD, therefore, the old question papers may not be available for the first batch students. However, for next batches, the following is the process of downloading the question papers from IGNOU website:

Visit the IGNOU website at URL: <http://www.ignou.ac.in> and select the Download Button on IGNOU web site. On this Download Page select *Question Papers* link. The following page will be displayed (please note that URL of this page is: <https://webservices.ignou.ac.in/Pre-Question/>

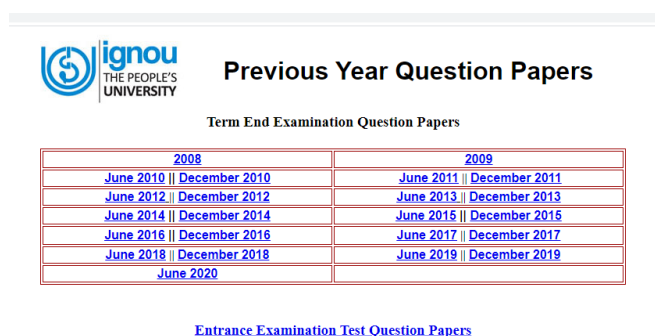


Figure 4: The Previous Year Question papers of IGNOU

Select the year of Question paper, this will display School wise list of Question papers, as the list is large you may use *find on page* option of your browser to find CMAD old question

9. LINKS TO FORMS AND ENCLOSURES

In this section, we are enclosing the IGNOU website links to various forms, which are useful for you. Whenever you have to correspond with the university, please download the form from the Website and fill it carefully and send as per instructions therein. The detailed instructions for all these-forms are provided in form itself. Some of these links may change, in those cases please use search option to find the desired link.

Note: You must Download the Forms from the Website

Forms and Useful links

- *Change of Address (Form No. 1)*
- *Assignments Remittance-Cum-Acknowledgement Card (Form No.2)*
- *Link to Latest Assignment(s)*
- *Link to Online Term end Examination form*
- *Link to form for early declaration of result*
- *Link to form for obtaining photocopy of the answer script*
- *Link to form for Re-evaluation of Answer script*
- *Link to Application form for improvement in Division/Class*
- *Link to form for obtaining Duplicate Grade Card / Mark-sheet*
- *Link to form for issue of Official Transcript*
- *Link to form for issue of Migration Certificate*

Change of Address (Form 1) You may also check online form for this.

Assignments related links

Assignment Remittance-cum-Acknowledgement (Form 2)

Link to Latest Assignment(s)

<https://webservices.ignou.ac.in/assignments/CMAD/CMAD%20%202021%20Assignments.pdf>

Term end Examination and related links

Link to online Term End Examination form

<https://exam.ignou.ac.in/>

Link to form for Early Declaration of Result

<http://www.ignou.ac.in/userfiles/APPLICATION%20FORM%20FOR%20EARLY%20DECLARATION%20OF%20RESULT%20OF%20TERM-END%20EXAMINATION.pdf>

Link to Application Form for Obtaining Photocopy of the Answer Script

<http://www.ignou.ac.in/userfiles/Application%20Form%20for%20obtaining%20photocopy%20of%20the%20answer%20script.pdf>

Link to form for Re-evaluation of Answer script

<http://www.ignou.ac.in/userfiles/Application%20form%20for%20Reevaluation%20of%20Answer%20Scripts.pdf>

Link to Application form for Improvement of Division/Class

<http://www.ignou.ac.in/userfiles/Improvement%20form.pdf>

Link to form for Duplicate Grade Card/Mark-sheet

<http://www.ignou.ac.in/userfiles/Duplicate%20mark%20sheet%20form.pdf>

Link to form for Issue of Official Transcript

<http://www.ignou.ac.in/userfiles/Official%20Transcript%20form.pdf>

Link to form for Issue of Migration Certificate

<http://ignou.ac.in/userfiles/Migration%20Certificate.pdf>



Form No. 1

(For Change of Address, send it duly filled-in to the concerned Regional Director, who will forward it to the Registrar (SRD), Maidan Garhi, New Delhi after verification)

Application for Change of Address

Date: _____

To

The Regional Director
IGNOU Regional Center

THROUGH THE REGIONAL DIRECTOR CONCERNED

Enro _____ lment No. _____
Progr _____ amme _____
Name _____ (in caps) _____

1. DETAILS FOR CHANGE/CORRECTION OF MAILING ADDRESS

New Address

Old Address

City _____ Pin _____

City _____ Pin _____

State _____

State _____

Signature of the Student

Please retain a photocopy of any matter that you submit to the University.

Form No. 2

**ASSIGNMENTS REMITTANCE -CUM-
ACKNOWLEDGEMENT CARD**

Enrol. No. _____ Programme Title: _____ Name : _____ C			INDIRA GANDHI NATIONAL OPEN UNIVERSITY ASSIGNMENTS REMITTANCE -CUM-ACKNOWLEDGEMENT CARD		
Enrol. No. _____ Name : _____ Course Code: _____		Programme Title: _____ Medium : _____ For Office Use Only			
S.No.	Assignment No.	For Office Use Only			
		S .No. _____			
		Date of Receipt: _____			
		Name of Evaluator: _____			
Signature of the Student Date : _____		Date of despatch to the Evaluator: _____ Date of receipt from the Evaluator: _____			
Signature of the Student _____ Name : _____ Address of the Student : _____ Date : _____ (Please write your complete address and affix adequate postal stamp on reverse)					
		Signature of the receiver _____ Date : _____ Seal			

Affix
Stamp
Here

From:

The Coordinator
STUDENT)
Study Centre concerned

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To

(ADDRESS OF THE

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QR Code of Some of the Useful Web Links



eGyankosh (for Course Materials) Webcast



iGRAM (IGNOU Grievance Redress and Management System)