

PROGRAMME GUIDE

Certificate Programme in Teaching of Primary School Mathematics (CTPM)



**School of Sciences
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110068
ctpm@ignou.ac.in**

RECOGNITION

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Further information on Indira Gandhi National Open University courses may be obtained from the University's office at Maidan Garhi, New Delhi-110 068.

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CONTENTS

	Page No.
1. ABOUT THE UNIVERSITY	4
Course Preparation	4
Credit System	4
Support Services	4
Programme Delivery	5
Change/Correction of Address and Study Centre	5
Change of Region	5
Disputes	5
2. ABOUT THE PROGRAMME	6
Teaching of Primary School Mathematics	6
Learning Mathematics	8
3. ASSESSMENT	9
Assignments	9
Term-end Examination	11
Project Evaluation	12
Re-registration	12
Credit Transfer	12
4. SAMPLES OF USEFUL FORMS	13-16

1. ABOUT THE UNIVERSITY

Welcome to the Indira Gandhi National Open University, which was established by an Act of Parliament in 1985. The chief aim of the University is to give every adult an opportunity to study courses of various kinds without having to go out of the home. We offer need-based academic programmes including professional and vocational programmes and general awareness programmes to all adults, irrespective of region or formal qualifications. Most of these programmes have been developed after an initial survey of the demand for such studies. They have been created with a view to fulfil the learner's needs for:

- certification,
- improvement of skills,
- acquisition of professional qualifications,
- continuing education and professional development at the workplace,
- self-enrichment.

Some of the **special features** are:

- Relaxed entry regulations.
- Study according to your own pace and convenience.
- Study from your own chosen place. (If you so require you can change the study centre you have opted for to any other centre where the programme is available.)
- You may also pursue your study in any other university while being a learner of IGNOU.

Let us look at a few aspects in detail.

1.1 Course Preparation

Learning materials are specially prepared by teams of experts drawn from different institutions and universities all over the country, as well as in-house faculty. Similarly, audio and video cassettes are produced in consultation with course writers, in-house faculty and producers. The material, thus prepared is previewed and reviewed by the faculty as well as outside media experts. It is edited or modified, wherever necessary, before it is finally despatched to the study centres, Doordarshan and AIR.

1.2 Credit System

The University follows the 'Credit System'. Each credit in our system is equivalent to 30 hours of student study time. Thus, an 8-credit course involves 240 study hours. This study time includes the time taken for reading and comprehending the print material, listening to audio, watching video, attending counselling sessions, writing assignments, and undertaking project work, wherever required.

1.3 Support Services

In order to provide individualized support to you, the University allots you to a study centre, which is coordinated by the regional centres you are attached to. At the study centre you would have counselling sessions with the academic counsellors, refer to books in the library, watch/listen to video/audio cassettes and interact with the Coordinator on administrative and academic matters.

1.4 Programme Delivery

The methodology of instruction in this university is different from that of the conventional universities. The open university system is more learner-oriented – the learner is an active participant in the teaching and learning process. So, most of the study is done by you on your own, studying specially designed materials, not through face-to-face communication.

The University follows a multi-media approach for instruction. It consists of:

- a) **Self-instructional Printed Material:** The printed study material (written in self-instructional style) is supplied to you in batches of blocks for every course (on an average 1 block per credit). A block, which comes in the form of a booklet, usually contains 3 to 5 units.
- b) **Audio-visual Material Aids:** The learning package also contains audio and video cassettes which have been produced by the University. A video programme is normally 25-30 minutes long. The audio tapes are run and video cassettes are screened at your study centre during specific sessions, which are scheduled by the coordinator of the study centre.
- c) **Counselling Sessions:** Normally counselling sessions are held according to a schedule drawn up by your study centre coordinator, usually during week-ends.
- d) **Practicals/Project Work:** Some programme have practical/project components. For project work, apart from a printed Project Guide, counsellors at the study centres will provide the necessary guidance.

1.5 Change/Correction of Address and Study Centre

There is a printed form for change/correction of address and change of study centre which is in this Guide. In case there is any correction/change in the address or a change of study centre is desired, you are advised to make use of the form addressed to SR Division, Maidan Garhi, New Delhi – 110 068. **You 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, you are advised to make your own arrangements to redirect the mail to the changed address during this period. Request for change of study centre is normally granted subject to availability of a seat for the programme at the new centre asked for. Change of address and study centre is not permitted until admissions are finalized.**

1.6 Change of Region

If you want a transfer from one region to another, you have to write to this effect to the Regional Centre from where you are seeking a transfer, marking copies to the Regional Centre where you would like to be transferred to. A copy should also be sent to the Registrar, SR Division, IGNOU, Maidan Garhi, New Delhi – 110 068, for effecting the change. Further, you have to obtain a certificate from the Coordinator of the Study Centre from where you are seeking a transfer regarding the number of assignments submitted. The Regional Director from where you are seeking the transfer will transfer all records, to the Regional Centre where you are going, under intimation to the Registrar, SR Division and you.

1.7 Disputes

Regarding any disputes on University matters, the place of jurisdiction for filing a suit, if necessary, will only be at New Delhi/Delhi.

2. ABOUT THE PROGRAMME

Most people, children or adults, usually read mathematics. Why does this happen? We believe that the problem is due to the way mathematics is usually taught from early school on. In this awareness level, practical-oriented programme we look at ways in which we can teach mathematics to children, so that they feel mathematics is their friend!

This programme consists of two courses. Both the courses are built around detailed examples of ways of communicating mathematical concepts/processes/skills to children upto the age of 10. Thus, the programme is aimed at **pre-primary and primary school teachers, as well as parents of young children.**

PROGRAMME OBJECTIVES

- a) To help primary school teachers to critically look at their mathematics teaching strategies and alter them to suit their students' backgrounds.
- b) To increase the teachers' awareness about the nature of mathematics and the need to learn it.
- c) To refresh the teachers about the acquisition and learning process, in the context of mathematics learning.
- d) To make teachers aware of various interactive teaching strategies and techniques for teaching mathematics.
- e) To make the discourse of mathematics teaching available to a wider section of society by exposing them to the need for giving a meaning and context while learning or teaching mathematical concepts/processes/skills.

DURATION

You can take anywhere from 6 months to 2 years to do the programme.

MEDIUM OF INSTRUCTION: English and Hindi

PROGRAMME STRUCTURE

CTPM consists of two courses, each worth 8 credits. You should first study the course 'Teaching of Primary School Mathematics' (AMT-01), consisting of 5 blocks, an assignment booklet (which may be downloaded from the IGNOU website, www.ignou.ac.in) and a **project guide**. You are expected to start work on your **project, worth 2 credits**, after studying most of this course.

The second 8-credit course 'Learning Mathematics' (LMT-01) comprises 6 blocks.

The details of the courses are given below:

- 1) **Teaching of Primary School Mathematics (AMT-01)*** **8 credits**

This is an awareness level practical-oriented course, **which does not require any mathematics electives as a pre-requisite**. It aims to expose you to various ways in which mathematics can be taught to children upto the age of 10. **It is aimed at parents, pre-school and primary school teachers, and others who are interested in teaching children of this age group.**

**(Also available under the Associate Studentship Scheme)*

This course is built around detailed examples of ways of communicating certain mathematical concepts/skills/processes for the primary school syllabus to the children. They include ways of teaching concepts that adults usually find difficult to understand and those that children take longer to understand. They provide several interesting activities for children also.

The course is presented in **5 blocks**, which include several exercises and small activities for you. After going through these blocks, you have to do **2 credits worth of project work**. You will be sent a **project guide** to help you with this component of the course.

The details of the five blocks are:

Block 1: Aspects of Teaching Mathematics

- Unit 1 Why Learn Mathematics?
- Unit 2 Knowing Your Learner
- Unit 3 Helping Children Learn Mathematics
- Unit 4 Classroom Practice

Block 2: Numbers (I)

- Unit 5 Learning to Count
- Unit 6 Ones, Tens and More
- Unit 7 Addition and Subtraction
- Unit 8 Multiplication and Division

Block 3: Numbers (II)

- Unit 9 Negative Numbers
- Unit 10 Generalising Arithmetic to Algebra
- Unit 11 Developing Language

Block 4: Fractions

- Unit 12 Fractions of Which Whole
- Unit 13 Types of Fractions
- Unit 14 Operations with Fractions
- Unit 15 Decimals

Block 5: Measurement

- Unit 16 Developing Spatial Concepts
- Unit 17 Measuring Size
- Unit 18 Measuring Angles
- Unit 19 Measuring Time

Project Guide

Audio Programme

1. Learning Mathematics Can Be Fun

Video Programme

1. Doing Your Project part I
2. Doing Your Project part II

2) Learning Mathematics (LMT-01)

8 credits

This course looks more deeply into the issues brought up in AMT-01. While creating it, we have assumed that you have already studied AMT-01. Therefore, you must study this course only after you finish the blocks of AMT-01. You may do the project of AMT-01 alongside studying this course.

The course material comprises six blocks and video programmes, as detailed below:

Block 1: Approaches To Learning

- Unit 1 Thinking About Learning
- Unit 2 Thinking About The Learner
- Unit 3 Constructivist Approaches To Learning

Block 2: Encouraging Learning in the Classroom

- Unit 4 Constructive Classroom Processes
- Unit 5 Building a Constructivist Classroom
- Unit 6 On Learning Mathematics
- Unit 7 Learning Through Activities

Block 3: Data and Chance

- Unit 8 Learning to Handle Data
- Unit 9 Learning to Interpret Data
- Unit 10 Learning About Chance

Block 4: On Spatial Learning

- Unit 11 Children's Spatial Abilities
- Unit 12 Reading Pictures – Relating 2D with 3D
- Unit 13 Understanding Maps

Block 5: Exploring Numbers

- Unit 14 Working With Fractions
- Unit 15 Working With Decimal Fractions
- Unit 16 Exploring Number Systems

Block 6: Thinking Mathematically

- Unit 17 The Essence of Mathematics
- Unit 18 Exploring Mathematics
- Unit 19 Symmetry and Patterns

Video Programme

1. Mathematics Comes Alive (In The Primary Classroom)
2. Working Mathematically (In The Primary Classroom)

Counselling

Counsellors will be available at your study centre according to a schedule made by the coordinator of the study centre. The counsellor is there to **facilitate your self-study**. Thus, if there is a problem that you face while studying, you can ask your counsellor for help in sorting it out. **The counsellor will not give lectures.**

Your counsellor will also provide you with valuable **advice regarding your project work**. For details, please see your Project Guide.

3. ASSESSMENT

As you go through the study material, the exercises given in it allow you to assess your own understanding and attitude. Apart from this, in AMT-01 the weightage of marks is 25% for the assignment, 50% for your term-end exam and 25% for your project work. For the course LMT-01, the weightage is 30% for the assignment and 70% for the term-end exam. You have to pass (i.e., get 35% or more) in **each of these components** to successfully complete the programme.

3.1 Assignments

Assignments constitute a continuous evaluation component of a course. As noted above, the marks that you get in your assignments will be counted in your final result. Therefore, you are advised to take your assignments seriously.

You have to complete the assignments in time. You will not be allowed to appear for the term-end examination for a course if you do not submit the assignment response in time for that course. If you appear in the term-end examination without submitting the assignments, then the result of the term-end examination is liable to be cancelled.

The main purpose of assignments is to help you and us assess your grasp of the learning material. The information given in the printed course material should be sufficient for answering the assignments. Please do not worry about the non-availability of extra reading material for working on the assignments. However, if you have easy access to other books, you may make use of them. But the assignments are designed in such a way as to help you make connections between the printed course material and your personal experience. **The assignments are available on the IGNOU website.**

Please submit your assignments well before the due date, to the Coordinator of your Study Centre. The University/Coordinator of the Study Centre has the right to reject the assignments received after the due date.

For your own record, **retain a copy of all the assignment responses which you submit to the Coordinator of your Study Centre.** If you do not get back your evaluated assignments along with the comments on them within a month after submission, please ask your study centre coordinator for them. This may help you to improve upon future assignments. Also maintain an account of all these corrected assignment responses received by you after evaluation. This will help you to represent your case to the University in case any problem arises.

In case you are unable to submit the assignment responses or to pass in them, **you have to wait for the assignments meant for the next batch of students**, and then submit responses to them. You can download the fresh assignment from the IGNOU website.

Once you pass in an assignment, you cannot resubmit it for improvement of grade. Assignments are not subject to re-evaluation except for factual errors, if any.

Send your doubts, if any, about your assignment marks in a separate cover to the Registrar (SED), IGNOU, Maidan Garhi, New Delhi – 110 068. When doing so give your Enrolment No., name, address and title of the course on top of your envelope.

SPECIFIC INSTRUCTIONS

1. Write your Enrolment number, name, full address, signature and date on the top right hand corner of the first page of your response sheet.
2. Write the programme title, course code, course title, Assignment code and name of your study centre on the left hand corner of the first page of your response sheet.

The Course code and Assignment code may be reproduced from the Assignment.

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

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

3. Read the assignments carefully and follow the specific instructions, if any, given on the assignment itself.
4. Go through the units on which the assignments are based. Make some points regarding the questions, rearrange those points in a logical order and draw up a rough outline of your answer. Make sure that **the answer is logical and coherent**, and has clear connections between sentences and paragraphs. The **answer should be relevant to the question** given in the assignment. Make sure that you have attempted all the main points of the question. Once you are satisfied with your answer, write down the final version neatly and underline the points you wish to emphasise.
5. Use only foolscap size paper for your responses and tie all the pages carefully. Avoid using very thin paper. Leave a 4cm 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.

6. Write the response in your own hand. Do not print or type the answers. Do not reproduce your answers from the units sent to you by the University. If you reproduce from units, you will get poor marks for the respective question.
7. Do not copy from the response sheet of other students. If copying is noticed, the assignments of such students will be rejected.
8. Write the question number with each answer.
9. **The completed assignments should be sent to the Coordinator of the Study Centre allotted to you. Under no circumstances should you send the response sheets to the Student Evaluation Division at Headquarters for evaluation.**
10. After submitting the assignment at the study centre, **get the acknowledgement from the study centre** Coordinator.
11. In case you have requested for a change of study centre, you should submit your assignments only to the original study centre until the change of study centre is effected by the University.

3.2 Term-End Examination

The University conducts term-end examinations twice a year, i.e., in June and December. You can take the examination after the completion of the course. In case you fail to get a pass score (35% marks) in the term-end examination, you will be eligible to reappear at the next term-end examination for that course as and when it is held, within the period in which your registration in the programme is valid.

To be eligible to appear in the term-end examination in any course, you are required to ensure the following:

1. You have paid the course fee.
2. You have submitted the assignment response for the course.
3. You have submitted the examination form in time and paid the examination fee.

The filled in examination form is to be submitted online. For the latest information regarding dates for submission of examination forms and the fee please check the IGNOU website. The examination form received after the due date or without late fee (wherever applicable), shall be rejected. The examination fee, once paid, is not refundable, nor adjustable.

The examination date sheets (i.e., the schedule which indicates the date and time of the examination for each course) are uploaded on the IGNOU website.

Hall Ticket for Term End Examination

- No hall ticket shall be despatched to you. The Hall Tickets will be uploaded on the University website (www.ignou.ac.in) 7-10 days before the commencement of the T.E. Examinations.
- You should take a print out of the Hall Ticket after entering the enrolment number and name of the programme of study, and report at the examination centre along with the Identity Card issued to you by the Regional Centre/University. You will not be permitted to appear in the examination without the valid IGNOU Student ID Card.

- In case, you misplace the Identity Card issued by the University, you can download a duplicate Identity Card from the IGNOU website.

Your study centre is normally your examination centre. A change of examination centre is permissible in exceptional cases and for this you have to make a request to the Registrar, Student Evaluation Division at least one month before the commencement of examinations.

Your enrolment number is your Roll Number for examinations. Be careful in writing it. Any mistake in writing the Roll number will result in non-declaration of your result.

It is your duty to check whether you are registered for that course and whether you are eligible to appear for that examination or not. If you neglect this and take the examination without being eligible for it, your result will be cancelled.

Your study centre is the contact point for you. The University cannot always send communications to all the students individually. All the important communications are sent to the Coordinators of the Study Centres and Regional Directors. The coordinators would display a copy of such important circular/notification on the notice boards of the study centre for the benefit of all the students. You are, therefore, advised to get in touch with your Coordinator for day-to-day happenings so as to get advance information about assignments, submission of examination forms, date sheet, list of students admitted to a particular examination, declaration of result, etc.

While communicating with the University regarding examinations, please clearly write your enrolment number and complete address. In the absence of such details, we may not be able to attend to your problems.

3.3 Project Evaluation

Please **read the Project Guide** of AMT-01 carefully before doing your project, and again before submitting your project report. The report should be submitted, along with

1. Forms B and C (given in the Project Guide)
2. A copy of the Project Proposal and Form A

to:

The AR(Projects),
Student Evaluation Division,
Indira Gandhi National Open University,
Maidan Garhi, New Delhi – 110 068.

You will receive the evaluation result within 3 months of submitting the report.

3.4 Re-registration

In case you do not successfully complete the two courses within two years. You may re-register for the course(s) still not cleared.

3.5 Credit Transfer

If you have already successfully completed the course AMT-01 under the Associate Studentship Scheme, you can apply for a credit transfer of these credits. The same is true if you have

successfully completed AMT-01 as part of the Bachelor's Degree Programme, but haven't received certification for it.

For credit transfer, you should apply directly to the Registrar (SRD), IGNOU, Maidan Garhi, New Delhi – 110 068, in the prescribed form (available on the website) enclosing the following items:

- a) A demand draft for the required fee, drawn in the name of IGNOU and payable at New Delhi;
- b) Attested copy of your AMT-01 grade card.

4. SOME FORMS FOR YOUR USE

We are enclosing the samples of the following forms for your use. All the other forms are available on the IGNOU website.

1. Intimation of Non-receipt of Study Material (Form No.1)
2. Change/Correction of Address and Study Centre (Form No. 2)
3. Form for Provisional Certificate (Form No.3)

You are also advised to get in touch with the **Coordinator of your study centre** for timely information.

For the latest list of study centre in your region please see the website of IGNOU Regional Centre for your region.

To,
Registrar, MPDD,
IGNOU,
Maidan Garhi

Sub: Non-receipt of Study Material

Enrolment No.

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Programme

Medium of Study

I have not received the Study Material/Assignments in respect of the following:

Sl. No.	Course Code	Blocks	Assignments
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I have remitted all the dues towards the course fee and there is NO CHANGE in any address given as follows:

Name and Address:

.....

.....

.....

.....

Signature:

Date:

For Official Use

Date of despatch of study material to students.

APPLICATION FOR CHANGE OF ADDRESS AND STUDY CENTRE

Date: _____

To,
Regional Director concerned

Enrolment No. _____

Programme _____

Name (in caps) _____

DETAILS FOR CHANGE/CORRECTION OF MAILING ADDRESS

New Address

Old Address

City _____ Pin _____

City _____ Pin _____

State _____

State _____

DETAILS FOR CHANGE OF STUDY CENTRE

New Study Centre	Old Study Centre
Study Centre Code _____	Study Centre Code _____
_____ _____	_____ _____
_____ _____	_____ _____
City _____ Pin _____	City _____ Pin _____
State _____	State _____

Date: _____

 Signature of Student

**Indira Gandhi National Open University
Student Evaluation Division
Maidan Garhi, New Delhi – 110 068**

APPLICATION FORM FOR ISSUE OF PROVISIONAL CERTIFICATE

Enrolment No.

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Programme Title

Name: _____

Father's name: _____

Month and year of last examination in which you have completed the Programme

Mailing address

.....

.....

.....

Please write the names of the course(s) successfully completed and enclose a copy of your complete grade card.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

.....
Signature

Date:

The filled in form to be sent to:

**The Registrar
Student Evaluation Division
Indira Gandhi National Open University
Maidan Garhi
New Delhi-110 068**

Some Useful Contact Addresses

1.	Identity Card, Fee Receipt, Bonafide Certificate, Scholarship Forms, change of name, correction of name address	Regional Centre Concerned
2.	Non-receipt of study material	Registrar (MPDD), Block 10, IGNOU, Maidan Garhi
3.	Change of Elective/Medium	Regional Centre Concerned
4.	Schedule/Information regarding Exam Form, Entrance Test, Date-sheet, Hall Ticket	Assistant Registrar (Exam-II), SED, Block-12, Room No. 2, IGNOU, Maidan Garhi, New Delhi – 110068 E-mail: sgoswami@ignou.ac.in or jitenderkr@ignou.ac.in Ph.: 29572202, 29572209
5.	Results, Re-evaluation, Grade Card, Provisional Certificate, Early Declaration of Result, Transcript, etc.	Section Officer Email: cpresult@ignou.ac.in Ph.:011-29572208, 011-29536405
6.	Non-reflection of Assignment Grade/Marks	Assitant Registrar, SED, Block-3, Room No.12, IGNOU, Maidan Garhi, New Delhi – 110068 E-mail: assignments@ignou.ac.in Ph.: 011-29571313, 011-29571319, 011-29571325
7.	Status of Project Reports of all programmes	Assistant Registrar (Project), SED, IGNOU, Maidan Garhi, New Delhi – 110068 Ph.: 29571324/29571313/29571321 E-mail: projects@ignou.ac.in
8.	Original Degree/Diploma/Verification of Degree/Diploma	Assistant Registrar (Exam-I), SED, Block 9, IGNOU, Maidan Garhi, New Delhi – 110068 Ph.: 29535438, 29572224, 29572213 E-mail: convocation@ignou.ac.in
9.	Re-admission and Credit Transfer	Student Registration Division, Block No. 1 & 3, IGNOU, Maidan Garhi, New Delhi – 110068
10.	Student Grievances (SED)	Asstt. Registrar (Student Grievance), SED, Block 3, Room No. 13, IGNOU, Maidan Garhi, New Delhi – 110068 E-mail: sedgrievance@ignou.ac.in Ph.: 29532294, 29572218, 29571313
11.	Purchase of Audio/Video Tapes	Marketing Unit, EMPC, IGNOU, Maidan Garhi, New Delhi – 110068
12.	Academic Content	Director, School of Sciences, Email: directorsos@ignou.ac.in
14.	Submission of AMT Project Report	Asstt. Registrar, (Projects), SED, Block-12 Ph. : 011-29571321 E-mail: projects@ignou.ac.in
15.	Student Support Services and Student Grievances, pre-admission Inquiry of various courses in IGNOU	Director, Student Service Centre, IGNOU, Maidan Garhi, New Delhi-110068 E-mail: ssc@ignou.ac.in Ph. No.: 011-29572514