



# TAMIL NADU OPEN UNIVERSITY

## School of Education

### CERTIFICATE PROGRAMME ON MODERN TECHNIQUES AND TECHNOLOGY IN TEACHING

Modern Teaching Techniques have been spread all over the world, which is useful and easy for teachers. Certificate in Modern Techniques and Technology in Teaching programme educates children well and make them understand clearly. In this contemporary era, there is an increased usage of the internet in educational applications; this could mean that students and teachers will increasingly make use of technology within open and flexible learning systems. Technology plays an important role in enhancing and developing our learning system. Intended outcomes as well as unintended results of using Modern Teaching Techniques for teacher professional development need to be explored. Modern Teaching Technologies facilitate teaching and learning process in more productive fashion. Certain skills and capabilities of using different Modern Teaching Technologies are necessary for students as well as teachers. Therefore it is necessary to introduce the learners for the age of Modern Teaching Technology.

#### **Programme Objectives**

While studying the Certificate Programme, the student shall be able to:

- Understand the basic psychology of studying behaviour of students while adopting innovative teaching techniques and technologies
- Discuss the application of modern teaching methods with examples.
- Adopt the recent trend in utilising the online/web media for associating with teaching learning process
- Know the various Micro Teaching Techniques with adopting innovative online teaching tools
- Understand teaching and learning process in applying modern teaching and developing curriculum and assessment and evaluation with utilising the modern teaching techniques and technology.

## Programme Outcomes

After completion of the Certificate Programme, the student will be able to:

- Knowledge in psychology balance in the studying behavior in applying the modern teaching tools in teaching learning process
- Practice in applying the innovative online teaching and learning tools in the emerging situation.
- Demonstrate the latest ICT facilities introducing in the teaching and learning process and to overcome the hurdles in the implementation process.
- Apply the new technological methods in the Micro Teaching Methods in the teaching and learning process in the recent era
- Implement the developing curriculum methods, technology-enabled assessment and evaluation strategies with support of technology to capitalize on student learning process

<b>Eligibility</b>	:	+2 and above
<b>Medium of Instruction</b>	:	English.
<b>Duration</b>	:	Minimum 6 months and Maximum 1 year
<b>Fee Structure</b>	:	Rs. 1500 /-

## Programme Details

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>
CMTT- 01	Psychology in Modern Era	3
CMTT- 02	Modern Techniques in Teaching	3
CMTT- 03	Recent Trends in Technology in Teaching	3
<b>Total Credits</b>		<b>9</b>

**Examination System:** Theory Examinations will be conducted by the University in the Identified Centres. The assignment for each course should be submitted to the respective Learning Support Centres, which will be evaluated by the evaluators appointed by the University.

## Assignment for each Course

### Assignment 1:

Answer any one of the questions not exceeding 1000 words	Max – 15 Marks
Question 1	
Question 2	
Question 3	

### Assignment 2:

Answer any one of the questions not exceeding 1000 words	Max – 15 Marks
Question 1	
Question 2	
Question 3	

**Theory Examination:** Students shall normally be allowed to appear for theory examination by completing Assignment. The Term-End Examination shall carry Sections: A, B and C.

Section-A	Very Short-Answer Questions [Each 3- Marks] Three out of Five Questions	3 x 3 = 9 Marks
Section-B	Short-Answer Questions [Each 7 - Marks] Three out of Five Questions	3 x 7 = 21 Marks
Section-C	Long-Answer Questions [Each 10- Marks] Four out of Seven Questions	4 x 7 = 40 Marks
<b>Total</b>		<b>70 Marks</b>

### Awarding Continuous Internal Assessment (Maximum 30 marks):

Submission and Evaluation of Assignments	<b>15 Marks (Compulsory)</b>
Attending in Academic Counselling Classes at LSCs/SCs (50% of Attendance may be considered for maximum marks)	<b>15 Marks</b>
<b>Total</b>	<b>30 Marks</b>

### **Scheme of Evaluation**

Continuous Internal Assessment	<b>30 Marks</b>
Theory Examinations	<b>70 Marks</b>
<b>Total</b>	<b>100 Marks</b>

**Passing Minimum:** The passing minimum is 25 marks out off 70 marks in the external (Theory) Examination and minimum 10 marks out off 30 marks in the Continuous Internal Assessment (CIA), overall 40 percent for successful completion of each course.

**Classification of Successful Candidate:** Candidates who pass all the Courses and who secure 60 percent and above in the aggregate of marks will be placed in the first class. Those securing 50 percent and above but below 60 percent in the aggregate will be placed in the second class. Those securing 40 percent and above but below 50 percent in the aggregate will be placed in the third class.

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**COURSE TITLE** : **PSYCHOLOGY IN MODERN ERA**  
**COURSE CODE** : **CMTT - 01**  
**COURSE CREDIT** : **3**

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**COURSE OBJECTIVES**

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While studying Psychology in modern era, the student shall be able to:

- Know the basic psychology of education and its methods in studying behavior of learners
  - Describe how behavior and development are used to understand child, adolescence and individual behavior
  - Understand the fundamentals of learning, and its theories in the educational implication.
  - Comprehend the type of learning disability in relation to the impairment and to identify the higher intellectual capability
  - Make out the theories of emotion and intelligence, stress and anxiety
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**COURSE OUTCOMES**

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After completion of Psychology in modern era, the student will be able to:

- Knowledge in basic psychology of education in the applying it practical manner
  - Pertained the behavior and development in individual behavior such as child and adolescence
  - Gained knowledge of learning, and its theories and how to take the same into educational implication
  - Understood the different learning disability and apply the tools of higher intellectual capability
  - Applied the theories of emotional intelligences in society
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**BLOCK 1**      **EDUCATIONAL PSYCHOLOGY**  
**UNIT – 1 – Basics in Psychology**

Definition - Nature - Scope - Schools of Psychology- Branches of Psychology.

## **UNIT – 2 – Basics in Educational Psychology**

Definition - Nature - Scope - Educational Psychology as a Science.

## **UNIT – 3 – Methods of Educational Psychology**

Methods of Studying Behaviour- introspection – Observation - Experimental - Differential–Psycho Physical.

### **BLOCK 2      GROWTH AND DEVELOPMENT**

#### **UNIT – 4 – Developmental stages**

Meaning - stages - Mental - Emotional - Social Development during childhood and adolescence.

#### **UNIT – 5 – Individual Differences**

Meaning - Significance - Causes - Distribution - Determinants - Individual differences in Schools.

#### **UNIT – 6 – Growth & Development Theories**

Cognitive Development - Piaget's Cognitive Development Theory - Vygotsky's Zone of Proximal Development - Language Development - Erickson's Theory of Psycho-social Development - Kohlberg's Theory of Moral Development .

### **BLOCK 3      LEARNING**

#### **UNIT – 7 – Basics of Learning**

Concept - characteristics - Attention - Perception - Motivation - learning process - learning curve.

#### **UNIT – 8 – Theories of Learning 1**

Trial and Error - Classical Conditioning- Operant Conditioning.

#### **UNIT – 9 – Theories of Learning 2**

Lewin's Field Theory - Bandura's Social Learning - Transfer of Learning.

### **BLOCK 4      INTELLIGENCE & CREATIVITY**

#### **UNIT – 10 – Intelligence**

Meaning-Theories: Two Factor theory (Spearman); Multi Factor Theory, Guilford Model of Intellect-Measurement of Intelligence (two verbal and two non verbal tests).

### **UNIT – 11 – Creativity**

Meaning – characteristics - difference between creativity and intelligence - role of teacher in developing creativity - Methods of developing creativity. Theories of creativity: Taylor's psychoanalytic and Ariet's theory of creativity. Assessment methods for creativity.

### **UNIT – 12 – Motivation**

Concept of Motivation - Achievement Motivation- Factors affecting Motivation- Theories of Motivation: Physiological Theory, Murray's Need Theory, Maslow's Theory of Hierarchy of Needs.

## **BLOCK 5 PERSONALITY AND POSITIVE PSYCHOLOGY**

### **UNIT – 13 – Self- Development Skills**

Introduction to Personality – Self-Esteem and Self Confidence- Thinking and Problem Solving Skills-Stress Management-SWOT Analysis and Goal-Setting.

### **UNIT – 14 – Interpersonal Skills**

Hard Skills and Soft Skills- Effective Communication-Skills for successful interview – Leadership-Social Empathy.

### **SUGGESTING READING**

- **Bhatia & Bhatia (1981)** Textbook of Educational Psychology, Doaba House, Delhi.
- **Chatterjee S. K. (2000)** Advanced Educational Psychology Books & Allied Pvt. Ltd. Delhi.
- **Dandekar W. N. (1995)** Fundamentals of Educational Psychology, M. Prakashan, Poona.
- **Mangal S.K. (2004)** Educational Psychology, Tandon Publishers, Ludhiana.
- **Richards, Barry(1993)** "Technophobia and Technophilia." British Journal of Psychotherapy 10.2188–95.
- **Santrock J. W. (2006)** Educational Psychology. 2nd ed. Tata McGraw-Hill, New Delhi.
- **Tuckman B. W, Monetti D. M. (2011)** Educational Psychology. Wadsworth Cengage Learning.
- **Sharma RN & Sharma RK (2003)** Advance Educational Psychology, Atlantic Publishers & Distributors, N. Delhi
- **Aggarwal J. C. (2004)** Psychology of learning & development, Shipra Publishers, N. Delhi
- **Anita Woolfolk Hoy (2019)** Educational psychology, Publisher: Pearson
- **James Boyle (2016)** Frameworks for practice in educational psychology. Publisher: Jessica Kingsley
- **McInerney D .M. (2014).** Educational psychology : constructing learning Publisher: Frenchs Forest, N.S.W. Pearson Australia Group

- **Kelvin Seifert, Rosemary Sutton, (2011)** Educational psychology Publisher: Kelvin Seifert

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**COURSE TITLE** : **MODERN TECHNIQUES IN TEACHING**  
**COURSE CODE** : **CMTT - 02**  
**COURSE CREDIT** : **3**

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**COURSE OBJECTIVES**

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While studying Modern Techniques in Teaching, the student shall be able to:

- Explain the concept of group analysis, Brain storming, Micro teaching ,different types of techniques, programmed, inquired, co-operative learning and mind mapping with illustration
  - Describe the innovative medias involved in teaching and learning process such as M-Learning and E-Learning in the class room
  - Familiar with online Learning Tools which are used to connect the learners to teach them
  - Know the various digital education tools for teaching and learning process
  - Comprehend the concept of innovative learning strategies in developing modern pedagogy
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**COURSE OUTCOMES**

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After completion of Modern Techniques in Teaching, the student will be able to:

- practice the group analysis, Brain storming and Micro teaching and understanding the application of mind mapping and obtaining knowledge in programmed, cooperative and inquiry based learning
- Apply of the innovative medias involved in teaching and learning process such as M-Learning and E-Learning can be practiced in the class room
- online Learning Tools which are used to connect the learners to teach them
- practice the digital education tools for teaching and learning process while teaching
- Make use of application of various innovative learning strategies in teaching

## **BLOCK 1      TECHNIQUES ASSOCIATED WITH TEACHING METHOD**

### **UNIT – 1 – Innovative Techniques**

Group analysis: Meaning - Methods – Brain Storming: Meaning - Methods - Micro Teaching Technique: Meaning - Characteristics - Procedure - Phases -Principles - Teaching Skills -Set induction - Reinforcement - Probing Questions - Stimulus Variation - Closure - Black Board Skills - Advantages - Disadvantages.

### **UNIT – 2 – Individualised Instructions**

Programmed Learning - Concept - Characteristics - Principles - Styles of Program -InquiryBasedLearning - Concept - Characteristics - Misconception - Criticism - Mind Map - Concept - Characteristics - Examples.

### **UNIT – 3 – Educational Approaches**

Cooperative Learning - Meaning -Techniques - Benefits - Dramatization - Meaning - Importance - Types - Advantages - Limitations -Gamification - Meaning - Techniques - Design - Applications.

## **BLOCK 2      MEDIA INVOLVED IN MODERN TEACHING TECHNIQUES**

### **UNIT – 4 – Audio-Visual Aids**

Need for Audio Visual Aids - Role of Audio Visual Aids - Purpose - Print Resources - Newspaper - Magazines - Journal - Encyclopaedia - Audio Resources – DVDs - CD - Visual Resources - Pictures - Flash card - Charts - Posters – Photographs- Models - ICT Resources -Television – Internet-Multimedia.

### **UNIT – 5 – Interactive Electronic Whiteboard**

Highlights - Features - General operation and use - Classroom uses - Benefits - Criticisms

### **UNIT – 6 – M- Learning and E-Learning**

Meaning - Benefits - Challenges - Advantages - Disadvantages.

## **BLOCK 3      ONLINE LEARNING TOOLS**

### **UNIT – 7 – Introduction to online learning Tools**

Online Learning tools - Definition - Types- online Classroom - Blended

Classrooms - Flipped Classrooms - Distance Education Classrooms - Assistive Technology - Text to Speech - Dictation - Word Prediction - Apps - Examples.

**UNIT – 8 – collaborative and conferencing tools in India**

Skype - WebEx Meet - Zoom - Messenger: Introduction - Installation and Operation - Standards - Technology - Function - Features - Privacy.

**UNIT – 9 – Communication over phone**

Conference Call - Telegram - You Tube: Introduction - Installation and Operation - Standards - Technology - Function - Features - Privacy.

**BLOCK 4 DIGITAL EDUCATION TOOLS**

**UNIT – 10 – Introduction to Digital Education Tools**

Introduction - Characteristics - Various tools - Google Drive -Dropbox - Trello- Lync – Tricider - SurveyMonkey-Googleforms- Doodle polls -Eventbrite- Join.me.

**UNIT – 11 – Latest Technology trends in schools**

Edmodo–Project- TED-Ed - cK-12: Introduction - How to Connect - Resources - Supports - Function - Uses

**UNIT – 12 – Digital Learning Environment**

Educlipper - storybird- Animoto - Clasdojo - Introduction - How to Connect - Resources- Supports - Function - Uses

**BLOCK 5 INNOVATIVE LEARNING STRATEGIES FOR MODERN PEDAGOGY**

**UNIT – 13 – New forms of Teaching and Learning**

Crossover Learning - Connecting Formal and informal learning - Creativity is Key - Innovating further - Computational Thinking - Characteristics - in K-12 education – Center for Computational Thinking.

**UNIT – 14 – Innovative Pedagogy**

Adaptive Teaching - Meaning - importance - goals - platforms - Embodied Learning - Meaning - Effects - types – Context-Based Learning.

**Suggesting Reading**

- **Denning,P.J and Tedre,M. (2019)** Computational Thinking. The MIT Press.
- **Flatley, Joseph .L (2011)** Augmented reality at the Allard Pearson Museum in Netherland.
- **Higgins,s.,Xiao.Z, (2012)** The impact of Digital Technology on learning: A summary for the

Education Endowment Foundation, London.

- **Rajasekar,S. and Raja Ganesan,D.(2013)** Methods of Teaching of Computer Science,Hyderebad: Neelkamal Publications PVT Ltd.
- **Sharma.R.C. (1990)** Modern Science Teaching, New Delhi: DhanpathRai and sons.
- **Zaidi S.F. (2013)** ICT in Education. New Delhi. APH Publishing Corporation.
- **Nagarajan K., Natarajan S. and Manivasagan C.R. (2013)** Educational Innovations & Curriculum Development. Chennai. Sriram Publishers.

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<b>COURSE TITLE</b>	<b>: RECENT TRENDS IN TECHNOLOGY IN TEACHING</b>
<b>COURSE CODE</b>	<b>: CMTT - 03</b>
<b>COURSE CREDIT</b>	<b>: 3</b>

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**COURSE OBJECTIVES**

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While studying Recent Trends in Technology in Teaching, the student shall be able to:

- Gain knowledge in understanding the new learning technology outside the classroom environment
  - Know the various online education platform and its function in the teaching learning process
  - Understand the application of social media in taking part in learning process
  - Learn the latest Technology used in teaching and learning process
  - Know the ICT facilities used in the education as per the guidelines issued by the MHRD
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**COURSE OUTCOMES**

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After completion of Recent Trends in Technology in Teaching, the student will be able to:

- Enrich his/her knowledge recent trends in Education technology in the class room environment
  - Identify the suitable online education platform and its application in teaching and learning process
  - Comprehend the various social media tools which are playing a vital role in simplifying the teaching and learning process
  - Apply the latest Technology like STEM, DIKSHA, NISHTHA and so on in the teaching and learning process
  - Understand the ICT facilities used in the online education which has formulated by MHRD
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**BLOCK 1 CURRENT TRENDS IN EDUCATION TECHNOLOGY**

**UNIT – 1 – Collaborative Learning**

Meaning - Definition - Benefits - Difference between Collaborative Learning Vs Co-operative Learning - Collaborative Learning Theories - Examples

## **UNIT – 2 – Learning Outside the Classroom Environment**

Meaning - Nature - How to Engage - Reasons - Benefits - Barriers.

## **UNIT – 3 – Current Trends**

Interactivity in Classroom - Data Management & Analytics-Immersive Learning with Augmented Reality and Virtual Reality - Online Data and Cyber Security

### **BLOCK 2 ONLINE EDUCATION PLATFORM**

## **UNIT – 4 – Introduction of Online education**

Meaning - Characteristics - why Online Education is important - Online Education Futures - Advantages

## **UNIT – 5 – Online Education Platforms**

Online Learning Platforms: Coursera- Skill share -Udemy- Code academy -Edex- Pluralsight – Future learn

## **UNIT – 6 – Functions of Online Education**

Demonstration of Online Working Platforms - Advantages - Disadvantages.

### **BLOCK 3 SOCIAL MEDIA IN LEARNING**

## **UNIT – 7 – Role of Social Media in Education**

Introduction - Social media - Purpose - Role of Social media in education - Positive and Negative impacts of Social Media

## **UNIT – 8 – Types of Social Media tools in Teaching and Learning**

Blogs - Twitter - Skype - Pinterest - Google Docs - Wikis - LinkedIn - Youtube - Instagram- Facebook: How to Login - Operations - Its Important.

## **UNIT – 9 – Importance of Social Media in Teaching and Learning**

Importance Social Media in Teaching and Learning: Administrators - Faculty – Students.

### **BLOCK 4 LATEST TECHNOLOGY USED IN TEACHING AND LEARNING**

## **UNIT – 10 – STEM (Science, Technology, Engineering and Mathematics)**

Background- Scope of the Platform – Importance- Benefits and criticisms

## **UNIT – 11 – DIKSHA (Digital Infrastructure for Knowledge Sharing)**

Background- Scope of the Platform - National Teacher Platform - Benefits and criticisms.

**UNIT – 12 – NISHTHA** (National Initiatives for School Heads and Teachers Holistic Advancement)

Introduction - Forum - Achieve - Benefits and criticisms

**BLOCK 5 ICT INITIATIVES OF MHRD**

**UNIT – 13 – Audio- Video e-Content**

Multimedia: Audio- Visual - Scope - Audacity - One India One digital platform - Swayam- Swayamprabha- Educational Multimedia Research Centre.

**UNIT – 14 – Digital Content**

How to Create Digital Content - Types of Digital Content - Implications - Examples of Digital Content.

**Suggesting Reading**

- **Baxter,A.M. (2014)** Social Media fosters professional Learning and Collabration, Learning and Leading with Technology, Pages. 36-38.
- **Diane Elkins et al. (2015)** E-Learning Fundamentals: A PRACTICAL GUIDE.ISBN:9781562869472, pages:176.
- **Hopfenberg,w,s and H.M.Levin (1993)** The Accelerated Schools Resource Guide, San Frasnisco:Jossey-Bass.
- **S.K.Mangal& Uma Mangal (2011)** Essential of Educational Technology,PHI learning Publisher, ISBN:9788120337237.
- **Prof.Dr.K.Sivarajan (2018)** EducationalTechnology,Laxmi Publications pvt.ltd.
- **Will Richardson (2010)** Blogs, wikis, podcasts and other powerful web tools for classroom, SAGE indiaPvt.Ltd, ISBN:978-1-4129-7747-0.
- **Allen, C.V. (2011)** A handbook of Educational Technology, London, Kogan page Ltd.
- **Hale, C. (2011)** Instructional Technology and its uses in the classroom, New York, Row
- **Walter, T.A. (2011)** Audio-Visual instructional Technology and methods, New York, McGraw-Hill.

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