

# **Certificate in STEAM Education**

## **(CISE)**



**DEPARTMENT OF EDUCATION**

**School of Social Sciences and Humanities.**

**University of Management and Technology, Lahore**

### **Introduction of the Certificate**

This course aims to improve teaching pedagogies of science subjects at secondary school level. Learning by doing is essence of constructivist teaching that empowers the student. The use of innovative teaching activities with low cost no cost material is one of the popular method of building the concepts of students in science subjects. These activities not only improve students' engagement, but also help teachers in assessment of the learning progress of students. This course will focus on polishing the skills of science teachers for using innovating activities as a teaching pedagogy in science subjects.

### **Objectives of the Certificate**

After successful completion of the certificate, the participants will be able to:

1. Classify the theories of STEAM teaching courses
2. Apply STEAM pedagogies for science subjects
3. Develop innovative activities for teaching science in classroom
4. Argue on the global perspective of STEAM pedagogy

### **Eligibility for Admission**

CGPA 2.00 or 50% marks in BS/ Master/equivalent degree from any HEC recognized university

### **Merit Formula/Criteria:**

- BSc/MSc/ BS(Hons.) (Total attained marks): 60%
- Interview: 40%

### **Instructional Strategies**

The instructional strategies will include lectures and demonstration by the teachers, individual and group assignments and presentations, group and whole class discussion, class activities on development of portfolio, hand-on-activities, quiz etc. and online international lectures. The resource person is expected to use student-centered teaching-learning techniques to the maximum possible extent according to the nature of the course.

### **Assessment Mechanism**

UMT rules employed at Master/ BS levels will be followed for students' assessment and examination: quiz, written assignments, presentations, field project, final assessment etc.

## Award of Certificate

The award of certificate to the students will be subject to:

- A) Securing minimum 2 CGPA or 60% marks as per rules of UMT
- B) Submission of allocated assignment
- C) 80% attendance in course

**Schedule:** Twice a week class. On Saturday and/or Sunday.

**Class:** 5 hrs /week (2 sessions of 2.5 hrs. each in one day or in 2 days)

**Duration:** 6 weeks **Contact Hours:** 30

## Fee

- UMT Faculty and Participants: 5000/- PKR
- Other University Students: 8000/- PKR
- Professionals: 10,000/- PKR

## SCHEME OF STUDIES

Course Codes	Courses	Contact Hours
CISE 101	STEAM education and Constructivism: Introduction	5
CISE 102	Lesson Planning and Pedagogies Practices with STEAM	5
CISE 103	Development of low-cost no-cost material for teaching with STEAM education	5
CISE 104	Creating an environment for sustaining STEAM	5
CISE 105	Execution of STEAM projects and future visions	5
CISE 106	Local and Global perspective of STEAM education	5
Total		30

## Contact Details

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