

GUJARAT TECHNOLOGICAL UNIVERSITY

BRANCH NAME: Mining Engineering
SUBJECT NAME: Computer Application in Mining
SUBJECT CODE: 2162206
B.E. 6th SEMESTER

Type of course: Mining

Rationale:

The degree holders in mining engineering will be responsible to deal with computer software and hardware to make mine plans, administrative work, etc. This subject provides the basic knowledge of input & output devices, database system and CAD.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks						Total Marks
L	T	P		Theory Marks			Practical Marks			
			ESE (E)	PA (M)		ESE (V)		PA (I)		
				PA	ALA	ESE	OEP			
2	0	0	2	70	20	10	0	0	0	100

Content:

Sr. No.	Content	Total Hrs	% Weightage
1	Introduction to Computer Graphics: Input and Output devices, displays, graphics printers, plotters, digitizers, scanners and pointing devices	10	40 %
2	Points, line, plane and co-ordinates. Vectors pixels and frame buffers. Line and circle generation algorithms. Introduction to 2D Transformation, Translation, rotation, scaling, shearing and reflection	10	30 %
3	Introduction to database system. Use of any DBMS package for programming related to mining activities	5	20 %
4	Introduction to CAD and its application of Mining	3	10 %

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
58 %	22 %	14 %	2 %	2 %	2 %

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

Sr. No.	Title of Books	Author	Publication
1	Computer Graphics	K.H.Vandara	Lovely Prakashan
2	Auto CAD 2008 – Tymothy,Sean Sykes	Tymothy,Sean Sykes	
3	Data Base Management System	Ravi Jasuja	
4	Surface Mining Technology	S.K.Das	Lovely Prakashan

Course Outcome:

After learning the course the students should be able to:

- i. Explain different input and output devices.
- ii. Explain 2D Transformation.
- iii. Explain DBMS regarding to Mining activities
- iv. Explain CAD and its application in Mining

Major Equipment:

- i. Models.

List of Open Source Software/learning website:

- i. Wikipedia.
- ii. www.youtube.com
- iii. www.novamining.com

ACTIVE LEARNING ASSIGNMENTS: Preparation of power-point slides, which include videos, animations, pictures, graphics for better understanding theory and practical work – The faculty will allocate chapters/ parts of chapters to groups of students so that the entire syllabus to be covered. The power-point slides should be put up on the web-site of the College/ Institute, along with the names of the students of the group, the name of the faculty, Department and College on the first slide. The best three works should submit to GTU.