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# AISECT UNIVERSITY™

**JHARKHAND, HAZARIBAG** AN AISECT GROUP UNIVERSITY

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## DIPLOMA IN AMIN SURVEY

Duration: 12 Months (1 Years)

### COURSE STRUCTURE OF DIPLOMA IN AMIN SURVEY SEMESTER 1st

Course Details				External Assessment		Internal Assessment				Credit Distribution			Allocated Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
<b>Theory Group</b>													
2TDAS 101		Historical Background of Survey	100	50	17	20	07	30	15	2	1	0	3
2TDAS 102		Surveying - I	100	50	17	20	07	30	15	2	1	0	3
2TDAS 103		Legal Acts And Education Of Land	100	50	17	20	07	30	15	2	1	0	3
2TDAS 104		Fundamentals of Computers & IT Literacy	100	50	17	20	07	30	15	2	1	0	3
<b>Practical Group</b>				<b>Term End Practical Exam</b>				<b>Sessional</b>					
2TDAS 102		Surveying - I	200	50	24	-	-	50	24	-	-	2	2
2TDAS 103		Fundamentals of Computers & IT Literacy	100	50	24	-	-	50	24	-	-	2	2
2TDAS 106		Project Work	100	50	24	-	-	50	24	-	-	2	2
Grand total			800					50	24	-	-	2	2
										10	5	6	21

Minimum Passing Marks are equivalent to Grade D

Major- Term End Theory / Practical Exam

Minor- Pre-University Test

Sessional weightage - Attendance 50%, Three Class Tests/ Lab Performance Assignment 50%

*M.K. Mishra*  
**Prof. Manoj Kumar Mishra**  
 Dean Academics  
 JECIT University, Hazaribag

L- Lectures T- Tutorials P- Practical

*P. Parag* 29/10/24  
*N. Manohar* 29/10/24  
*A. Chandra* 29/10/24

**DIPLOMA IN AMIN SURVEY**  
Duration: 12 Months (1 Years)

**COURSE STRUCTURE OF DIPLOMA IN AMIN SURVEY SEMESTER 2nd**

Course Details				External Assessment		Internal Assessment				Credit Distribution			Allocated Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
<b>Theory Group</b>													
2TDAS 201	Prismatic Compass Survey		100	50	17	20	07	30	15	2	1	0	3
2TDAS 202	Surveying -2		100	50	17	20	07	30	15	2	1	0	3
2TDAS 203	Fundamentals of AutoCAD		100	50	17	20	07	30	15	2	1	0	3
2TDAS 204	Land measurement Survey & Calculation		100	50	17	20	07	30	15	2	1	0	3
<b>Practical Group</b>				<b>Term End Practical Exam</b>				<b>Sessional</b>					
2TDAS 202	Surveying -2		200	50	24	-	-	50	24	-	-	2	2
2TDAS 203	Fundamentals of AutoCAD		100	50	24	-	-	50	24	-	-	2	2
2TDAS 206	Project Work		100	50	24	-	-	50	24	-	-	2	2
Grand total			800							10	5	6	21

Minimum Passing Marks are equivalent to Grade D  
Major- Term End Theory / Practical Exam  
Minor- Pre-University Test

Sessional weightage - Attendance 50%, Three Class Tests/ Lab Performance Assignment 50%

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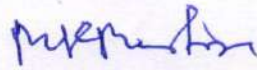
*P. Singh*  
29/10/24  
*H. Manoj*  
29/10/24  
*Sharma*  
29/10/24



## SYLLABUS OF AMIN SURVEY

### SPECIFIC LEARNING OUTCOMES

1. Perform Basic workshop operation of Amanat survey. Draw conventional signs & symbols used in surveying.
2. Plan & carryout site survey using chain/ tape & prepare a site plan.
3. Identify and select Farzi map.
4. Study and verify about land revenue & record field book.
5. Carryout site survey using prismatic compass.
6. Perform different types of levelling activities at site.



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P. B. G. G. S.  
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Shanku  
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HISTORICAL BACKGROUND OF SURVEY

History of survey

Unit - I

Land revenue-zamindari system, rotary system, mahalwari system

Unit-II

Zamindari evolution act, responsibility of land revenue system. Land system of Jharkhand

Unit -III

Field Book Use of field book, function of field book, survey and plan record, status of plan, base plans- water, drainage & sewerage

Unit - IV

Measurement: English line measure, Metric Measure, Metric Square Measure, Indian Land Measure.

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## SURVEYING I

### Unit -I

Introduction and Basic concepts:- Definition of chain survey ,classification of chain , Principle of chain surveying , scale- Representation of scale.

### Unit -II

Study and use of instrument:-Measurement of Chain, tape, Ranging Rod ,Arrows ,pegs , Cross staff , Optical square , line Range

### Unit -III

Survey by Plane Table with Chain:- Necessity of using a plane table. ,Methods of plane tabling: intersection method of plane tabling, radiation or radial line method of plane tabling. Errors in chain.

### Unit -IV

Obstacles in chaining:- Definition of obstacles, classification of obstacles, possibility of chain obstacles. Linear measurement:- different method, direct measurement, instrument for chaining – chain or tape, arrows, pegs, ranging rods, plumb bob, plasters laths & whites, chaining- follower & leader, folding & unfolding of chain, chaining on uneven or sloping ground by direct method & indirect method, first order measurement -base line measurement. Chain triangulation:- Definition, survey stations, survey lines, check line, tie lines, arrangement of survey lines, locating ground features offsets, limiting length of offset, field book, field work, basic problem in chaining.

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LEGAL ACTS AND EDUCATION OF LAND

code 2TDAS103

Unit – I

Land selling- tips and tricks for selling plots of land, known your audience, contract builder or sellers

Unit -II

Batwara : rules of batwara, property partition kaanoon, civil law for partition, Zaminbatwara, house batwara, sarkari batwara, batwara cast. Batwaranama format, joint property batwara, bibhajan property batwara, vashiayat

Unit III

Labor Welfare Legislation

Welfare Acts Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, Workmen' Compensation Act.

Unit -IV

Law Of Survey commission – Introdoucation of law , works under survey , Defintion of commission .

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**FUNDAMENTAL COMPUTER AND IT LITERACY**

**Unit - I**

Basics of Computer Introduction, Computer and its applications, Hardware and peripherals, Switching on-Starting and shutting down of computer.

**Unit - II**

**Computer Operating System**

Basics of Operating System, WINDOWS, the user interface of Windows OS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc., Use of Common applications.

**Unit - III**

**Word Processing and Worksheet**

Basic operating of Word Processing, Creating, opening and closing Documents, use of shortcuts, Creating and Editing of Text, Formatting the Text, Insertion & creation of Tables, Printing document. Basics of Excel worksheet, understanding basic commands, creating simple worksheets, understanding sample worksheets, use of simple formulas and functions, Printing of simple excel sheets.

**Unit - IV**

**Computer Networking and Internet**

Basic of computer Networks (using real life examples), Definitions of Local Area Network (LAN), Wide Area Network (WAN), Internet, Concept of Internet (Network of Networks), Meaning of World Wide Web (WWW), Web Browser, Web Site, Web page and Search Engines. Accessing the Internet using Web Browser, Downloading and Printing Web Pages, Opening an email account and use of email. Social media sites and its implication. Information Security and antivirus tools, Do's and Don'ts in Information Security,

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## PRISMATIC COMPASS SURVEY

### Unit -I

Basic terms used in compass survey ,Instrument required and it setting up

### Unit -II

Bearing of lines–Meridian–True, Magnetic, and Arbitrary. Bearing– fore bearing, Back bearing, Whole circle bearing, Quadrantal bearing system and Reduced bearing, Conversion of bearings, finding include dangles from bearings.

### Unit -III

Prismatic Compass–Component, construction and use.

### Unit -IV

Local attraction, Causes, precautions to be taken to avoid and correction-of bearings affected due to local attraction, calculation of included angels.

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## SURVEYING 2

### Unit 1 :

Plane table survey ,principle , merits and demerits  
Instrument used in plane table survey setting up the plane table (centering levelling orientation)  
Methods of plane table survey ( Traverse methods ,Radio-Progression)  
Error in plane table survey . Unit 2 : introduction to levelling  
Types of levelling instruments technical terms use in levelling Temporary and permanent adjustment  
Different types of levelling entry of level book

### Unit 3

Curvature and refraction effect sensitivity of bubble tube. Common error and their elimination  
Degree of accuracy ,Introduction of theodolite ,Types of theodolite parts of theodolite survey  
Temporary adjustment of theodolite , angle measurement process , reading of angles, field book entry of measured angles, Permanent adjustment of theodolite .

### Unit 4:

Contouring contour interval, selection of contour interval characteristics of contour, uses of contour, contouring by various methods

Interpolation of contour by various methods, computation of volume establishment of gradient by abbey level

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Sub. Code : 2TDAS203

## FUNDAMENTAL OF AUTOCAD

Introduction of CAD  
Computer aided drafting and designs  
Graphical user interface (GUI)  
Practice on auto CAD  
CAD basics  
Basic commands - I  
Basic command - II  
Other CAD commands  
Text and dimensions  
Printing and plotting  
Layers  
Properties and blocks Isoplane

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Sub. Code : 2TDAS204

LAND MEASUREMENT SURVEY & CALCULATION

SECTION - A

Unit 1

Kishtwar: bhumi paimaish -Auzar , Khanapuri, Chakbandi ,Tasdik, Bujharat

Unit 2

Importance of cartographic projection

Uses of various types of cartographic projection for mapping

SECTION - B

Unit 3:

Mensuration : Area and perimeter of square, rectangle, parallelogram , triangle ,circle , semicircle; volume of solids -cube ,cuboid ,cylinder, and sphere ,surface area of solids – cube ,cuboid ,cylinder and sphere

Unit 4:

Trigonometry: trigonometrically ratios, measurement of angles. Trigonometric tables. Square root: square and square root, method of finding out square roots .Ratio and proportion, simple calculation on related problems.

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