OH SO	GOVERNMENT POLYTECHNIC, KORAPUTDEPARTMENTCIVILENGINEERING		
Discipline:CIVI L ENGG	Semester:	Name of the Teaching Faculty: RABINARAYAN HOTA,PTGF	
Subject: CONSTRUCT ION MANAGEME NT	No. ofdays/ perwee kclassal lotted: 05	SemesterFromdate: 10.03.2022 ToDate: 10.06.2022  No. ofWeeks:13	
PRE- REQUISIT E	Basicknow	ledgeabout Construction Technology	
COURSEOU TCOMES	CO1:Develop schedules for construction project CO2:Realize significance of organizational behavior towards successful functioning CO3:Explain the important terminology related to materials management CO4: Understand construction quality indicators and their measurement CO5:Understand construction quality indicators and their measurement		
Wee	Clas	Theory/Practical	
wee k	sDa	Topics	
K	y		
1st	1ST	Introduction To Construction Management: Aims and objectives of construction management.	
	2 <sup>ND</sup>	Functions of construction management.	
	2 <sup>ND</sup> 3 <sup>RD</sup>	Functions of construction management.  The construction team components	
		Owner, engineer, architect, contractor-their functions and interrelationshi and jurisdiction. Resources for construction managementmen, machines, materials, money	
2ND	3RD 4TH	Owner, engineer, architect, contractor-their functions and interrelationshi and jurisdiction. Resources for construction managementmen, machines, materials, money  Constructional Planning: Importance of Construction Planning	
2 <sup>ND</sup>	3RD 4TH	Owner, engineer, architect, contractor-their functions and interrelationshi and jurisdiction. Resources for construction management-men, machines, materials, money  Constructional Planning: Importance of Construction Planning  Developing work breakdown structure for construction work	
2 <sup>ND</sup>	3RD 4TH	Owner,engineer,architect,contractor-their functions and interrelationshi and jurisdiction. Resources for construction management-men,machines,materials,money  Constructional Planning:Importance of Construction Planning  Developing work breakdown structure for construction work  Construction Planning stages-Pre-tender stage, Post-tender stage.	
2ND	3RD 4TH	Owner, engineer, architect, contractor-their functions and interrelationshi and jurisdiction. Resources for construction management-men, machines, materials, money  Constructional Planning: Importance of Construction Planning  Developing work breakdown structure for construction work  Construction Planning stages-Pre-tender stage, Post-tender stage.  Construction scheduling by Bar charts-preparation of Bar Charts for	
2ND 3RD	3RD 4TH 1ST 2ND 3RD	Owner,engineer,architect,contractor-their functions and interrelationshi and jurisdiction. Resources for construction management-men,machines,materials,money  Constructional Planning:Importance of Construction Planning  Developing work breakdown structure for construction work  Construction Planning stages-Pre-tender stage, Post-tender stage.	
-	3RD 4TH 1ST 2ND 3RD 4TH	Owner, engineer, architect, contractor-their functions and interrelationshi and jurisdiction. Resources for construction managementmen, machines, materials, money  Constructional Planning: Importance of Construction Planning Developing work breakdown structure for construction work  Construction Planning stages-Pre-tender stage, Post-tender stage.  Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works  QUIZ  Preparation of schedules for labourmaterials, machinery, finance for smeaning works	
-	3RD 4TH 1ST 2ND 3RD 4TH 1ST	Owner,engineer,architect,contractor-their functions and interrelationshi and jurisdiction. Resources for construction managementmen,machines,materials,money  Constructional Planning:Importance of Construction Planning  Developing work breakdown structure for construction work  Construction Planning stages-Pre-tender stage, Post-tender stage.  Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works  QUIZ  Preparation of schedules for labourmaterials,machinery, finance for sm works  Limitation of Bar charts Construction scheduling by network technique defination of terms, PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis, estimation of time a critical path, application of PERT and CPM techniques in sample	
-	3RD  4TH  1ST 2ND 3RD 4TH  1ST 2ND 3RD 4TH  1ST 2ND 3RD	Owner, engineer, architect, contractor-their functions and interrelationshi and jurisdiction. Resources for construction managementmen, machines, materials, money  Constructional Planning: Importance of Construction Planning Developing work breakdown structure for construction work Construction Planning stages-Pre-tender stage, Post-tender stage. Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works  QUIZ  Preparation of schedules for labourmaterials, machinery, finance for sm works Limitation of Bar charts Construction scheduling by network technique defination of terms, PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis, estimation of time a critical path, application of PERT and CPM techniques in sample construction works.  Materials and Stores Management	
-	3RD 4TH  1ST 2ND 3RD 4TH 1ST 2ND	Owner,engineer,architect,contractor-their functions and interrelationshi and jurisdiction. Resources for construction managementmen,machines,materials,money  Constructional Planning:Importance of Construction Planning  Developing work breakdown structure for construction work  Construction Planning stages-Pre-tender stage, Post-tender stage.  Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works  QUIZ  Preparation of schedules for labourmaterials,machinery, finance for sm works  Limitation of Bar charts Construction scheduling by network technique defination of terms, PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis, estimation of time a critical path, application of PERT and CPM techniques in sample	

Job Lay out-Objectives, Review plans, specifications, Lay out of

Job lay out for different construction sites. Principle of storing material at

Location of equipment, organizing labour at site.

3RD

4111

IST

 $2^{ND}$ 

5TH

equipments.

		site
	3RD	Construction Organization: Introduction – Characteristics. Structure importance.
	4TH	Organization types-line and staff, functions and their characteristics
6 <sup>TH</sup>	181	Principles of organization- meaning and significance of terms- control authority, responsibility, job & task.
	2 <sup>ND</sup>	Leadership-necessity, styles of leadership, role of leader
	3 <sup>RD</sup>	Human relations-relations with subordinates, peers, Supervisors, characteristics of group behavior, mob psychology, handling of grievances, absenteeism, labour welfare.
	4111	QUIZ

		QUIZ
7111	IST	Construction Labour and Labour Management:
	2ND	Preparing Labour schedule, Essential steps for optimum labour output
	3RD	Labour characteristics, Wages & their payment
	4TH	Labour incentives Motivation- Classification of motives, different approaches to motivation
8TH	1ST	Equipment Management
0	2 <sup>ND</sup>	Preparing the equipment schedule, Identification of different alternative
	3 <sup>RD</sup>	Importance of Owning & operating costs in making decisions for hiring & purchase of equipment
	4тн	Inspection and testing of equipment Equipment maintenance
9 <sup>TH</sup>	1st	QUIZ
	2ND	Quality Control
	3 RD	Concept of quality in construction
	4 <sup>тн</sup>	Quality Standards- during construction, after construction, destructive &nor destructive methods.
10 <sup>TH</sup>	1ST	Monitoring Progress :
	2ND	Programme and progress of work, Work study
	3RD	Analysis and control of physical and financial progress corrective measures
	4тн	Safety Management In Construction:
11 <sup>TH</sup>	1ST	Importance of safety
	2ND	causes and effects of accidents in construction works
	3RD	Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition.
	4тн	Development of safety consciousness Safety legislation- Workman's compensation act, contract labour act
12 <sup>TH</sup>	1st	QUIZ
	2 <sup>ND</sup>	Role of Vulnerability Atlas of India in construction projects :
	3RD	Introduction to Vulnerability Atlas of India, Concepts of natural hazards a disasters and vulnerability profile of India. Definition of disaster related terms.
	4111	Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zones, earthquake hazard maps, types of structures and damage classification, effects in housing and resistant measures.
13 <sup>TH</sup>	181	Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitants and flood resistant construction.
	2 <sup>ND</sup>	Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards.
	3RD	RIVISION

Division	
4TH RIVISION	

- I M. R. Samal& R.L. Sahoo Construction Management Kalyani Publication
- 2 PS Gahlot& B M Dhir Construction planning and management New age international Publishers
- 3 Robert L Peurifoy&Willium B Ledbetter Construction Planning equipment and methods TMH Education

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# GOVERNMENT POLYTECHNIC,

THE BUILDING	KORAPUTDEPARTMENTCIVILENGINEERING		
Discipline:CIVI L ENGG	Semester:	Name of the Teaching Faculty: SUCHITRA LENKA, PTGF	
Subject: - LAND SURVEYII	No. ofdays/ perwee kclassal lotted: 05	SemesterFromdate: 10.03.2022 ToDate: 10.06.2022  No. ofWeeks:13	
PRE- REQUISIT E		ledgeaboutEngineeringmechanics.	
COURSEOU TCOMES	CO1:Solve numerical problems in the segment off tacheometry CO2:Comprehend concepts of curve ranging and solve simple numerical CO3:Study and interpret maps CO4:Comprehend basics of GIS and prepare map using GIS data CO5:Comprehend basics of GPS setup, data processing and export		
Wee k	Clas sDa y	Theory/Practical Topics	
1ST	1st	TACHEOMETRY: (Only concepts; applications without derivation)	
	2ND	Principles, stadia constants determination	
	3RD	Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined, numerical problems	
	4тн	Elevations and distances of staff stations – numerical problems	
	5 <sup>TH</sup>	CURVES:	
2 <sup>ND</sup>	IST	Compound, reverse and transition curve, Purpose & use of different types of curves in field	
	2 <sup>ND</sup>	Elements of circular curves, numerical problems	
	3RD	QUIZ	
	4111	Preparation of curve table for setting out	
	5 <sup>TH</sup>	Setting out of circular curve by chain and tape and by instrument angular methods	
3 <sup>RD</sup>	1st	(i) offsets from long chord, (ii) successive bisection of arc, (iii) offsets from tangents, (iv) offsets from chord produced, (v) Rankine's method of tangent angles (No derivation	
	2 <sup>ND</sup>	Obstacles in curve ranging – point of intersection inaccessible	
	380	BASICS ON SCALE AND BASICS OF MAP:	
	4111	Fractional or Ratio Scale, Linear Scale, Graphical Scale	
	5111	What is Map, Map Scale and Map Projections	
4111	JST	How Maps Convey Location and Extent	
	2 <sup>ND</sup>	How Maps Convey characteristics of features, How Maps Convey Spatial Relationship	
	380	Classification of Maps: Physical Map Topographic Map Road Map	
	4111	Political Map Economic & Resources Map Thematic Map Climate Map	
	5111	QUIZ	
5111	151	SURVEY OF INDIA MAP SERIES:	
	2ND	Open Series map : Defense Series Map Map Nomenclature	

	3RD	Quadrangle Name Latitude, Longitude, UTM's, Contour Lines		
	4TH	Magnetic Declination ,Public Land Survey System Field Notes		
5 <sup>TH</sup>		BASICS OF AERIAL PHOTOGRAPHY, PHOTOGRAMMETRY, DEM AND ORTHO IMAGE GENERATION:		
6 <sup>TH</sup>	151	Aerial Photograph, Film, Focal Length, Scale		
	250	Types of Aerial Photographs (Oblique, Straight) Photogrammetry:		
	3RD	Classification of Photogrammetry		
	4 <sup>TH</sup>	Aerial Photogrammetry		
	5 <sup>TH</sup>	Terrestrial Photogrammetry		
7 <sup>TH</sup>	151	QUIZ		
	250	Terrestrial Photogrammetry		
	3RD	Acquisition of Imagery using aerial and satellite platform, Control Survey		
	4 <sup>TH</sup>	Geometric Distortion in Imagery Application of Imagery and its support dat Orientation and Triangulation		
	5 <sup>TH</sup>	Stereoscopic Measurement : X-parallax, Y-parallax		
8714	15T	MODERN SURVEYING METHODS:		
	2\n	6.1 Principles, features and use of (i) Micro-optic theodolite, digital theodolite 6.2 Working principles of a Total Station (Set up and use of total station to measure angles, distances of points under survey from total station and the co-ordinates (X,Y,Z)		
	3RD	QUIZ		
	4TH	BASICS ON GPS & DGPS AND ETS:		
	5 <sup>TH</sup>	Global Positioning		
9TH	15T	Working Principle of GPS, GPS Signals, Errors of GPS, Positioning Methods		
	2 <sup>ND</sup>	DGPS: - Differential Global Positioning System, Base Station Setup, Rove GPS Set up		
	3RD	Download, Post-Process and Export GPS data, Sequence to download GPS data from flashcards		
	<b>4</b> <sup>TH</sup>	Sequence to Post-Process GPS data , Sequence to export post process GPS data		
- 717	5 <sup>TH</sup>	Sequence to export GPS Time tags to file		
10 <sub>1H</sub>	157	ETS: - Electronic Total Station ,Distance Measurement		
	2ND	Continuation		
	380	Angle Measurement, Leveling		
	4TH	Determining position 7.1.5 Reference networks Errors and Accuracy		
70	5 <sup>TH</sup>	QUIZ		
11 <sup>7H</sup>	157	BASICS OF GIS AND MAP PREPARATION USING GIS		
	2 <sup>ND</sup>	Components of GIS, Integration of Spatial and Attribute Information		
	380	Three Views of Information System		
	4 <sup>TH</sup>	Database or Table View, Map View and Model View , Spatial Data Model		
	5 <sup>TH</sup>	Continuation		
12 <sup>TH</sup>	151	Spatial Data Model		
	250	Attribute Data Management and Metadata Concept		
	380	Continuation		
		Prepare data and adding to Arc Map		
	5 <sup>1H</sup>	Organizing data as layers		
13 <sup>TH</sup>	[51	Editing the layers.		
	2ND	Switching to Layout View		

3RD	Change page orientation.	
4тн	Removing Borders	
STH	Rivision	

- 1 D. Gaikwad Advanced Surveying S.Chand
- 2 B. C. Punmia Surveying Vol. I, II, III Laxmi Publication, Delhi 06 3 R. Agor A text book of surveying and leveling Khanna Publishers, Delhi6 4 N. N. Basak Surveying and Levelling Tata Mcgraw Hill

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#### GOVERNMENT POLYTECHNIC, KORAPUTDEPARTMENTCIVILENGINEERING

M 101 101	KORAPUTDEPARTMENTCIVILENGINEERING			
Discipline:CIVI L ENGG	Semester:	Name of the Teaching Faculty: SUCHITRA LENKA,PTGF		
Subject: ADVANCE CONSTRUCT ION TECHNIQUE AND EQUIPMENT	No. ofdays/ perwee kclassal lotted: 05	SemesterFromdate: 10.03.2022  No. ofWeeks:13  .		
PRE- REQUISIT		vledgeaboutEngineeringmechanics.		
COURSEOU TCOMES	CO2:Sele CO3: Add resistance	ct proper material during construction in domain of advanced materials et appropriate prefabrications in pursuance of standard codes pt structural requirements & Possible retrofits to improve earthquake prehend requirement of various services need to be operational prehend necessity of soil reinforcing and prescribe appropriate strategy		
Wee k	Clas sDa	Theory/Practical Topics		
1 ST	1 <sub>ST</sub>	Advanced construction materials :		
	2 <sup>ND</sup>	Fibers and Plastics		
	3RD	Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers.		
	4 <sup>тн</sup>	Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets		
2 <sup>ND</sup>	1ST	Continuation		
2	2ND	Artificial Timbers – Properties and uses of artificial timber		
	3RD	Types of artificial timber available in market, strength of artificial timber.		
	4111	Miscellaneous materials – Properties and uses of acoustics materials		
3 <sup>RD</sup>	1st	QUIZ		
	2 <sup>ND</sup>	Wall claddings, plaster boards, micro-silica		
	3RD	Artificial sand, bonding agents, adhesives etc. 3 Prefabr		
	4тн	Prefabrication		
4111	157	Introduction, necessity and scope of prefabrication of buildings,		
,	2 <sup>ND</sup>	History of prefabrication, current uses of prefabrication, types of prefabricated systems, classification of prefabrication,		
	380	Advantages and disadvantages of prefabrication		
	4111	Continuation Continuation		
5111	lst	The theory and process of prefabrication, design principle of prefabricated systems		
	2 <sup>ND</sup>	Types of prefabricated elements, modular coordination		
	3RD	QUIZ		
	4тн.	Earthquake Resistant Construction		
6тн	IST	Building Configuration		

	2N	Lateral Load resisting structures
	3.81	
	411	Stricting Characteristics
7TH		E (A)
,	1ST	Effect of structural irregularities-vertical irregularities, plan configuration problems.
	2 <sup>ND</sup>	Effect of structural irregularities-vertical irregularities.
	3RD	Plan configuration problems.
	<b>4</b> TH	Safety consideration during additional construction
8 <sup>TH</sup>	1ST	Alteration of existing Buildings.
	2ND	Continuation
	3RD	Additional strengthening measures in masonry building-corner
		reinforcement,
	4тн	lintel band, sill band, plinth band, roof band, gable band etc
9тн	1ST	Building Services
	2ND	Cold Water Distribution in high rise building, lay out of installation
	3RD	Hot water supply - General principles for central plants-layout
	4тн	QUIZ
10 <sup>1H</sup>	1ST	Sanitation -soil and waste water installation in high rise buildings
	2 <sup>ND</sup>	Electrical services – requirements in high rise buildings ,Layout of wiring - types of wiring
	3RD	Fuses and their types ,Earthingand their uses
	4TH	Lighting - Requirement of lighting, Measurement of light intensity
	5 <sup>TH</sup>	Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation
$\Pi_{\mathrm{IH}}$	15T	Continuation
	2ND	Mechanical Services- Lifts, Escalator, Elevators – types and uses.
	3RD	QUIZ
	4тн	Construction and earth moving equipments –
12 <sup>TH</sup>	1 <sub>ST</sub>	Planning and selection of construction equipments
	2 <sup>ND</sup>	Study on earth moving equipments like drag line, t
	3RD	Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
	4тн	Soil reinforcing techniques
13 <sup>TH</sup>	1ST	Necessity of soil reinforcing.
	2ND	Use wire mesh and geo-synthetics.
	3RD	Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques
	4TH	Rivisuion

- 1 Agrawal & Shrikhande Earthquake Resistant Design of Structures Prentice-Hall of India Pvt. Ltd.
- 2 Swami Saran Reinforced Soil and its Engineering applications I.K.International Pvt. Ltd.
- 3 National building code of India\_BIS
- 4 Fred & Greeno Building Services Hand book Routledge Publisher

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### GOVERNMENT POLYTECHNIC, KORAPUTDEPARTMENTCIVILENGINEERING

Carried to the con-	AGRATOTDEPARTMENTCIVILENGINEERING			
Discipline:CIVI L ENGG	Semester:	Name of the Teaching Faculty: DUTIKA MUDULI,PTGF		
Subject: CONCRETE TECHNOLO GY	No. ofdays/ perwee kclassal lotted: 05	SemesterFromdate: 10.03.2022 ToDate: 10.06.2022  No. ofWeeks:13		
PRE- REQUISIT E	- BasicknowledgeaboutRCC,BMBC			
COURSEOU TCOMES	CO2:Prese CO3:Desi CO4: Con	CO1:Describe functions and characteristics of the concrete constituents CO2:Prescribe test requirements and methods for fresh and hardened concrete CO3:Design concrete mix CO4: Comprehend concrete production and inspection techniques CO5:Acquaint themselves with special concrete preparation and application		
Wee k	Clas sDa y	Theory/Practical Topics		
IST	1st	Concrete as a construction material:		
	2 <sup>ND</sup>	Grades of concrete. Advantages and disadvantages of concrete		
	3RD	Continuation		
	4 <sup>тн</sup>	Cement: 2.1 Composition, hydration of cement, water cement ratio and compressive strength, fineness of cement, setting time, soundness, types of cement		
2ND	1ST	Continuation		
	2 <sup>ND</sup>	Continuation		
	3RD	Aggregate, Water and Admixtures:		
	. 4 <sup>тн</sup>	Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S. 383		
3 <sup>RD</sup>	Ist	QUIZ		
	2 <sup>ND</sup>	Quality of water for mixing and curing.		
	3RD	Important functions, classification of admixtures, I.S 9103, accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixtures		
	4тн	Properties of fresh concrete:		
4 <sup>TH</sup>	Ist	Concept of fresh concrete, workability, slump test, compacting factor test, V-bee consistency test and flow test, requirement of workability, I.S. 1199		
	2 <sup>ND</sup>	Continuation		
	380	Continuation		
	4TH	Properties of hardened concrete:		
5111	1ST	Cube and cylinder compressive strengths, flexural strength of concrete, stress, train and elasticity		
	2 <sup>ND</sup>	phenomena of creep and shrinkage, permeability, durability of concrete, sulphate, chloride and acid		
	3RD	Chloride and acid attack on concrete, efflorescence		
	4TH	Concrete mix Design :		

6111	ST	Introduction: Data or input
	2 <sup>ND</sup>	Introduction: Data or input required for mix design.  2 Nominal mix consists 6 to the consists of the consists
		2 Nominal mix concrete &design mix concrete.
	3RD	Basic consideration for concrete minute is
		Basic consideration for concrete mix design, Methods of proportioning concrete mix – LS Code method of mix design(LS.10262)
	4TH	Production of concrete:
7711		
7 <sup>TH</sup>	1st	Batching of materials, mixing of concrete materials, transportation, placing of concrete
	2ND	Continuation
	3RD	Compaction of concrete (vibrators), Curing of concrete, Formwork-requirements and types ,stripping of forms. (Concepts only)
	4 <sup>TH</sup>	QUIZ
8111	1ST	Inspection and Quality Control of Concrete
	2 <sup>ND</sup>	Quality control of Concrete as per I.S.456, Factors causing the variations in
		the quarty of concrete
	3RD	Mixing, Transporting, Placing &curing requirements of Concrete as per 1.S.456
	4тн	Inspection and Testing as per Clause 17 of IS:456. Durability requirements of Concrete as per I.S:456
9ТН	1ST	Continuation
	2ND	Continuation
	3RD	Special Concrete
	4тн	1 Introduction to ready mix concrete, high performance concrete, silica fume concrete, shot-crete concrete or gunitting (Concepts only).
10111	1st	Continuation
	2ND	Silica fume concrete, shot-crete concrete or gunitting (Concepts only).
	3RD	QUIZ
• • TH	4тн	Gunting& its type
11 <sup>TH</sup>	JST	Deterioration of concrete and its prevention:
	2 <sup>ND</sup>	Types of deterioration, prevention of concrete deterioration,
	3RD	Corrosion of reinforcement
	4тн	Effects and prevention of corrosion
12 <sup>TH</sup>	1st	Repair technology for concrete structures:
	2 <sup>ND</sup>	Symptom, cause and prevention
	3RD	Remedy of defects during construction
	4тн	Cracking of concrete due to different reasons, racking of concrete due to different reasons.
13 <sup>TH</sup>	187	Repair of cracks for different purposes, selection of techniques, polymer based repairs, common types of repairs.
	· 2ND	Revision
	3RD	Revision
	4тн	Revision

- M.S Shetty & A.K. Jain Concrete technology S.Chand
   M.L. Gambhir Concrete technology Tata McGraw Hill.
   A R Santhakumar. Concrete technology Oxford Publication

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On su	Di	GOVERNMENT POLYTECHNIC, KORAPUT EPARTMENT CIVIL ENGINEERING	
Discipline: CIVIL ENGG.	Semester:	Name of the Teaching Faculty: RABINARAYAN HOTA, PTGF	
Subject: LAND SURVEY PRACTICE II	No. of days/per week class allotted: 05	Semester From date: 10.03.2022 To Date: 10.06.2022  No. of Weeks: 13	
PRE- REQUISITE	Basic knowledge about soil Survey.		
COURSE OUTCOMES	CO2: Prepa CO3: Study different ap CO4:Prepa	out circular curve in the field.  are survey map by conducting traverse survey with theodolite.  y and use of modern electronic surveying instruments for its  oplications.  are contoured maps or plans requiring both the horizontal as  tical control.	
Week	Class Day	Theory / Practical Topics	
	1ST	TRIGONOMETRICAL SURVEYING & TACHEOMETRY	
	2ND	Do	
1ST	3RD	Determination of height of 3 objects whose bases are accessible	
131	<sub>4</sub> TH	Do	
	4111	Determination of stadia constants	
	5TH		
	1ST	Do	
	<sub>2</sub> ND	Determination of horizontal distance an elevation with Staff vertical, by stadia method	
2ND	3RD	Do	
2.45	4TH	SETTING OUT CURVES AND SITE SURVEYING	
	5 <sup>TH</sup>	Do	
	IST	Setting out a simple circular curve by offsets from long chord	
		Do	
3RD	2ND		
,	3RD	Setting out a simple circular curve by offsets from the tangent	
	4TH	Do Since from about anathron	
	5 <sup>TH</sup>	Setting out a simple circular curve by offsets from chords produces  Do	
	<sub>1</sub> ST <sub>2</sub> ND	Setting out a simple circular curve by Rankine's method of tangen	
<sub>4</sub> TH	2110	angle (Deflection angles)  Setting out a site the center line and foundation width of a building from the given plan	
• • • • • • • • • • • • • • • • • • • •	3RD	Do	
	<sub>4</sub> TH	Dividing an area into plots of given size	
	5 <sup>TH</sup>	Do	
TI.	<sub>1</sub> ST	STUDY OF MAP AND MAP SERIES	
€TH		-	

Do

<sub>5</sub>TH

2ND

	3RD	Physical Map
	4TH	Do
	5111	Topographic Map
	IST	Do
	2ND	Road Map
6TH	3RD	Do
	4TH	Political Map
	5111	Do
	1ST	Economic & Resources Map
	2ND	Do
7TH	3RD	Thematic Map
	4TH	
	5111	Climate Map Do
	1ST	
	2ND	Open Series map and Defense Series Map Do
	3RD	STUDY ON GPS & DGPS AND ETS
8TH		
	4TH	Do  CDS: Clobal Positioning CDS Signals Engage of CDS Positioning
	5111	GPS: - Global Positioning, GPS Signals, Errors of GPS, Positioning Methods
100	1ST	Do
	2ND	DGPS: - Differential Global Positioning System
ρTΗ	3RD	Do
	4TH	Rover GPS Set up
	5 <sup>TH</sup>	Do
	1ST	Download, Post-Process and Export GPS data
10 <sup>TH</sup>	2ND	Do
10	3RD	Sequence to download GPS data from flashcards
	4ти	Do
	5111	Sequence to export post process GPS data
	1ST	Do .
200	2 <sup>ND</sup>	ETS: - Electronic Total Station
$\Pi^{m}$	3RD	Do
	4111	Leveling
	5 <sup>TH</sup>	Do
	1st	Reference networks
	2 <sup>ND</sup>	Do
12 <sup>TH</sup>	3RD	STUDY OF GIS AND MAP PREPARATION USING GIS
	4тн	Do
	5 <sup>TH</sup>	Components of GIS, Integration of Spatial and Attribute Informatio
	187	Do
***	2ND	Attribute Data Management and Metadata Concept
13 <sup>TH</sup>	380	Do
	4111	Editing the layers
	5111	Do

1 D. Gaikwad Advanced Surveying S.Chand

2 B. C. Punmia Surveying Vol. I, II, III Laxmi Publication, Delhi - 06

3 R. Agor A text book of surveying and leveling Khanna Publishers, Delhi6

4 N. N. Basak Surveying and Levelling Tata Mcgraw Hill

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## GOVERNMENT POLYTECHNIC, KORAPUT DEPARTMENT CIVIL ENGINEERING

1179 304	DE	PARTMENT CIVIL ENGINEERING	
Discipline: CIVIL ENGG.	Semester:	Name of the Teaching Faculty: RABINARAYAN HOTA, PTGF	
Subject: CWP & MS PROJECT	No. of days/per week class allotted:	Semester From date: <b>10.03.2022</b> To Date: <b>10.06.2022</b> No. of Weeks: <b>13</b>	
	05		
PRE- REQUISITE	Basic knowle	edge about costruction management & ms project	
COURSE OUTCOMES	CO2: Const	the construction tools and select as per requirement. truct brick walls and comprehend the challenges associated cate formworks and reinforcements v different plumbing tools and fixtures	
Week	Class Day	Theory / Practical Topics	
	1ST	Study of tools required for construction of masonry.	
	2ND	Do	
<sub>1</sub> ST	3RD	Do	
	<sub>4</sub> TH	Lay out Plan of a building.	
	5TH	Do	
	1ST	Do	
	<sub>2</sub> ND	Construction of 1 &1 ½ Brick thick walls in English Bond in Mudmortar including a corner.	
<sub>2</sub> ND	3RD	Do	
2	<sub>4</sub> TH	Do	
	5 <sup>TH</sup>	Construction of 1 &1 1/2 Brick thick Pillar in Mud mortar.	
	<sub>1</sub> ST	Do	
3RD	2ND	Do	
	3RD	Bar bending and fabrication of reinforcements for a beam.	
	<sub>4</sub> TH	Do	
	5 <sup>TH</sup>	Do	
	IST	Bar bending and fabrication of reinforcements for a slab.	
	<sub>2</sub> ND	Do	
<sub>4</sub> TH	3RD	Do	
	<sub>4</sub> TH	Bar bending and fabrication of reinforcements for a lintel with chajj	
	5 <sup>TH</sup>	Do	
5TH	1ST	Do	

12111	4TH	Do
	3RD	Tracking the project progress
	2 <sup>ND</sup>	Do
11 <sup>7H</sup>	151	Do
	5 <sup>TH</sup>	Tracking the project progress
	4тн	
		Do
	2ND 3RD	Do
	181	Basics of Microsoft Project
	5 <sup>TH</sup>	Do
	-70	Creating project from a blank Do
	4 <sup>TH</sup>	
10 <sup>TH</sup>	3RD	Do
	2ND	Do
	JST	Creating a project plan
	5 <sup>TH</sup>	Do
	<sub>4</sub> TH	Do
9TH	3110	MS project scheduling for engineering
	3RD	
	2ND	Do
	IST	Do
4 ***	5 <sup>TH</sup>	Project Management-Definition & concept
Ü	4TH	DO
8TH	3RD	Do
	2ND	Introduction to Microsoft Project Do
	1ST	
	5 <sup>TH</sup>	Do Do
		Painting (interior/ exterior), e) Wood works, f) Fabrication & concreting works, g)Flooring
7,	4TH	Excavation of foundation, b) Masonry works, c) Plumbing works d
7TH	3RD	Do
	2ND	Do
	1ST	Field visits
	5 <sup>TH</sup>	Do
	4TH	Do
<sub>6</sub> TH	3RD	Study of pipe joints and plumbing fixtures.
	2ND	Do
	1ST	Do
	5 <sup>TH</sup>	Conducting a Non destructive compressive strength test on concepted beam using rebound Hammer as per I.S:1311(Part-2)-1992.
	4TH	Do
	3RD	Do
	0.0	
		Bar bending and fabrication of reinforcements for a column.

1st	Project Reporting
2ND	Do
3RD	Do
4тн	Custom views and field
	Do
	2ND 3RD

- 1. M. R. Samal & R.L. Sahoo Construction Management Kalyani Publication
- 2. PS Gahlot & B M Dhir Construction planning and management New age international Publishers
- 3. Robert L Peurifoy & Willium B Ledbetter Construction Planning equipment and methods TMH Education

Rubinarryan HT 10/03/22 Sign. of Faculty concerned

Madhusmita Dehuri HOD, Civil Department Govt. Polytechnic, Koraput



# GOVERNMENT POLYTECHNIC, KORAPUT DEPARTMENT CIVIL ENGINEERING

-	DEPARTMENT CIVIL ENGINEERING		
Discipline: CIVIL ENGG.	Semester:	Name of the Teaching Faculty: MADHUSMITA DEHURI, HOD CIVIL	
Subject: LIFE SKILL	No. of days/per week class allotted: 02	Semester From date: 10.03.2022  No. of Weeks: 13	
PRE- REQUISITE	Basic knowledge about Personal traits.		
COURSE OUTCOMES	CO2: Develo	oping communication skills oping intra persona skills oping decision making skills	
Week	Class Day	Theory / Practical Topics	
	1ST	Social skill	
1ST	2ND	Society, Social Structure, Develop Sympathy and Empathy	
2ND	1ST	PROBLEM SOLVING	
	2ND 1ST	Steps of Problem solving:  Presentation skill	
3RD	2ND	Voice and language – Volume, Pitch, Inflection, Speed, Pause Group discussion and interview techniques	
4TH	1ST	Interview technique	
4	2ND	Working in team	
5TH	1ST		
3	2ND	Leadership in teams, Handling frustrations in group  Task management	
6TH	1ST 2ND	Introduction, Task identification, Task planning, Organizing and execution, Closing the task	
	1ST	Swot analysis	
7TH	2ND	Analyse yourself with respect to your strength and weaknesses, opportunities and threats. Following points will be useful for doing swot.	
	1ST	Solve the true life problem assigned by the teacher	
8TH	2ND	Working in a team	
9TH	1ST	Form a group of 5-10 students and do a work for social cause e.g. tree plantation, blood donation, environment protection, camps on awarenes like importance of cleanliness in slum area, social activities like giving cloths to poor etc.  Mock interview	
	2ND	Do	
10 <sup>TH</sup>	1ST 2ND	Discuss a topic in a group and prepare minutes of discussion.	
	21ND	Do	
11 <sup>TH</sup>	2ND	Deliver a seminar for 5 minutes using presentation aids on the topic given by your teacher	
12 <sup>TH</sup>	IST	Do	

	2 <sup>ND</sup>	Task management
	1ST	Do
13 <sup>TH</sup>	2ND	Decide any task to be completed in a stipulated time with the help of
	_	teacher. Write a report considering various steps in task management

- 1. Dr. B.C.Punmia , Soil Mechanics & Foundation Engineering Laxmi publications (P) LTD
- 2. Dr. K.R.Arora, Soil Mechanics & Foundation Engineering Laxmi publications (P) LTD
- 3. Dr. V.N.S. Murthy, Soil Mechanics& Foundation Engineering, Vol-I UBS Publishers Distributors Ltd.

Sign. of Faculty concerned

Sign. of HOD

Madhusmita Deburi HOD, Civil Department Govt. Polytechiac, Koraput