

GOVERNMENT POLYTECHNIC, VAISHALI

LECTURE PLAN FOR LEFT SYLLABUS EFFECTIVE FROM 10-04-020

BRANCH: - CIVIL ENGINEERING

SEMESTER: - IV

SUBJECT: - GEOTECHNICAL ENGINEERING (1615403)

SUBJECT TEACHER: - HIMANSHU KRISHN SAURABH

SL.NO.	UNIT	TOPIC TO BE COVERED	NO.OF PERIOD	BOOK
1	Unit-05	<p><u>Bearing Capacity of Soils</u> 5.1 Concept of bearing capacity, ultimate bearing capacity, safe bearing capacity and allowable bearing pressure 5.2 Terzaghi's analysis and assumptions made. 5.3 Effect of water table on bearing capacity 5.4 Field methods for determination of bearing capacity – Plate load test and standard penetration test. Test procedures as Per IS:1888 & IS:2131. 5.5 Typical values of bearing capacity from building code IS:1904 5.6 Definition of active earth pressure and passive earth pressure, structures subjected to earth pressure in the field.</p>	L1 -L4	SELF WRITTEN NOTES ,T1
2	Unit-06	<p><u>Compaction of Soil & Stabilization</u> 6.1 Concept of compaction, purpose of compaction field situations where compaction is required. 6.2 Standard proctor test – test procedure as per IS code, Compaction curve, optimum moisture content, maximum dry density, Zero air voids line. 6.3 Modified proctor test 6.4 Factors affecting compaction 6.5 Field methods of compaction – rolling, ramming & vibration and Suitability of various compaction equipments. 6.6 California bearing ratio, CBR test, significance of CBR value 6.7 Difference between compaction and consolidation 6.8 Concept of soil stabilization, necessity of soil stabilization 6.9 Different methods of soil stabilization – Mechanical soil stabilization, lime stabilization, cement stabilization, bitumen stabilization, fly-ash stabilization</p>	L5 – L10	SELF WRITTEN NOTES ,T1
3	Unit-07	<p><u>Site Investigation And Sub Soil Exploration</u> 7.1 Necessity of site investigation & sub-soil exploration. 7.2 Types of exploration – general , detailed. 7.3 Method of site exploration open excavation & boring 7.4 Criteria for deciding the location and number of test pits and bores 7.5 Disturbed & undisturbed soil samples for lab testing. 7.6 Field identification of soil – dry strength test, dilatancy test & toughness test 7.7 Empirical correlation between soil properties and SPT values.</p>	L11-L14	SELF WRITTEN NOTES ,T1
4	Unit-08	<p><u>Liquefaction</u></p>	L15-L17	SELF WRITTEN NOTES,T1

Text / Reference Books:		
Titles of the Book	Name of Authors	Name of the Publisher
Soil Mechanics & Foundation Engineering(T1)	Dr. B. C. Punmia	Standard Book house, New Delhi
Soil Mechanics & Foundation Engineering	Murthi	Tata McGraw Hill , New Delhi
Soil Mechanics	B. J. Kasmalkar	Pune Vidhyarti Griha, Pune
Geo-technical Engineering	Gulhati & Dutta	Tata McGraw Hill , New Delhi
Geo Technical Engineering	Kuldep Singh	Foundation Publishing

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BRANCH: - CIVIL ENGINEERING

SEMESTER: - IV

SUBJECT: - COMPUTER AIDED DRAWING -TW(1615411)

SUBJECT TEACHER:-HIMANSHU KRISHN SAURABH

SL.NO.	UNIT	TOPIC TO BE COVERED	NO.OF PERIOD	BOOK
1.	Unit-02	<p>CAD Command WCS icon, UCS icon, co-ordinates, drawing limits, grid, snap, ortho features. Drawing commands, line, circle, polyline, multiline, ellipse, polygon etc. Editing commands – Copy, move, offset, fillet, chamfer, trim,lengthen, mirror, rotate, array etc. Working with hatches, fills, dimensioning, text etc.</p>		SELF WRITTEN NOTES,T1
2.	Unit-03	<p>Submission / Working Drawing Generation of line plan, Detailed Plan, elevation, section, site plan, Area statement Generation of 3D view and print commands Introduction to Auto Civil , 3D Max.</p>		SELF WRITTEN NOTES,T1

Text/Reference Books:		
Titles of the Book	Name of Authors	Name of the Publisher
Reference Manual of AutoCAD(T1)	AutoDesk	
Reference Manual of Felix cad	Felix CAD	
Reference Manual of Intel CAD		
Reference Manual of Auto Civil		
Reference Manual of 3D- Max		
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