



SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with 'A' Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956, Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada Seetharampuram, W G DT., Narsapur-534280, (Andhra Pradesh)

DEPARTMENT OF CIVIL ENGINEERING

TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods /Week	Academic Year	Date of commencement of Semester
16CE7T03	ESTIMATING, SPECIFICATIONS & CONTRACTS	VII	CIVIL	05	2021-22	04-10-2021

COURSE OUTCOMES

1	Determine the quantities of different components of buildings. [K3]
2	Calculate the quantities and cost of various building components. [K3]
3	Estimate R.C.C, Canal and Road works. [K4]
4	Acquire the knowledge of the contracts and contractor. [K4]
5	Construct detailed report on estimation and valuation process [K3]
6	Construct detailed report on estimation and valuation process [K3]

UNIT	Out Comes / Bloom's Level	Topics No.	Topics/Activity	Text Book / Reference	Contact Hour	Delivery Method
I	The student should be able to determine the quantities of different components of buildings. (K3)	1.1	Introduction	T1,R1	1	Chalk & Talk, PPT, Tutorial
		1.2	General items of work in Building	T1,R1, R3	1	
		1.3	Standard Units Principles of working out Quantities	T1,R1	1	
		1.4	Detailed estimates	T1,R1	1	
		1.5	Abstract estimates	T1,R2	1	
		1.6	Approximate method of Estimating.	T1,R2, R3	1	
		1.7	Problem on Service Unit Method ,Cubic Content Method	T1,R2	1	
		1.8	Plinth area Estimate Problem on plinth area	T1,R2	1	
Total						8



SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956, Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada Seetharampuram, W.G.D.T., Narsapur-534280, (Andhra Pradesh)

II	The student should be in a position to find the cost of various building components(K3)	2.1	Rate Analysis	T1,T2, R1	1	Chalk & Talk, PPT, Tutorial
		2.2	Working out data for various items of work over head & contingent charges.	T2,R1	1	
		2.3	Brick work Estimation	T1,T4	1	
		2.4	Cement Concrete Work- Dry material Calculation	T1,T4	1	
		2.5	RCC Slab Estimation –Material & Labours	T1,T4	1	
		2.6	RCC Column Estimation – Material & Labours	T1,T4	1	
		2.7	Lime Concrete Work –Material & Labours	T1,T4	1	
		2.8	R.B Work / <i>plastering</i>	T1,T4	1	
		2.9	Lime Concrete in Foundation	T1, T4	1	
Total					9	
III	The student should be able to Estimate R.C.C, Canal and Road works. (K4)	3.1	Earthwork for roads and canals.	T2,R1	1	Chalk & Talk, PPT, Tutorial
		3.2	Mid Sectional Method ,Mean Cross Sectional Method	T2,R1	1	
		3.3	Canal section in fully Embankment & Cutting	T1,T4	1	
		3.4	Problems on Mean Sectional, Mid section Method	T1,T4	1	
		3.5	Prismoidal Formula Method ,Trapezoidal Formula method problems	T1,T4	1	
		3.6	Earth Work Problem on Up Ward Gradient & Downward Gradient	T1,T4	1	
		3.7	Mean Depth Method	T1,T4	1	
		3.8	Reinforcement bar bending and bar requirement schedules	T1,T4	1	
		3.9	Reinforced Concrete beam Design	T1,T4	1	
		3.1	Reinforced Concrete Footing Design	T1,T4	1	
		3.11	Reinforced Concrete lintel ,slab	T1,T4	1	
		3.12	Reinforced Concrete footing	T1,T4	1	
Total					12	



SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by
NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956,
Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada
Seetharampuram, W G DT, Narsapur-534280, (Andhra Pradesh)

IV	The student should be capable of Acquire the knowledge of the contracts and contractor (K4)	4.1	Contracts – Types of contracts	T2,R1	1	Chalk & Talk, PPT, Tutorial
		4.2	Contract Documents –	T2,R1	1	
		4.3	Conditions of contract Valuation of Buildings	T1,R2	1	
		4.4	Valuation of Buildings – Purpose of Valuation	T1,R2	1	
		4.5	Book Value ,Market Value ,Captilized Value	T1,R2	1	
		4.6	Sinking Fund ,Depreciation	T1,T4	1	
		4.7	Fixation of Rent	T1,T4	1	
		4.8	Standard specifications for different items of building construction	T1,T4	1	
		4.9	RCC Slab Different Spans	T1,R1	1	
		4.10	Structural Design of Buildings and Thumb Rules	T1,T4	1	
Total					10	
V	The student should be able to determine the quantities of different components of buildings. K5)	5.1	Detailed Estimates of Buildings using Individual Wall Method	T1,R1, R3	1	Chalk & Talk, PPT, Tutorial
		5.2	Earth Work Calculation in excavation in Foundation	T1,T4	1	
		5.3	Lime Concrete in Foundation	T1,T4	1	
		5.4	Ist Class Brick Work in Foundation & plinth	T1,T4	1	
		5.5	2.5cm Damp Proof Course	T1,T4	1	
		5.6	Deductions	T1,T4	1	
		5.7	Ist Class Brick Work in Superstructure	T1,T4	1	
		5.8	Deductions in Doors and Windows openings	T1,T4	1	
		5.9	Lintel Over doors and windows ,Verandah lintels	T1,T4	1	
		5.10	R.C.C.Work	T1,T4	1	
		5.11	7.5 cm lime concrete in roof	T1,T4	1	
		5.12	12mm plastering Cement and sand –Deduct	T1,T4	1	
		5.13	6mm plaster with 1:3Cement coarse sand mortar	T1,T4	1	



SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956, Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada Seetharampuram, W.G.DT., Narsapur-534280, (Andhra Pradesh)

		5.14	2.5cm c.c (1:2:4) floor	T1,T4	1	
		5.15	Wood Work , White Washing ,Painting	T1,T4	1	
					Total	15
VI	The student should be able to determine the quantities of different components of buildings. (K5)	6.1	Detailed Estimates of Buildings using Centre line Method	T1,R2	10	Chalk & Talk, PPT, Tutorial
		6.2	Earth Work Calculation in excavation in Foundation	T1,T4	1	
		6.3	Lime Concrete in Foundation	T1,T4	1	
		6.4	Ist Class Brick Work in Foundation & plinth	T1,T4	1	
		6.5	2.5cm Damp Proof Course	T1,T4	1	
		6.6	Deductions	T1,T4	1	
		6.7	Ist Class Brick Work in Superstructure	T1,T4	1	
		6.8	Deductions in Doors and Windows openings	T1,T4	1	
		6.9	Lintel Over doors and windows ,Verandah lintels	T1,T4	1	
		6.10	R.C.C.Work	T1,T4	1	
		6011	12mm plastering Cement and sand –Deduct	T1,T4	1	
		6.12	Wood Work , White Washing ,Painting	T1,T4	1	
					Total	12
CUMULATIVE PROPOSED PERIODS						66
Text Books:						
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION					
1	B.N. Dutta , . 'Estimating and Costing', UBS publishers, 2000					
2	B. S. Patil , 'Civil Engineering Contracts and Estimates', Universities Press (India) Pvt. Ltd., Hyd. 2010					
3	Rajiv Gupta, 'Construction Planning and Technology', CBS Publishers & Distributors Pvt. Ltd. New Delhi.2014					
4	G.S. Birdie, 'Estimating and Costing'2015					
Reference Books:						
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION					
1	'Standard Schedule of rates and standard data book' by public works department.					
2	. IS 1200 (Parts I to XXV-1974/ Method of Measurement of Building & Civil Engg Works – B.I.S.)					
3	M. Chakraborti, 'Estimation, Costing and Specifications' Laxmi publications 2018					
4	National Building Code					

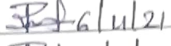
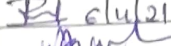




SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956, Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada Seetharampuram, W.G.DT., Narsapur-534280, (Andhra Pradesh)

Web Details

1 <https://nptel.ac.in/courses/105/103/105103093/>

		Name	Signature with Date
i.	Faculty	K.Ramya	
ii.	Course Coordinator	K.Ramya	
iii.	Module Coordinator	A.VENKATA KRISHNA	
iv.	Programme Coordinator	G V L N MURTHY	



Principal