



DEPARTMENT OF CIVIL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI - 620 015, TAMIL NADU, INDIA

COURSE OUTLINE TEMPLATE			
Course Title	Basics of Civil Engineering		
Course Code	CEIR 11	No. of Credits	2
Department	Computer Science & Engineering – Section B	Faculty	Mrs. GOURI GOPAN
Pre-requisites Course Code	---		
Course Coordinator(s) (if, applicable)	---		
Other Course Teacher(s)/Tutor(s) E-mail	-	Telephone No.	8281510657
Course Type	<input checked="" type="checkbox"/> GIR course <input type="checkbox"/> Core course <input type="checkbox"/> Elective course		
Syllabus (approved in BOS)			
<p>Properties and uses of construction materials - stones, bricks, cement, concrete and steel.</p> <p>Site selection for buildings - Component of building - Foundation- Shallow and deep foundations - Brick and stone masonry - Plastering - Lintels, beams and columns - Roofs.</p> <p>Roads-Classification of Rural and urban Roads- Pavement Materials-Traffic signs and road marking-Traffic Signals.</p> <p>Surveying - Classification-Chain Survey-Ranging-Compass Survey-exhibition of different survey equipment.</p> <p>Sources of Water - Dams- Water Supply-Quality of Water-Wastewater Treatment – Sea Water Intrusion – Recharge of Ground Water.</p>			
COURSE OVERVIEW			
<p>This course gives students the knowledge about the fundamentals of Civil Engineering such as Properties and uses of construction materials, Building Construction, Construction of roads, Surveying methods and equipment, Water resources and Waste water related concepts.</p> <ul style="list-style-type: none"> • This is a 2 Credit course offered to all branches of engineering except Civil Engineering. • Two theory classes (2 hours per week) will be conducted per week. 			
COURSE OBJECTIVES			
<ol style="list-style-type: none"> 1. To give an overview of the fundamentals of the Civil Engineering fields to the students of all branches of Engineering 2. To realize the importance of the Civil Engineering Profession in fulfilling societal needs 			

COURSE OUTCOMES (CO)	
Course Outcomes	Aligned Programme Outcomes (PO)
On completion of the course, the students will be able to:	
1. The students will gain knowledge on site selection.	1, 3, 4, 8
2. The students will gain knowledge on construction materials.	1, 3, 4, 8, 10
3. The students will gain knowledge on components of buildings.	1, 3, 4, 8, 9
4. The students will gain knowledge on roads and water resources.	1, 3, 4, 8, 9, 10
5. A basic appreciation of multidisciplinary approach when involved in Civil Related Projects.	1, 4, 8, 9, 10

COURSE TEACHING AND LEARNING ACTIVITIES

S. No.	Week	Topic	Mode of Delivery
1.	3 rd week of Aug 18 (13 to 17) (2 Contact Hours)	Introduction to Basics of Civil Engineering Properties and uses of construction materials – stones- (Quality, Quarrying, Dressing, Uses)	Lecture
2.	4 th week of Aug 18 (20 to 24) (2 Contact Hours)	Properties and Tests on Stones; Properties and uses of construction materials – bricks (Manufacture, Quality)	PPT
3.	5 th week of Aug 18 (27 to 31) (2 Contact Hours)	Properties and uses of construction materials – bricks (Classification, Uses); Cement (Constituents, Manufacture, Properties)	PPT & BB
4.	1 st week of Sep 18 (3 to 7) (2 Contact Hours)	Properties and uses of construction materials – cement – (Uses, Types); Concrete (Advantages, Constituents, Properties, Proportioning)	PPT & BB
5.	2 nd week of Sep 18 (10 to 14) (1 Contact Hour)	Properties and uses of construction materials – concrete – (Manufacture and Types, Uses)	PPT & BB
6.	3 rd week of Sep 18 (17 to 21) (2 Contact Hours)	Steel (Varieties, Properties and Uses, Commercial forms)	PPT & BB
7.	4 th week of Sep 18 (24 to 28) (2 Contact Hours)	Site selection of buildings- Classification and Planning of buildings, components of building Foundation- Shallow and deep foundations (Function, Loads, Bearing Capacity of Soil, Types, Causes of failure of foundation)	PPT & BB
8.	1 st week of Oct 18 (1 to 5) (1 Contact Hour)	Assessment – I	

9.	2 nd week of Oct 18 (8 to 12) (2 Contact Hours)	Brick masonry- Definition, terms used, Bonds, Comparison	PPT
10.	3 rd week of Oct 18 (15 to 19) (2 Contact Hours)	stone masonry – (Definitions, Bonds, Comparison, Points to be observed in construction) Plastering, Lintels, beams and columns	PPT & BB
11.	4 th week of Oct 18 (22 to 26) (2 Contact Hours)	Roofs – (Requirement, Classification, Types, roof coverings); Roads-Classification of Rural and urban Roads	PPT
12.	5 th week of Oct 18 and 1 st week of Nov 18 (29 - 31 and 1, 2) (2 Contact Hours)	Pavement Materials; Traffic signs and road marking-Traffic Signals. Surveying - Classification- Chain Survey – (Instruments used, Principle, Terms used)	PPT
13.	2 nd week of Nov 18 (5 to 9) (2 Contact Hours)	Assessment – II Operations(Ranging) – Compass Survey (Methods of using, Bearing, Local attraction)	PPT & Lab visit
14.	3 rd week of Nov 18 (12 to 16) (2 Contact Hours)	Surveying Instruments Sources of Water – Dams (Purpose of dam, factors governing selection of dam site, Cross section details of gravity dam)	PPT & BB
15.	4 th week of Nov 18 (19 to 23) (2 Contact Hours)	Water Supply- Quality of Water, Wastewater Treatment	PPT & BB
16.	5 th week of Nov 18 and (26 - 30) (2 Contact Hours)	Sea Water Intrusion Recharge of Ground Water	PPT
17.	1 st week of Dec 18	Final Assessment	
18.	1 st week of Dec 18 (1 st) Closure	Teaching, learning and assessment as per respective course plan ends closure of all class work and the session assessments	

COURSE ASSESSMENT METHODS

S. No.	Mode of Assessment	Week/Date	Duration	% Weightage
1.	Assessment - I	8 th Week	1 hour	20%
2.	Assessment – II	13 th Week	1 hour	20%
3.	Final Assessment	17 th week	3 hours	40%
4.	Assignments	-		20%

ESSENTIAL READINGS : Textbooks, reference books Website addresses, journals, etc

1. Punmia, B.C, Ashok Kumar Jain, Arun Kumar Jain, 'Basic Civil Engineering', Lakshmi Publishers, 2012.
2. Satheesh Gopi, 'Basic Civil Engineering', Pearson Publishers, 2009.
3. Rangwala, S.C, 'Building materials', Charotar Publishing House, Pvt. Limited, Edition 27, 2009.
4. Palanichamy, M.S, 'Basic Civil Engineering', Tata Mc Graw Hill, 2000.
5. Lecture notes prepared by Department of Civil Engineering, NITT.

COURSE EXIT SURVEY (mention the ways in which the feedback about the course is assessed and indicate the attainment also)

1. Feedback from students during Class committee meetings

2. Anonymous feedback through questionnaire at the end of the semester (through the feedback section portal in "MIS")

COURSE POLICY (preferred mode of correspondence with students, policy on attendance, compensation assessment, academic honesty and plagiarism etc.)

MODE OF CORRESPONDENCE (email/ phone etc)

Mode of correspondence would be through phone/ email only to the class representatives and vice versa

Mrs. GOURI GOPAN
gourigopan93@gmail.com
Mob: +91 – 8281510657

ATTENDANCE

1. The attendance will be taken in all the contact hours. Students are encouraged to attend all the classes without absence.
2. Also, the students are encouraged to participate in various co-curricular and extracurricular activities to enrich the academic / campus life.
3. Students will be given attendance if they show "ON DUTY" on their absence with proper attestation from the concerned officials and are to be approved by Head of the Department.
4. The minimum attendance for appearing for the end semester examination is 75%.
5. Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded "V" grade.

Compensation Assessment

1. Students who are absent in any one of their internal assessments can appear for the compensation assessment on a fixed date after completion of syllabus.
2. The students have to appear for it on the given date otherwise the student will not be eligible to appear for the End Semester examination.
3. Students need to submit a valid explanation of their absence in their internal assessment.

COURSE POLICY (including plagiarism, academic honesty, attendance, etc.)

1. Students should have to perform their assignments and assessments without any malpractices.
2. The student will not be allowed further to write the exam if he is found to commit any malpractices and proper disciplinary action is taken by the head of the department.
3. Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.
4. Zero mark will be awarded to the offenders.
5. The departmental disciplinary committee including the course faculty member, PAC chairman and the HOD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the academic office.

ADDITIONAL COURSE INFORMATION

Queries / Clarifications / Discussions (if required) may be e-mailed to the Course Faculty or the Faculty can be contacted during office hours.

FOR Approval

Course Faculty



CC-Chairperson



HOD



3/10/2018

D. K. V. Iyer