

# Sandip University

Mahiravani, Trimbak Road, Tal & Dist. Nashik 422213, Maharashtra

Phone: 02594-222541, 222582 Fax: 02594 222555

## School of Engineering & Technology

Course Structure for Undergraduate Programme of Bachelor of Civil Engineering  
(B.Tech.)

### Semester-V

Sr. No	Core Course	Course Code	Theory Paper/Practical	Teaching Scheme (Hrs./Week)				Credits	Duration University Exam. (Hrs.)	CIA	Examination Scheme		Total Marks
				L	T	P	Total				T	P/O	
01	PC	YCE501	Water Resource Engineering - I	03	--	--	03	03	3	50	50	--	100
02	PC	YCE502	Transportation Engineering - I	03	--	--	03	03	3	50	50	--	100
03	PC	YCE503	Steel Structures	03	01	--	04	04	3	50	50	--	100
04	PC	YCE504	Structural Analysis -II	03	--	--	03	03	3	50	50	--	100
05	PC	YCE505	Fluid Mechanics -II	03	--	--	03	03	3	50	50	--	100
06	UC	YCE506	Foreign Language	02	--	--	02	02	3	25	--	25	50
07	PC	YCE517	Steel Structures Laboratory	--	--	02	02	01	3	25	--	25	50
08	PC	YCE518	Fluid Mechanics Laboratory-II	--	--	02	02	01	3	25	--	25	50
09	UC	YCE519	Employability Skills Development	--	--	02	02	01	3	25	--	--	25
10	UC	YCE5110	Internship**	--	--	--	--	02	--	50	--	--	50
<b>Total</b>				<b>17</b>	<b>06</b>	<b>01</b>	<b>24</b>	<b>23</b>	<b>--</b>	<b>400</b>	<b>250</b>	<b>75</b>	<b>725</b>

\*\* Internship of minimum 21 days

CIA1: Home Assignment

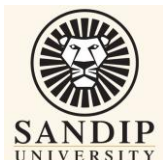
CIA2: Mid Term Examination

CIA3: Seminar PPT

CIA4: Research Based Activity

CIA1	CIA2		CIA3	CIA4
10%	A-10%	B-10%	10%	10%

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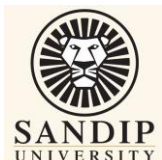
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<b>School: School of Engineering and Technology</b>	<b>Programme: B.Tech (Civil Engineering )</b>
<b>Year : Third Year</b>	<b>Semester – V</b>
<b>Course: Water Resources Engineering - I</b>	<b>Course Code:YCE501</b>
<b>Theory: 3Hrs/Week</b>	<b>Max. University Theory Examination: 50 Marks</b>
<b>Max. Time for Theory Exam.: 3 Hrs</b>	<b>Continuous Internal Assessment: 50 Marks</b>

Objectives	
1	To understand conceptually water resources engineering and their aspects.
2	To analyze problems related to water requirements of crops.
3	To understand mechanism of Precipitation and abstraction.
4	To understand Irrigation Engineering and their aspects.
5	To understand Ground water hydrology.

Unit Number	Details	Hours
I	<p><b>INTRODUCTION TO WATER RESOURCES ENGINEERING</b> Need of water resources projects, Preliminary aspects of Environmental Impact Assessment of Water Resources Projects, Hydrologic cycle, scope and application</p> <p><b>PRECIPITATION AND ABSTRACTIONS</b> Mechanism of precipitation, types and forms of precipitation, measurement techniques, rain gauge network, variability in precipitation, estimation of missing data, test for consistency of rainfall record, rainfall hyetograph, rainfall mass curve, areal average rainfall, intensity duration curves, evaporation, factors affecting evaporation, evaporimeters, estimation of evaporation, evapotranspiration, measurement of evapotranspiration, initial loss, infiltration and infiltration indices.</p>	8
II	<p><b>RUN OFF AND HYDROGRAPH</b> Direct runoff and base flow; run off characteristics of streams, computation of runoff, rainfall-runoff relationships, components of hydrograph and factors affecting shape of hydrograph, base flow separation, effective rainfall hyetograph, unit hydrograph theory, derivation of unit hydrograph of different duration, synthetic unit hydrograph, IUH.</p>	8
III	<p><b>WATER REQUIREMENT OF CROPS</b> Classes and availability of soil water, available moisture depth, frequency of irrigation, relationship between duty, delta and base period, factors affecting duty, methods of improving duty, irrigation efficiencies, command areas, kharif, rabi and perennial crops, crop rotation, irrigation water requirement, design discharge of canal and storage capacity of reservoir based on irrigation requirement.</p>	8

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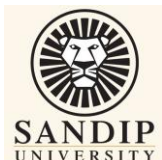
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IV	<b>IRRIGATION ENGINEERING</b> Definition of irrigation, necessity, drainage problems of irrigation , advantages and disadvantages of irrigation, types of irrigation, quality of irrigation water, various methods of irrigation, suitability of various methods of irrigation, <b>WATER LOGGING AND DRAINAGE</b> Definition, effects, causes and remedial measures of water logging, types of land drains, layout and spacing of tile drains. <b>STREAM GAUGING AND DESIGN FLOOD</b> Site selection for stream gauging, direct methods of discharge measurements, computation of design flood using rational, empirical, unit hydrograph and flood frequency methods	8
	<b>GROUND WATER HYDROLOGY</b> Occurrence, distribution of ground water, specific yield of aquifers, movement of groundwater, Darcy’s law, permeability, safe yield of a basin, compressibility of aquifer, storage coefficient, specific storage, hydraulics of wells under steady & introduction to unsteady condition in confined and unconfined aquifers, yield of wells, pumping and recuperation tests, types of tube wells. <b>FLOOD ROUTING</b> Reservoir and channel flood routing methods	
<b>Total</b>		<b>40</b>

Outcome	
1	Apply math, science, and technology in the field of water resource Engineering.
2	Various components of hydrologic cycle that affect the movement of water in the earth
3	Basic requirements of irrigation and various irrigation techniques
4	Concepts of water logging and drainage and design flood
5	Concepts of movement of ground water beneath the earth

Reference Books	
	1. Chow V T, Maidment D R and Mays L W, “Applied Hydrology”, McGraw-Hill Book Company, New York, 1988. 2. Raghunath H. M., “Hydrology, Principles, Analysis and Design”, New Age International (P) Ltd, New Delhi, 2000. 3. K. Subramanya, “ Engineering Hydrology”, Tata Mc-Graw Hill Publishing Co. Ltd., New Delhi,1990. 4. Asawa G.L.,”Irrigation and water resources Engineering”, New Age International Publishers, New Delhi, 2005. 5. Garg S. K., “Irrigation Engineering and Hydraulic Structures”, Khanna Publishers, New Delhi, 1996. 6. V.P.Singh,”Elementary Hydrology”, Prentice Hall Publication, New Delhi, 1994

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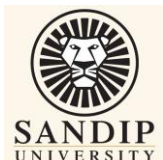
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<b>School: School of Engineering and Technology</b>	<b>Programme: B.Tech. Civil Engineering</b>
<b>Year: Third Year</b>	<b>Semester – V</b>
<b>Course: Transportation Engineering-I</b>	<b>Course Code: YCE 502</b>
<b>Theory: 3Hrs/Week</b>	<b>Max. University Theory Examination: 50 Marks</b>
<b>Max. Time for Theory Exam.: 3 Hrs</b>	<b>Continuous Internal Assessment: 50 Marks</b>

Objectives	
<b>1</b>	To teach the students about the different transportation systems
<b>2</b>	Describe the terminology of infrastructure services like railway, tunnels, docks and harbor and airport facilities.

Unit Number	Details	Hours
<b>I</b>	<b>Infrastructure:</b> Scope of Transportation Engineering in National & Global development, Provisions made for various infrastructure sectors like Roads & Highways, Railways, Airports, Ports, Housing, and Energy & Power sector with reference to 12 <sup>th</sup> Five Year Plan. Public Private Partnership (PPP) its advantages and disadvantages.	8
<b>II</b>	<b>Railways Engineering:</b> Merits of rail transportation, railway gauges and gauge problems, Cross section of permanent way and track components: Sleepers-functions and types, Rails: Coning of wheels and tilting of rails, rail cross sections, wear and creep of rails, rail fastenings. Points crossings and turnouts. Functions components, elements of points, types of crossings and turnouts.	9
<b>III</b>	<b>Tunnel Engineering:</b> Functions of tunnel, criteria for selection of size & shape of tunnels. Pilot tunnel, shaft, adit and portal, NATM TBM & Earth Pressure Balance Method of tunneling in soft soil, Drilling & blasting method of tunneling including various operations like mucking, micro tunneling and trenchless tunneling.	7
<b>IV</b>	<b>Water Transportation:</b> Introduction to harbours, Requirements of harbours and ports. Classification of harbors with examples, Selection of site for harbor, Various components of ports, harbor works, break waters, jetties, wharves, piers, berthing facilities, types and construction, dolphins, docks, transit sheds and warehouses, general layout, containers and container yard, layout and handling equipment	8
<b>V</b>	<b>Airport Engineering:</b> Advantages and limitations of air transportation Aircraft characteristics and their influence on airport planning, Airport planning: topographical and geographical features, air traffic characteristics, and development of new airports, factors affecting airport site selection, Characteristics of good layout, runway configuration, airport obstruction, location of terminal buildings, aprons and hangers. Zoning requirements regarding permissible heights of constructions and landing within the airport boundary. Runways and taxiways: Runway orientation, wind coverage, use of wind rose diagram, basic runway length, corrections for elevation, temperature and gradient as per ICAO and FAA recommendation. Airport classification by ICAO.	8
<b>Total</b>		<b>40</b>

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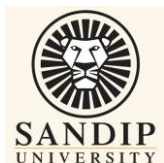
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Course Outcome	
1	Students will be able to describe the terminology of infrastructure services like railway, docks and harbour and airport facilities.
2	Describe and sketch railway, docks and harbor and airport components.
3	Analyze the factors influencing the site selection for railway, docks, harbour and airport facilities.

Reference Books	
	1. Construction Planning Methods & Equipment: Puerifoy –Tata MC Graw Hill 2. Saxena S.C. and Arora S. P., A course of railway engineering, Dhanpat Rai and sons, New Delhi 3. Railway Engineering, 2/E by Chandra—Oxford University Press 4. Railway Track Engineering: J.S. Mundrey, Tata McGraw Hill 5. Harbour, Dock & Tunnel Engineering: R. Srinivasan 6. Khanna and Arora, Airport planning & design, Nemchand Bros, Roorkee

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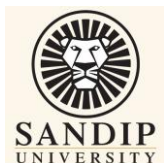
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<b>Year : Third Year</b>	<b>Semester – V</b>
<b>Course: Steel Structures</b>	<b>Course Code: YCE503</b>
<b>Theory: 3Hrs/Week</b>	<b>Max. University Theory Examination: 50 Marks</b>
<b>Tutorial :01 Hr /Week</b>	
<b>Max. Time for Theory Exam.: 3 Hrs</b>	<b>Continuous Internal Assessment: 50 Marks</b>

Course Objectives	
1	To learn IS 800-2007 code of practice for the design of Compression, Tension and Flexural members using various cross-sections.
2	To study the behaviour and design of compression and tension members using simple and built-up sections.
3	To understand behaviour of flexural members and the design of laterally restrained and unrestrained beams.
4	To study the components of truss, loads on trusses, analysis and design of purlins and truss members.
5	To study the design of bolted and welded connections and arranging field visit to industries.

Unit Number	Details	Hours
I	<b>Introduction to steel structures and</b> relevant IS specifications such as IS:800-2007, IS:808-1989, IS:875 part I to III, SP: 6(1), SP: 6(6),- Material specifications - Rolled sections – Section classifications - Permissible stresses in tension, compression, bending and shear, Mechanical behaviour of steel – Measures of Yielding – Measures of Ductility – Types of Structures – Structural Steel Sections. <b>Methods of Structural design:</b> Introduction-Design Philosophies-Working Stress method-Ultimate Strength method-Load and Resistant factor- Limit State Method-Partial safety factor-Load-Load combinations-Classification of Cross sections- General aspects in the design.	10
II	<b>Design of Steel fasteners:</b> Types of fasteners –Bolted connections-Assumptions- Failure of bolted joints – Strength of bolted joints – Design examples – Design of Welded connections – Butt weld- fillet weld – Design examples.	8
III	<b>Design of Tension Members:</b> General – Modes of Failure of Tension member-Analysis of Tension members- Example - Design steps – Design examples – Lug angles – Design. <b>Design of Compression Members:</b> General – Strength of Compression members- Design Compressive strength- Example on analysis of Compression members – Design of Angle struts – Design Examples- Built up Columns-Design of Lacing – Design of Battens- Design Examples- Design of Roof members.	10
IV	<b>Flexural members</b> – Rolled sections - built-up beams - Design for strength and	8

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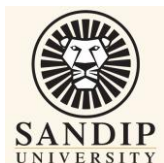
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<b>School: School of Engineering and Technology</b>	<b>Programme: Civil Engineering</b>
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	serviceability, web crippling, web yielding, bearing stiffeners. <b>Design of welded plate girder:</b> Design of cross section, curtailment of flange plates, stiffeners and connections.	
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Course Outcomes		
1	Students will learn to apply the IS code of practice for the design of steel structural elements	
2	Students will learn to design compression and tension members using simple and built-up sections	
3	Students will learn to calculate forces on the various members of the truss and design them	
4	Students will learn to analyze the behavior of bolted connections and design them	
5	Students will learn to design welded connections for both axial and eccentric forces	
V	<b>Roof truss:</b> Assessment of dead load, live load and wind load, design of purlin, design of members of a truss, detailing of typical joints and supports.	9
	<b>Total</b>	<b>45</b>

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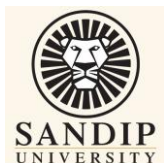
<b>Year : Third Year</b>	<b>Semester – V</b>
<b>Course: Structural Analysis - II</b>	<b>Course Code: YCE504</b>
<b>Theory: 3Hrs/Week</b>	<b>Max. University Theory Examination: 50 Marks</b>
<b>Max. Time for Theory Exam.: 3 Hrs</b>	<b>Continuous Internal Assessment: 50 Marks</b>
<b>Course Objectives</b>	
<b>1</b>	To analyze indeterminate structures using force and displacement method
<b>2</b>	To study finite difference and finite element method for structural elements.
<b>3</b>	To study plastic analysis of structure.

<b>Unit Number</b>	<b>Details</b>	<b>Hours</b>
<b>I</b>	<b>Flexibility Method:</b> Fundamental concepts of flexibility method of analysis, formulation of flexibility matrix. Application of flexibility method to beams, rigid jointed rectangular portal frames and pin jointed plane trusses. (Involving not more than three unknowns).	8
<b>II</b>	<b>Stiffness Method:</b> Fundamental concepts of stiffness method of analysis, formulation of stiffness matrix. Application of stiffness method to beams, rigid jointed rectangular portal frames, trusses. (Involving not more than three unknowns).	8
<b>III</b>	<b>Finite Difference Method:</b> Introduction, application to deflection problems of determinate beams by central difference method. Approximate methods of analysis of multi-storied multi-bay 2 - D rigid jointed frames by substitute frame method, cantilever method and portal method.	8
<b>IV</b>	<b>Finite element method:</b> Introduction, discretization, types of elements-1D, 2D, 3D, isoparametric and axisymmetric, convergence criteria, Pascals triangle, direct stiffness method, principal of minimum potential energy. Shape functions: CST, LST elements by using polynomials, 1D, 2D elements by using Lagrange's method, concept of local and global stiffness matrix	8
<b>V</b>	<b>Plastic Analysis of Structure:</b> True and idealized stress-strain curve for mild steel in tension, stress distribution in elastic, elasto-plastic and plastic stage, concept of plastic hinge and collapse mechanism, statical and kinematical method of analysis, upper, lower bound and uniqueness theorem. Plastic analysis of determinate and indeterminate beams, single bay single storied portal frame	8
<b>Total</b>		<b>40</b>

<b>Course Outcomes</b>	
<b>1</b>	Students will be able to analyze structures using force and displacement methods
<b>2</b>	Students will be able to understand finite difference and finite element method for structural elements analysis.

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3

Students will be able to understand plastic analysis of structure.

## Reference Books

1. Theory of Structures Vol. I & II by B. C. Punmia, Laxmi Publication.
2. Junarkar. S. B and Shah H.J- Mechanics of Structures Vol 1 & Vol.2 – 27th Edition, Charotar Publishers, 2008.
3. Theory of Structures Vol. I & II by Perumull & Vaidyanathan, Laxmi Publication
4. Wang C.K. - Intermediate Structural Analysis – Tata Mc Graw Hill Publishers, 2010.
5. Finite element Analysis, S.S. Bhavikatti, New Age Publication, Delhi

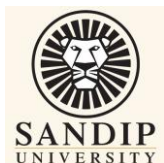
School: School of Engineering & Technology

Programme: B.Tech (Civil Engineering)

Year : Third Year

Semester –V

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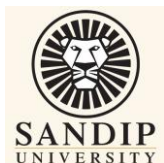
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<b>Course: Fluid Mechanics - II</b>	<b>Course Code: YCE 505</b>
<b>Theory: 4Hrs/Week</b>	<b>Max. University Theory Examination: 50 Marks</b>
<b>Max. Time for Theory Exam.: 3 Hrs</b>	<b>Continuous Internal Assessment: 50 Marks</b>

<b>Objectives</b>	
<b>1</b>	To understand Fluid Flow around Submerged Objects and Unsteady Flow.
<b>2</b>	To understand Depth-Energy Relationships in Open Channel Flow.
<b>3</b>	To understand concept of Uniform flow in open channels and hydraulic Jump.
<b>4</b>	To understand Hydropower generation and performance of hydraulic turbine.
<b>5</b>	To understand concept of Gradually Varied Flow.

<b>Unit Number</b>	<b>Details</b>	<b>Hours</b>
<b>I</b>	<p><b>Fluid Flow around Submerged Objects:</b> Practical problems involving fluid flow around submerged objects, Definitions and expressions for drag, lift, drag coefficient, lift coefficient, types of drag.</p> <p><b>Unsteady Flow:</b> Types of unsteady flow; Flow through openings under varying head, Fluid compressibility, Celerity of elastic pressure wave through fluid medium; Water hammer phenomenon; Rise of pressure due to water hammer-rigid water column and elastic water column theories; simple cases neglecting friction.</p>	8
<b>II</b>	<p><b>Introduction to Open channel flow:</b> Classification of channels, and Channel flows. Basic governing equations of Channel flow viz. continuity equation, energy equation and momentum equation, One dimensional approach, Geometric elements of channel, Velocity distribution in open channel flow, flow through notches/ weirs (Rectangular, Triangular, Trapezoidal).</p> <p><b>Depth-Energy Relationships in Open Channel Flow:</b> Specific energy, Specific force Specific energy diagram, Specific force diagram, Depth discharge Diagram, Critical depth, Conditions for occurrence of critical flow; Froude's number.</p>	8
<b>III</b>	<p><b>Uniform flow in open channels :</b> Characteristics and establishment of uniform flow, uniform flow formulae : Chezy's and Manning's formulae; Factors affecting Manning's roughness coefficient;</p> <p><b>Hydraulic Jump-</b>Phenomenon of hydraulic jump; Location and examples of occurrence of hydraulic jump; Assumptions in the theory of hydraulic jump; Energy dissipation in hydraulic jump; Classification of hydraulic jump; Practical uses of hydraulic jump,</p> <p><b>Centrifugal Pumps:</b> General classification of pumps, Centrifugal pumps-Classification, Selection of pumps, Centrifugal head, Introduction to submersible pumps and reciprocating pumps.</p>	8
<b>IV</b>	<p><b>Impact of Jet:</b>Force and work done due to impact of jet on stationary and moving, flat and curved surfaces using linear momentum principle.</p> <p><b>Hydropower generation:</b> Elements of hydropower plant; hydraulic turbines-Classification, heads and efficiencies, Design and governing of Pelton Wheel.</p>	8

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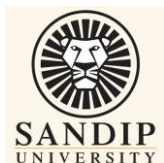
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	<b>Performance of hydraulic turbines:</b> Prediction of performance in terms of unit quantities and specific quantities, Specific speed, Characteristic curves, selection of turbines.	
<b>V</b>	<b>Gradually Varied Flow in Open Channels-</b> Definition and types of non-uniform flow; Gradually Varied Flow (GVF) and Rapidly Varied Flow (RVF); Basic Assumptions of GVF. <b>Gradually varied flow computations:</b> Methods of GVF computations. Direct Step method, Standard Step method (numerical problem), Ven Te Chow method (derivation and numerical problem).	8
<b>Total</b>		<b>40</b>

<b>Outcome:-</b>	
<b>1</b>	Student will be able to understand Fluid Flow around Submerged Objects and Unsteady Flow.
<b>2</b>	Student will be able to understand Depth-Energy Relationships in Open Channel Flow.
<b>3</b>	Student will be able to analyze flow through pipes, turbines and pumps.
<b>4</b>	Student will be able to understand concept of Uniform flow in open channels and hydraulic Jump
<b>5</b>	Student will be able to understand Hydropower generation and performance of hydraulic turbine

<b>Reference Books</b>	
	1. Garde R.J. and Mirajgaokar A.G.; Engineering Fluid Mechanics Scitech Publication 2003. 2. Subramanya K., Theory and Applications of Fluid Mechanics, Tata McGraw Hill Publication, 1996. 3. Streeter V.L. and Wyle E.B.; Fluid Mechanics; International Students Edition, 1986. 4. Modi S.M. and Seth S.M.; Hydraulics and Fluid Mechanics including Hydraulic Machines; PHI learning Pvt.Ltd.2015 5. Som S.K., Gautam Biswas and Suman Chakraborty; Introduction to Fluid Mechanics and Fluid Machines, Mc Graw Hill Education, 2011.

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<b>School: School of Engineering and Technology</b>	<b>Programme: Civil Engineering</b>
<b>Year : Third Year</b>	<b>Semester - V</b>
<b>Course: Steel Structures Laboratory</b>	<b>Code: YCE517</b>
<b>Practical: 2 Hrs./Week</b>	<b>TW: 25 Marks P/O Examination: 25 Marks</b>

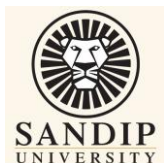
<b>Practical Objective</b>
Designing of various components of steel structure and then putting the same on drawing sheets. Understanding and Solving the actual practical difficulties

Sr. No.	Description
1	Four A3 size drawing sheet showing structural detailing of 16 sketches based on syllabus. (Hand drawn)
2	Design of industrial building including roof truss, purlin, bracings, column, column base and connections. (Analysis of roof truss by any suitable software/manual) Three A2 size drawing sheets. (Hand drawn)
3	Design of welded plate girder, design of cross section, curtailment of flange plates, stiffeners and connections. One A2 size drawing sheets. (Using suitable software) <b>Site visit is recommended to learn this topic.</b>
4	Two site visits: Report should contain structural details with sketches. <b>Oral Examination shall be based on the above term work.</b>
5	<b>Note: Maximum number of students in a group, if any, should not be more than four for the term work design assignments.</b>

<b>Practical Outcomes</b>
Students will develop complete understanding between theory and practise and in the subject of steel structure.

<b>School: School of Engineering and</b>	<b>Programme: B.Tech (Civil Engineering)</b>
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# Sandip University

Mahiravani, Trimbak Road, Tal & Dist. Nashik 422213, Maharashtra

Phone: 02594-222541, 222582 Fax: 02594 222555

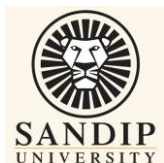
<b>Technology</b>	
<b>Year: Third Year</b>	<b>Semester: V</b>
<b>Course: Fluid Mechanics - II Laboratory</b>	<b>Course Code: YCE 518</b>
<b>Practical: 2Hrs/Week/Batch</b>	<b>Max. University Practical/Oral Examination: 20Marks</b>
	<b>Continuous Internal Assessment: 20 Marks</b>

Objectives	
1	To understand Fluid Flow around Submerged Objects and Unsteady Flow.
2	To understand Depth-Energy Relationships in Open Channel Flow.
3	To understand concept of Uniform flow in open channels and hydraulic Jump.
4	To understand performance of hydraulic turbine.
5	To understand concept of Gradually Varied Flow.

Expt .No.	Title of Experiment
1	Study of flow around immersed
2	Determination of Darcy-Weisbach friction factor for given pipes.
3	Determination of Manning's or Chezy's constant for an open channel.
4	Developing specific energy diagram for a rectangular channel bodies.
5	Study of GVF profiles.
6	Study of hydraulic jump in a horizontal rectangular channel.
7	Study and performance of Francis turbine.
8	Study and performance of Pelton Wheel turbine.
9	Study and performance of Centrifugal pump.
10	Study and performance of Reciprocating pump.

Outcome:-	
1	To understand the concept open channel flow, hydraulic jump and centrifugal pump.

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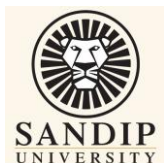
<b>School: School of Engineering and Technology</b>	<b>Programme: B .Tech (Civil Engineering)</b>
<b>Year : Third Year</b>	<b>Semester – V</b>
<b>Course: Employability Skills Development</b>	<b>Course Code: YCE519</b>
<b>Practical: 2 Hrs/Week</b>	<b>TW: 25Marks</b>

Course Objectives	
1	To develop inter-personal skills and be an effective goal oriented team player.
2	To develop communication and problem solving skills.
3	To develop professionals with idealistic, practical and moral values.

Unit Number	Details	Hours
I	<b>Employability:</b> What is Employability? What are Employability Skills? what skills do employers expect from graduates? Career planning with action plan.	04
II	<b>Interpersonal Skills:</b> Critical Thinking, Assertiveness, Decision Making, Problem Solving, Negotiation, Building Confidence, Time Management, Personal Presentation, Avoiding Stress.	04
III	<b>Personal skills-</b> Leadership, Ability to work in a team, Conceptual ability, Subject Knowledge and competence, Analyzing and investigating, Planning, Flexibility, Self, Lifelong Learning, ,Stress Tolerance, Creativity	04
IV	<b>Presentation Skills-</b> Presentation Skills What is a Presentation? Writing Your Presentation Coping with Nerves. <b>Communication Skills-</b> Verbal Communication, Written Communication, Difference between C.V. , Bio data and Resume	04
V	<b>Commercial Awareness:</b> Professional etiquettes and manners, Global negotiating and Persuading, Integrity. Global trends and statistics.	02
<b>Total</b>		<b>18</b>

Course Outcomes	
1	Students will be able to express themselves.
2	Students will be able to understand about the right and wrong usage of body language and the effects of both on communication and interpersonal relationships.
3	Students will be able to tackle any problem during their Project work.
4	Students will be able to face audience and to tackle any problem during presentation and group discussion.
5	Raising self awareness in students around the skills and attitudes required for employment
6	Developing skilled and adaptable students through practical experience and learning intervention specific skills.

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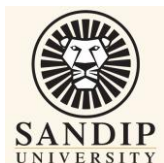
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Phone: 02594-222541, 222582 Fax: 02594 222555

School: School of Engineering and Technology		Programme: B .Tech (Civil Engineering)	
Year: Third Year	1. Cambridge English for Job Hunting—Colm Downes---Cambridge University Press(ISBN-978-0- 521-14470-4)	Semester: V	
	2. Polyskills--Foundation books-- Cambridge University Press—(ISBN 978-81-7596-916-2)		
	3. Global Business Foundation Skills-- Foundation books-- Cambridge University Press—(ISBN 978-81-7596-783-0)		
	4.Covey Sean, Seven Habits of Highly Effective Teens, New York, Fireside Publishers, 1998.		
	5. Carnegie Dale, How to win Friends and Influence People, New York: Simon & Schuster, 1998.		

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Phone: 02594-222541, 222582 Fax: 02594 222555

<b>Course: Internship</b>	<b>Course Code: YCE5110</b>
<b>Theory: ---</b>	<b>Max. University Theory Examination: --</b>
<b>Max. Time for Internship.: 21 days</b>	<b>Continuous Internal Assessment: --</b>
<b>Course Objectives</b>	
The internship will provide students with the opportunity to:	
<b>1</b>	Gain practical experience within the business environment.
<b>2</b>	Acquire knowledge of the industry in which the internship is done.
<b>3</b>	Apply knowledge and skills learned in the classroom in a work setting.
<b>4</b>	Develop a greater understanding about career options while more clearly defining personal career goals.
<b>5</b>	Identify areas for future knowledge and skill development.

<b>Course Particulars</b>
To receive credit for the internship, students are required to complete all tasks assigned to complete internship. Students are expected to: 1. Join internship as assigned by internship coordinator. Students should arrive at work as scheduled, ready to work and stay for the agreed upon time 2. Present yourself in a professional manner at all times, including being appropriately dressed for your workplace 3. Communicate any concerns with your supervisor and the internship coordinator in a timely manner and respectfully 4. Demonstrate enthusiasm and interest in what you are doing; ask questions and take initiative as appropriate 5. Complete and submit assigned tasks by designated timelines. Meet all deadlines. 6. Participate in assigned meetings at work and with the internship coordinator when you return to institute. 7. Keep track of and accurately report internship hours worked 8. Students will present their work in a mandatory class session scheduled at the start of the semester after you complete your internship. You will do a presentation during the class session. The 3-5 minute presentation will summarize salient elements of the internship experience.

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