ANNEXURE-V

REVISED SCHEME OF COURSES FOR 4-YEAR B.TECH. PROGRAMME IN CIVIL ENGINEERING NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

(FOR 2016 BATCH ONWARDS)

(BOS, September-2015)

REVISED SHCEME

For

UNDER GRADUATE PROGRAMME

(Bachelor of Technology)

IN

CIVIL ENGINEERING

(EFFECTIVE FROM: 2016 BATCH)

DEPARTMENT OF CIVIL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

HAZRATBAL, SRINAGAR, KASHMIR, J&K, INDIA - 190006

B. TECH. Ist SEMESTER

Course No.	Course title	L	T	P	<u>C</u>
CIV-102	Engg.Drawing	2	0	4	4
	B. TECH. 2nd SEMES	<u>STER</u>			
Course No.	Course title	L	T	P	<u>C</u>
CIV-201	Strength of Materials	3	1	0	4

B.TECH. 3RD SEMESTER (CIVIL)

Course No.	Course title	L	T	P	C	
CIV-301	Structucal Analysis- I	2	2	0	4	
CIV-301(P)	Structural Engineering Lab- I	0	0	2	1	
CIV-302	Fluid Mechanics	2	1	0	3	
CIV-302(P)	Fluid Mechanics Lab-I	0	0	2	1	
CIV-303	Surveying-I	2	1	0	3	
CIV- 303(P)	Surveying Lab-I	0	0	4	2	
MTH-303	Mathematics-I	2	1	0	3	
ELE-304	Basic Electrical Engineering	2	1	0	3	
ELE-304(P)	Basic Electrical Engineering Lab.	0	0	2	1	
HSS-301	Humanities & Social Science-I	2	1	0	3	
CIV-300	Professional Development Activities	0	0	2	1	
Total Lecture Hours and Credits			31		25	
COURSES OFFERED TO OTHERS DEPARTMENTS (METALLURGY)						
CIV- 304	Geology & Mineralogy	2	2	0	4	
CE-304(P)	Geology & Mineraology Lab.	0	0	2	1	

B.TECH. 4th SEMESTER (CIVIL)

Course No.	Course title	L	Т	P	С	Remarks
CIV-401	Structucal Analysis- II	2	1	0	3	* Two
CIV-402	Fluid Flow in Pipes and Channels	2	1	0	3	weeks
CIV-402(P)	Fluid Mechanics Lab-II	0	0	2	1	survey camp
CIV-403	Surveying-II	2	1	0	3	immediately
CIV-403(P)	Surveying Lab-II	0	0	2	1	after exam.
CIV-403(SC)	Surveying Camp*	0	0	4	2	of 4 th
CIV-404	Engineering Geology and Materials	2	1	0	3	semester
CIV-404(P)	Geology Lab.	0	0	2	1	(July)
CIV-405	Building Drawing and Construction	3	1	0	4	
MTH-406	Mathematics-II	2	1	0	3	
CIV-400	Professional Development Activities	0	0	2	1	
To	otal Lecture Hours and Credits		31		25	

BTECH. 5th- SEMESTER (Civil)

Course No.	Course title	L	Т	P	C
CIV-501	Design of Structures-I	2	2	0	4
CIV-501(P)	Concrete Laboratory	0	0	2	1
CIV-502	Highway Engineering and PMS	2	1	0	3
CIV-502(P)	Highway Laboratory	0	0	2	1
CIV-503	Geotechnical Engineering-I	2	2	0	4
CIV-503 (P)	Geotechnical Laboratory-I	0	0	2	1
CIV-504	Water Resources Engineering	2	2	0	4
CIV-505	Structural Analysis-III	2	1	0	3
CIV-500	Professional Development Activities	0	0	2	1
	Elective Courses				
	Architecture and Town Planning			0	
CIV-506: E1	Concrete Technology	2	1		3
	Engineering Seismology				
		35		25	
COURSES OFFERED TO OTHERS DEPARTMENTS (ELECTRICAL)					
CIV-507	Hydraulics and Hydraulic Machines	3	1	0	4

B.TECH. 6th SEMESTER (Civil)

Course No.	Course title	L	T	P	C
CIV-601	Design of Structures-II	2	2	0	4
CIV-601(P)	Structural Engineering LabII	0	0	2	1
CIV-602	Traffic Engineering and Road Facilities	2	2	0	4
CIV-602(P)	Traffic Engineering Laboratory	0	0	2	1
CIV-603	Geotechnical Engineering-II	2	2	0	4
CIV-603 (P)	Geotechnical Laboratory-II	0	0	2	1
CIV-604	Irrigation and Hydraulic Structures	2	1	0	3
CIV-600	Professional Development Activities	0	0	2	1
	Elective Courses				
CIV-611:E1	Water Shed Management				
MTH-611:E1	Operations Research	2	1	0	3
PHY-ELE:E1	Solar Architecture				
CIV-612:E2	Computer Aided Design		1		
	Disaster Management	2		0	3
	Applied Hydrology				
	Advanced Structural Analysis				
Total Lecture Hours and Credits			29		25

B.TECH. 7th SEMESTER (Civil)

Course No.	Course title	L	Т	P	C		
CIV-701	Environmental Engineering-I	2	1	0	3		
CIV-701(P)	Water Quality Lab	0	0	2	1		
CIV-702	Structural Dynamics	2	1	0	3		
CIV-703	Construction Technology & Management	2	1	0	3		
CIV-704	Design of Structures-III	2	2	0	4		
CIV-705	Quantity Surveying and Cost Evaluation	2	1	0	3		
CIV-706	Seminar	0	2	0	2		
CIV-707	Project Pre-Work	0	0	4	2		
CIV-700	Professional Development Activities	0	0	2	1		
	Elective courses						
	Railway and Airport Engineering						
CIV-711:E1	Fluvial Hydraulics	2	1	0	3		
	Advanced Geotechnical Engineering						
,	Total Lecture Hours and Credits		29		25		

B.TECH. 8th SEMESTER (Civil):

Course No.	Course title	L	Т	P	C		
CIV-801	Hydropower Engineering	2	2	0	4		
CIV-802	Bridge Engineering	2	1	0	3		
CIV-803	Project*	0	5	10	10		
CIV-804	Practical Training & Viva-Voce	0	0	0	2		
	ELECTIVE COURSES						
	Rock Mechanics and Tunneling		1	0			
CIV-811:E1	Technology	2			3		
	Transportation Planning and Economics				3		
MTH-811	Numerical Methods in Civil Engineering						
	Ground Improvement Techniques			0			
CIV-812:E2	Earthquake Resistant Design	2 1	1		3		
	Environmental Engineering-II						
Total Lecture Hours and Credits			28		25		

^{*}The evaluation will be done as per statutes.

NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

NAME OF THE DEPTT. /CENTRE: Department of Civil Engineering

1. Subject Code: CIV -101 Course Title: Introduction to Environmental

Science

2. Contact Hours: L: 3 T: 1 P: 0

3. Examination Duration (Hrs.): Theory: 3 Practical's: 0

4. Relative Weightage: Minor-I: 20 Minor-II: 20 Major: 50 C.I+ C.A: 10

5. Credits: 3

6. Semester: 1st (Autumn)

7. Pre-requisite: Nil

8. Objective: To introduce fundamentals of environmental pollution and its control.

9. Details of course:

S.No	Contents	Lecture Hours
1.	Overview: Environment and Natural Processes; Development	
	(Resource Utilization & Waste Generation); Environmental issues;	
	Concept of Sustainable Development; Issues affecting future	5
	development (population, urbanization, health, water scarcity,	
	energy, climate change, toxic chemicals, finite resources etc.);	
	Environmental units	
2.	Air –Water interaction: (Liquid phase-gas phase equilibrium)	
	Henry's Law Constant with units, Dimensionless Henry's Law	3
	Constant	
3.	Water –Soil Interaction: Carbonate System (Alkalinity and buffering	
	capacity); Major ions in water; Natural Organic Matter (NOMs);	
	Water quality parameters; Physical processes (Mass Balance):	7
	Spatio-temporal variation in quality of river water, lake water,	
	ground water; Water quality standards	
4.	Wetlands, water treatment and wastewater treatment.	5
5.	Air resources: Atmosphere; Air pollutants; Emissions and control of	
	air pollutants; Atmospheric meteorology and dispersion; Transport	7
	of air (global, regional, local); Air/ atmospheric stability; Plume	,
	shape; Gaussian modeling; Air quality standards	
6	Land pollution and solid waste management	3
7	Ecosystem: Structure and function; Energy flow in ecosystem;	
	Material flow in ecosystem; Biodiversity and ecosystem health; Bio-	3
	amplification and biomagnification	
8	Hazardous Waste: Definition; Classification; Storage and	
	management; Site remediation; Environmental Risk: assessment, and	3
	management	
	Total	36

10. Suggested Books:

Sr. No	Name of Books/authors/Publishers	Year of Publication
1.	Davis M. L. and Cornwell D. A., "Introduction to Environmental Engineering", McGraw Hill, New York 4/e	2008
2.	Masters G. M., Joseph K. and Nagendran R. "Introduction to Environmental Engineering and Science", Pearson Education, New Delhi. 2/e	2007
3.	Peavy H. S., Rowe D.R. and Tchobanoglous G., "Environmental Engineering", McGraw Hill, New York	1986
4.	Mines R. O. and Lackey L. W. ""Introduction to Environmental Engineering", Prentice Hall, New Yark	2009
5.	Miheicic J. R. and Zimmerman J. B. " Environmental Engineering: Fundamentals, Sustainability, Design" John Wiley and Sons, Inc.	2010