Pre Revision

Study & Evaluation Scheme

of

Bachelor of Technology
(Civil Engineering)

[Applicable for Academic Session 2018-19]

[Approved by Hon'ble VC dated August 08, 2017]

[With revision approved by VC date July 23, 2018 & August 14, 2018, January 23, 2019 & November 29, 2019]

TEERTHANKER MAHAVEER UNIVERSITY

N.H.-24, Delhi Road, Moradabad, Uttar Pradesh-244001

Website: www.tmu.ac.in

Study & Evaluation Scheme

Semester I

S. No	Course Code	Subject	Periods			Credit	Evaluation Scheme		
			L	T	P		Internal	External	Total
1	EAS116	Engineering Mathematics-I	3	1	-	4	40	60	100
2	EAS112/212	Engineering Physics-I	3	1	-	4	40	60	100
	EAS113/213	Engineering Chemistry							
3	EEE117/217	Basic Electrical Engineering	3	1	-	4	40	60	100
	EEC111/211	Basic Electronics Engineering							
4	TMU101	Environmental Studies	1	2	-	2	40	60	100
5	EHM199/ BHM199	English communication and soft skills – I	1	1	2	2	50	50	100
6	EAS162/262	Engineering Physics (Lab)	-	-	2	1	50	50	100
	EAS163/263	Engineering Chemistry (Lab)							
7	EEE161/261	Basic Electrical Engineering (Lab)	-	-	2	1	50	50	100
	EEC161/261	Basic Electronics Engineering (Lab)							
8	EME161/261	Engineering Drawing (Lab)	-	-	4	2	50	50	100
	EME162/262	Workshop Practice (Lab)							
9	EGP111	Discipline & General Proficiency	-	-	-	-	100	-	100
		Total	**11**	**6**	**10**	**20**	**460**	**440**	**900**

Semester II

S. No	Course Code	Subject	Periods			Credit	Evaluation Scheme		
			L	T	P		Internal	External	Total
1	EAS211	Engineering Mathematics-II	3	1	-	4	40	60	100
2	EAS212/112	Engineering Physics-I	3	1	-	4	40	60	100
	EAS213/113	Engineering Chemistry							
3	EEE217/117	Basic Electrical Engineering	3	1	-	4	40	60	100
	EEC211/111	Basic Electronics Engineering							
4	ECS212/ BCS111	Computer System & Programing in C++	3	-	-	3	40	60	100
5	EHM249/ BHM249	English communication and soft skills – II	1	1	2	2	40	60	100
6	EAS262/162	Engineering Physics (Lab)	-	-	2	1	50	50	100
	EAS263/163	Engineering Chemistry (Lab)							
7	EEE261/161	Basic Electrical Engineering (Lab)	-	-	2	1	50	50	100
	EEC261/161	Basic Electronics Engineering (Lab)							
8	ECS262/ BCS161	Computer System & Programing in C++ (Lab)	-	-	2	1	50	50	100
9	EME261/161	Engineering Drawing (Lab)		-	4	2	50	50	100
	EME262/162	Workshop Practice (Lab)							
10	EGP211	Discipline & General Proficiency	-	-	-	-	100	-	100
		Total	**13**	**4**	**12**	**22**	**500**	**500**	**1000**

Semester III

S. No.	Course Code	Subject	Periods			Credit	Evaluation Scheme		
			L	T	P		Internal	External	Total
1	ECE311	Fluid Mechanics	3	1	-	4	40	60	100
2	ECE312	Surveying	3	1	-	4	40	60	100
3	ECE313	Building Materials & Construction	3	1	-	4	40	60	100
4	ECE314	Concrete Technology	3	1	-	4	40	60	100
5	EME311	Engineering Mechanics	3	1	-	4	40	60	100
6	ECE361	Fluid Mechanics (Lab)	-	-	2	1	50	50	100
7	ECE362	Building Planning and Drawing using CAD (Lab)	-	-	3	2	50	50	100
8	ECE363	Materials Testing (Lab)	-	-	2	1	50	50	100
9	EGP311	Discipline & General Proficiency	-	-	-	1	100	-	100
		Total	**15**	**5**	**7**	**25**	**450**	**450**	**900**

Following additional Course for Lateral Entry Students with B.Sc. background to be taken in III semester and all should pass with minimum of 45% marks for obtaining the degree: credits will not be added

1	EME161/261	Engineering Drawing (Lab)	-	-	4	-	50	50	100

Semester IV

S. No	Course Code	Subject	Periods			Credit	Evaluation Scheme		
			L	T	P		Internal	External	Total
1	ECE411	Geoinformatics	3	1	-	4	40	60	100
2	ECE412	Mechanics of Solids	3	1	-	4	40	60	100
3	ECE413	Engineering Geology & Soil Mechanics	3	1	-	4	40	60	100
4	ECE414	Transportation Engineering	3	1	-	4	40	60	100
5	EHM449/ EHM349/ BHM349	English Communication and Soft Skills-III	1	1	2	2	40	60	100
6	ECE461	Surveying & Geoinformatics (Lab)	-	-	3	2	50	50	100
7	ECE462	Mechanics of Solids (Lab)	-	-	2	1	50	50	100
8	ECE463	Engineering Geology & Soil Mechanics (Lab)	-	-	2	1	50	50	100
9	EGP411	Discipline & General Proficiency	-	-	-	1	100	-	100
		Total	**13**	**5**	**9**	**23**	**450**	**450**	**900**

Following additional Courses for Lateral Entry Students with B.Sc. background to be taken in IV semester and all should pass with minimum of 45% marks for obtaining the degree: credits will not be added

1	EME162/262	Workshop Practice (Lab)	-	-	4	-	50	50	100

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Semester V

S. No.	Subject Code	Subject	Periods			Credits	Evaluation Scheme		
			L	T	P		Internal	External	Total
1	ECE511	Steel Structure-I	3	1	-	4	40	60	100
2	ECE512	Geotechnical Engineering	3	1	-	4	40	60	100
3	ECE513	Structure Analysis-I	3	1	-	4	40	60	100
4	ECE514	RCC Structure-I	3	1	-	4	40	60	100
5	ECE515	Hydrology & Irrigation Engineering	3	1	-	4	40	60	100
6	ECE561	Transportation Engineering (Lab)	-	-	3	2	50	50	100
7	ECE562	Geotechnical Engineering (Lab)	-	-	2	1	50	50	100
8	ECE563	Structural Analysis-I (Lab)	-	-	2	1	50	50	100
9	ECE564	Survey Camp	-	-	-	1	50	50	100
10	MOOC01	MOOC Program -I (Optional)	-	-	-	1/2	-	100	100
11	EGP511	Discipline & General Proficiency	-	-	-	1	100	-	100
		Total	**15**	**5**	**7**	**26**	**500**	**500**	**1100**

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Semester VI

S. No	Subject Code	Subject	Periods			Credits	Evaluation Scheme		
			L	T	P		Internal	External	Total
1	ECE611	Steel Structure-II	3	1	-	4	40	60	100
2	ECE612	Public Health & Environmental Engineering	3	1	-	4	40	60	100
3	ECE613	Structure Analysis-II	3	1	-	4	40	60	100
4	ECE614	Estimation & Costing	3	1	-	4	40	60	100
5	ECE615	RCC Structure- II	3	1	-	4	40	60	100
6	EHM699/ EHM599/ BHM499	English Communication & Soft Skills-IV	1	1	2	2	50	50	100
7	ECE661	Public Health & Environmental Engineering (Lab)	-	-	2	1	50	50	100
8	ECE662	Estimation & Costing (Lab)	-	-	2	1	50	50	100
9	MOOC02	MOOC Program -II (Mandatory)	-	-	-	1/2	-	100	100
10	EGP611	Discipline & General Proficiency	-	-	-	1	100	-	100
		Total	**16**	**6**	**6**	**26/27**	**450**	**550**	**1000**

Semester VII

S. No	Subject Code	Subject	Periods		Credit		Evaluation Scheme		
			L	T	P		Internal	External	Total
1	ECE711	Advanced Computer Aided Design (CAD)	3	1	-	4	40	60	100
2	**Departmental Elective-I**								
	ECE712	Introduction to Remote Sensing	3	1	-	4	40	60	100
	ECE713	Pavement Design							
	ECE714	Solid and Hazardous Waste Management							
	ECE715	Transportation Systems and Planning							
	ECE716	Disaster Management							
	ECE717	Introduction to GIS							
	ECE718	Railway and Airport Engineering							
3	**Departmental Elective-II**								
	ECE719	Earthquake Resistant Structures	3	1	-	4	40	60	100
	ECE720	Advanced Concrete Design							
	ECE721	Pre-stressed Concrete							
	ECE722	Finite Element Method							
	ECE723	Building Maintenance & Repair							
	ECE724	Groundwater Management							
4	**Open Elective-I**								
	FOE011	Principle of Management	3	1	-	4	40	60	100
	FOE012	Artificial Neural Network							
	FOE013	Industrial Sociology							
	FOE014	Organizational Behaviour							
	FOE015	Engineering and Managerial Economics							
	FOE016	Network security & cryptography							
5	ECE761	Analysis & Design (Lab)	-	-	3	2	50	50	100
6	ECE792	Industrial Training & Presentation (6 weeks)	-	-	-	4	50	50	100
7	ECE798	Project Work Phase-I (Synopsis, Literature Survey & Presentation & 30% project completion)	-	-	8	4	100	-	100
8	MOOC03	MOOC Program -III (Mandatory)	-	-	-	1/2	-	100	100
9	EGP711	Discipline & General Proficiency	-	-	-	1	100	-	100
		Total	**12**	**4**	**11**	**28/29**	**460**	**440**	**900**

Semester VIII

S. No	Subject Code	Subject	Periods			Credit	Evaluation Scheme		
			L	T	P		Internal	External	Total
1	ECE811	Project Planning & Control	3	1	-	4	40	60	100
2	ECE812	Design of Hydraulic Structures	3	1	-	4	40	60	100
3	**Departmental Elective-III**								
	ECE813	Rock Mechanics	3	1	-	4	40	60	100
	ECE814	Harbour, Docks & Airport Engineering							
	ECE815	Bridge Engineering							
	ECE816	Environmental Impact Assessment and Management							
	ECE817	Plastic Analysis of Steel Structures							
	ECE818	Advanced Foundation Design							
4	**Open Elective-II**								
	FOE021	Machine learning & Data Analytics	3	1	-	4	40	60	100
	FOE022	Total Quality Management							
	FOE023	Entrepreneurship							
	FOE024	Big Data & Hadoop							
	FOE025	Financial Management							
5	ECE898	Project Work Phase -II (100 % working condition, report analysis, plagiarism check report analysis Simulation, and Presentation)	-	-	14	7	50	50	100
6	MOOC04	MOOC Program -IV (Optional)	-	-	-	1/2	-	100	100
7	EGP811	Discipline & General Proficiency	-	-	-	1	100	-	100
		Total	**12**	**4**	**14**	**24**	**310**	**290**	**700**

Post Revision

Study & Evaluation Scheme

of

Bachelor of Technology
(Civil Engineering)
[Applicable w.e.f. Academic Session – 2019-20]

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4. The faculty advisor will suggest the additional courses to be taken by the students based on their choice and level of their academic competence.
5. The list of such additional courses offered by the NPTEL will be approved by the Honourable Vice Chancellor in the beginning of the academic year to facilitate the registration process.
6. The student can also opt for post graduate level courses.
7. The students have to submit the NPTEL course completion certificate to exam division for considering as B.Tech (Hons)

* Student should have to take permission of registration for the B.Tech. (Hons.) degree from Honourable Vice Chancellor in starting of third semester.

C. Choice Based Credit System (CBCS)

Choice Based Credit System (CBCS) is a versatile and flexible option for each student to achieve his/her target number of credits as specified by the AICTE/UGC and adopted by our University.

The following is the course module designed for the B.Tech program:

- ***Program Core Course (PCC):*** Core courses of B.Tech program will provide a holistic approach to engineering education, giving students an overview of the field, a basis to build and specialize upon. These core courses are the strong foundation to establish technical knowledge and provide broad multi-disciplined knowledge can be studied further in depth during the elective phase.
  The core courses will provide more practical-based knowledge, case-based lessons and collaborative learning models. It will train the students to analyze, decide, and lead-rather than merely know-while creating a common student experience that can foster deep understanding, develop decision-making ability and contribute to the society at large.
  A wide range of core courses provides groundwork in the basic civil engineering disciplines: surveying, transportation engineering, structural engineering, geotechnical engineering, environmental engineering, hydraulic engineering, etc.

  We offer core courses in semester III, IV, V, VI, VII &VIII during the B.Tech (Civil) program. There will be 3 or 4 credits for each core course offered depending upon the course content.

- ***HSMC – (Humanities and Social Sciences including Management courses):*** As per the AICTE guidelines of Choice Based Credit System (CBCS) for all Universities, including the private Universities, the ***Humanities and Social Sciences including Management courses*** are actually Ability Enhancement Compulsory Course (AECC) which is designed to develop the ability of students in communication (especially English) and other related courses where they might find it difficult to communicate at a higher level in their prospective job at a later stage due to lack of practice and exposure in the language, etc. Students are motivated to learn the theories, fundamentals and tools of communication which can help them develop and sustain in the corporate environment and culture. We offered four HSMCs of 3& 2 credits in I, II, IV, VI semesters.

- ***Skill Enhancement Course:*** This course may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge. We offer one SECs course as Lab- one each in VII Semester. One SEC will carry 2 credits each.

- ***Open Elective Course (OEC):*** Open Elective is an interdisciplinary additional subject that is compulsory in a program. The score of Open Elective is counted in the overall aggregate marks under Choice Based Credit System (CBCS). Each Open Elective paper will be of 3 Credits in VII and VIII semesters. Each student has to take Open/Generic Electives from department other than the parent department. Core / Discipline Specific Electives will not be offered as Open Electives.

Study & Evaluation Scheme

B.Tech (Civil Engineering)-Semester I

S. No	Category	Course Code	Course	Periods			Credit	Evaluation Scheme		
				L	T	P		Internal	External	Total
1	BSC-1	EAS116	Engineering Mathematics-I	3	1	-	4	40	60	100
2	BSC-2	EAS112	Engineering Physics-I	3	1	-	4	40	60	100
		EAS113	Engineering Chemistry							
3	ESC-1	EEE117	Basic Electrical Engineering	3	1	-	4	40	60	100
		EEC111	Basic Electronics Engineering							
4	MC-1	TMU101	Environmental Studies	2	1	-	3	40	60	100
5	HSMC-1	TMUGE101	English Communication- I	2	-	2	3	40	60	100
6	LC-1	EAS162	Engineering Physics (Lab)	-	-	2	1	50	50	100
		EAS163	Engineering Chemistry (Lab)							
7	LC-2	EEE161	Basic Electrical Engineering (Lab)	-	-	2	1	50	50	100
		EEC161	Basic Electronics Engineering (Lab)							
8	LC-3	EME161	Engineering Drawing (Lab)	-	-	4	2	50	50	100
		EME162	Workshop Practice (Lab)							
			Total	**13**	**4**	**10**	**22**	**350**	**450**	**800**

B.Tech (Civil Engineering)-Semester II

S. No	Category	Course Code	Course	Periods			Credit	Evaluation Scheme		
				L	T	P		Internal	External	Total
1	BSC-3	EAS211	Engineering Mathematics-II	3	1	-	4	40	60	100
2	BSC-4	EAS212	Engineering Physics-I	3	1	-	4	40	60	100
		EAS213	Engineering Chemistry							
3	ESC-2	EEE217	Basic Electrical Engineering	3	1	-	4	40	60	100
		EEC211	Basic Electronics Engineering							
4	ESC-3	ECS212	Computer System & Programming in C++	3	-	-	3	40	60	100
5	HSMC-2	TMUGE201	English Communication- II	2	-	2	3	40	60	100
6	LC-4	EAS262	Engineering Physics (Lab)	-	-	2	1	50	50	100
		EAS263	Engineering Chemistry (Lab)							
7	LC-5	EEE261	Basic Electrical Engineering (Lab)	-	-	2	1	50	50	100
		EEC261	Basic Electronics Engineering (Lab)							
8	LC-6	ECS262	Computer System &Programming in C++ (Lab)	-	-	2	1	50	50	100
9	LC-7	EME261	Engineering Drawing (Lab)	-	-	4	2	50	50	100
		EME262	Workshop Practice (Lab)							
			Total	**14**	**3**	**12**	**23**	**400**	**500**	**900**

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B.Tech (Civil Engineering)-Semester III

S. No	Category	Course Code	Course	Periods			Evaluation Scheme			
				L	T	P	Credit	Internal	External	Total
1	PCC-1	ECE311	Fluid Mechanics	3	1	-	4	40	60	100
2	PCC-2	ECE312	Surveying	3	1	-	4	40	60	100
3	PCC-3	ECE313	Building Materials& Construction	3	-	-	3	40	60	100
4	PCC-4	ECE314	Concrete Technology	3	1	-	4	40	60	100
5	ESC-4	EME311	Engineering Mechanics	3	1	-	4	40	60	100
6	LC-8	ECE360	Surveying (Lab)	-	-	2	1	50	50	100
7	LC-9	ECE361	Fluid Mechanics (Lab)	-	-	2	1	50	50	100
8	LC-10	ECE362	Building Planning and Drawing using CAD (Lab)	-	-	2	1	50	50	100
9	LC-11	ECE363	Materials Testing (Lab)			2	1	50	50	100
10	DGP-3	EGP311	Discipline & General Proficiency	-	-	-	-	100	-	100
			Total	**15**	**4**	**8**	**23**	**400**	**500**	**900**

Following additional Course for Lateral Entry Students with B.Sc./Polytechnic background to be taken in III semester and all should pass with minimum of 45% marks for obtaining the degree: credits will not be added

1	LC	EME161/261	Engineering Drawing (Lab)	-	-	4	-	50	50	100
2		TMU101	Environmental Studies	2	1	-	-	40	60	100

Value Added Course:
It is an audit course. The performance of the student in this course will not be counted in the overall result however the student has to pass it compulsorily with 45% marks.

1	VAC-1	TMUGA-301	Foundation in Quantitative Aptitude	2	1	-	-	40	60	100

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B.Tech (Civil Engineering)-Semester IV

S. No	Category	Course Code	Course	Periods			Evaluation Scheme			
				L	T	P	Credit	Internal	External	Total
1	PCC-5	ECE411	Geoinformatics	3	1	-	4	40	60	100
2	PCC-6	ECE412	Mechanics of Solids	3	1	-	4	40	60	100
3	PCC-7	ECE413	Engineering Geology & Soil Mechanics	3	1	-	4	40	60	100
4	PCC-8	ECE414	Transportation Engineering	3	-	-	3	40	60	100
5	HSMC-3	TMUGE401	English Communication- III	2	-	2	3	40	60	100
6	LC-12	ECE461	Geoinformatics (Lab)	-	-	2	1	50	50	100
7	LC-13	ECE462	Mechanics of Solids (Lab)	-	-	2	1	50	50	100
8	LC-14	ECE463	Engineering Geology & Soil Mechanics (Lab)	-	-	2	1	50	50	100
9	LC-15	ECE464	Transportation Engineering (Lab)	-	-	2	1	50	50	100
10	DGP-4	EGP411	Discipline & General Proficiency	-	-	-	-	100	-	100
			Total	**14**	**3**	**10**	**22**	**400**	**500**	**900**

*Skill based Training/Internship of 4 weeks duration from a reputed Industry/organization after completion of 4th semester end-semester examination.

Following additional Courses for Lateral Entry Students with B.Sc./Polytechnic background to be taken in IV semester and all should pass with minimum of 45% marks for obtaining the degree: credits will not be added

1	LC	EME162/262	Workshop Practice (Lab)	-	-	4	-	50	50	100

***Value Added Course:**

1	VAC-2	TMUGA-401	Analytical Reasoning	2	1	-	-	40	60	100

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B.Tech (Civil Engineering)-Semester V

S. No	Category	Course Code	Course	Periods			Evaluation Scheme			
				L	T	P	Credit	Internal	External	Total
1	PCC-9	ECE511	Steel Structure-I	3	1	-	4	40	60	100
2	PCC-10	ECE512	Geotechnical Engineering	3	-	-	3	40	60	100
3	PCC-11	ECE513	Structural Analysis-I	3	1	-	4	40	60	100
4	PCC-12	ECE514	RCC Structure-I	3	1	-	4	40	60	100
5	PCC-13	ECE515	Hydrology & Irrigation Engineering	3	-	-	3	40	60	100
6	LC-16	ECE562	Geotechnical Engineering (Lab)	-	-	2	1	50	50	100
7	LC-17	ECE563	Structural Analysis-I (Lab)	-	-	2	1	50	50	100
8	MC-2	ECE564	Survey Camp	-	-	-	1	50	50	100
9	PROJ-1	ECE592	Skill based Practical Training & Presentation	-	-	-	2	50	50	100
10	DGP-5	EGP511	Discipline & General Proficiency	-	-	-	-	100	-	100
			Total	**15**	**3**	**4**	**23**	**400**	**500**	**900**

***Value Added Course:**

1	VAC-3	TMUGA-501	Modern Algebra and Data Management	2	1	-	-	40	60	100
2	VAC-4	TMUGS-501	Managing Self	2	1	-	-	50	50	100

MOOC Course:

1	MOOC-1	MOOC01	MOOC Program -I (Optional)	-	-	-	2	-	100	100

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B.Tech (Civil Engineering)-Semester VI

S. No	Category	Course Code	Course	Periods			Evaluation Scheme			
				L	T	P	Credit	Internal	External	Total
1	PCC-14	ECE611	Steel Structure-II	3	1	-	4	40	60	100
2	PCC-15	ECE612	Public Health & Environmental Engineering	3	-	-	3	40	60	100
3	PCC-16	ECE613	Structural Analysis-II	3	-	-	3	40	60	100
4	PCC-17	ECE614	Estimation & Costing	2	1	-	3	40	60	100
5	PCC-18	ECE615	RCC Structure- II	3	1	-	4	40	60	100
6	HSMC-4	TMUGE601	English Communication- IV	2	-	2	3	40	60	100
7	HSMC-5	EHM613	Human values & Professional Ethics	2	-	-	2	40	60	100
8	LC-18	ECE661	Public Health & Environmental Engineering (Lab)	-	-	2	1	50	50	100
9	LC-19	ECE662	Estimation & Costing (Lab)	-	-	2	1	50	50	100
10	DGP-6	EGP611	Discipline & General Proficiency	-	-	-	-	100	-	100
			Total	**18**	**3**	**6**	**24**	**380**	**520**	**900**

*Industrial Training of 6 weeks duration from a reputed Industry/organization after completion of 6th semester end-semester examination.

***Value Added Course:**

1	VAC-5	TMUGA-601	Advance Algebra and Geometry	2	1	-	-	40	60	100
2	VAC-6	TMUGS-601	Managing Work and Others	2	1	-	-	50	50	100

MOOC Course:

1	MOOC-2	MOOC02	MOOC Program –II (Optional)	-	-	-	2	-	100	100

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B.Tech (Civil Engineering)-Semester VII

S. No.	Category	Course Code	Course		Periods			Evaluation Scheme			
					L	T	P	Credit	Internal	External	Total
1	PCC-19	ECE711	Advanced Computer Aided Design (CAD)		3	-	-	3	40	60	100
2	PEC-1		Program Elective	Program Elective-I	3	-	-	3	40	60	100
3	PEC-2			Program Elective-II	3	-	-	3	40	60	100
4	PEC-3			Program Elective-III	3	1	-	4	40	60	100
5	OEC-1		Open Elective	Open Elective-I	3	-	-	3	40/50	60/50	100
6	LC-20	ECE761	Analysis & Design (Lab)		-	-	2	1	50	50	100
7	PROJ-2	ECE792	Industrial Training & Presentation		-	-	-	2	50	50	100
8	PROJ-3	ECE798	Project Work Phase-1		-	-	10	5	100	-	100
9	DGP-7	EGP711	Discipline & General Proficiency		-	-	-	-	100	-	100
			Total		**15**	**1**	**12**	**24**	**400/410**	**400/390**	**800**

MOOC Course:

1	MOOC-3	MOOC03	MOOC Program –III (Optional)	-	-	-	2	-	100	100

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B.Tech (Civil Engineering)-Semester VIII

S. No	Category	Course Code	Course		Periods			Evaluation Scheme			
					L	T	P	Credit	Internal	External	Total
1	PCC-20	ECE811	Project Planning & Control		3	-	-	3	40	60	100
2	PCC-21	ECE812	Design of Hydraulic Structures		3	-	-	3	40	60	100
3	PEC-4		Program Elective	Program Elective-IV	3	-	-	3	40	60	100
4	PEC-5			Program Elective-V	3	1	-	4	40	60	100
5	OEC-2		Open Elective	Open Elective-II	3	-	-	3	40/50	60/50	100
6	PROJ-4	ECE898	Project Work Phase –II		-	-	6	3	50	50	100
7	DGP-8	EGP811	Discipline & General Proficiency		-	-	-	-	100	-	100
			Total		**15**	**1**	**6**	**19**	**250/260**	**350/340**	**600**

MOOC Course:

1	MOOC-4	MOOC04	MOOC Program –IV (Optional)	-	-	-	2	-	100	100

Shankar Dayal University, Moradabad
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ELECTIVE COURSES OFFERED

S.No	Code	Course	L	T	P	Credit
Semester VII- Program Elective I-(Remote Sensing and Transportation Engineering) -Any one						
1	ECE712	Introduction to Remote Sensing	3	0	0	3
2	ECE713	Pavement Design	3	0	0	3
3	ECE715	Transportation Systems and Planning	3	0	0	3
4	ECE717	Introduction to GIS	3	0	0	3
5	ECE718	Railway and Airport Engineering	3	0	0	3
Semester VII- Program Elective II– (Structural Engineering)- Any one						
6	ECE719	Earthquake Resistant Structures	3	0	0	3
7	ECE720	Advanced Concrete Design	3	0	0	3
8	ECE721	Pre-stressed Concrete	3	0	0	3
9	ECE722	Finite Element Method	3	0	0	3
10	ECE723	Building Maintenance & Repair	3	0	0	3
11	ECE724	Groundwater Management	3	0	0	3
Semester VII- Program Elective III-(Management) -Any one						
12	EHM731	Principle of Management	3	1	0	4
13	EHM735	Industrial Sociology	3	1	0	4
14	EHM734	Engineering and Managerial Economics	3	1	0	4
15	ECE734	Solid and HazardousWaste Management	3	1	0	4
16	ECE735	Disaster Management	3	1	0	4
Semester VIII- Program Elective IV– (Environmental and Geotechnical Engineering) -Any one						
17	ECE813	Rock Mechanics	3	0	0	3
18	ECE815	Bridge Engineering	3	0	0	3
19	ECE816	Environmental Impact Assessment and Management	3	0	0	3
20	ECE817	Plastic Analysis of Steel Structures	3	0	0	3
21	ECE818	Advanced Foundation Design	3	0	0	3
Semester VIII- Program Elective V-(Any one)						
22	ECE831	Machine learning & Data Analytics	3	1	0	4
23	EHM832	Total Quality Management	3	1	0	4
24	EHM833	Entrepreneurship	3	1	0	4
25	ECE834	Marine Structures & Airport Engineering	3	1	0	4

New course Added

Course Code: ECE592	B. Tech (Civil)- Semester-V **Skill based Practical Training & Presentation**	L-0 T-0 P-0 C-2
Course Procedure:		
	Students will have to undergo Skill based Practical Training(Certificate course)of four weeks in any industry or reputed organization or training centre after the IV semester examination in summer. The evaluation of this certificate course shall be included in the V semester evaluation. The student will be assigned a faculty guide who would be the supervisor of the student. The faculty would be identified before the end of the IV semester and shall be the nodal officer for coordination of the training. Students will receive certificate after completion his/her training which will be duly signed by the officer under whom training was undertaken in the industry/ organization/training centre. The student at the end of the V semester will present his/her presentation about the training before a committee constituted by the Director/Principal of the College which would comprise of at least three members comprising of the Department Coordinator, Class Coordinator and a nominee of the Director/Principal. The students guide would be a special invitee to the presentation. The presentation session shall be an open house session. The internal marks would be the average of the marks given by each member of the committee separately in a sealed envelope to the Director/Principal. The marks by the external examiner would be based on the presentation presented by the student which shall be evaluated by the external examiner and cross examination done of the student concerned.	
	The marking shall be as follows:	
Internal: 50 marks	By the Faculty Guide – 25 marks. By Committee appointed by the Director/Principal – 25 marks.	
External:50 marks	By External examiner appointed by the University – 50 marks	

Teerthanker Mahaveer University, Moradabad
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New Course Added

Course Code: TMUGA-301	Value Added Course B.Tech.- Semester-III **Foundation in Quantitative Aptitude**	L-2 T-1 P-0 C-0
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	Solving complex problems using Criss cross method, base method and square techniques.	
CO2.	Applying the arithmetical concepts of Average, Mixture and Allegation.	
CO3.	Evaluating the different possibilities of various reasoning based problems in series, Blood relation and Direction.	
CO4.	Operationalizing the inter-related concept of Percentage in Profit Loss and Discount, Si/CI and Mixture/Allegation.	
Course Content:		
Unit-1:	**Speed calculations** Squares till 1000,square root, multiplications: base 100, 200 300 etc., 11-19, crisscross method for 2X2, 3X3, 4X4, 2X3, 2X4 etc., cubes, cube root	**3 Hours**
Unit-2:	**Percentages** Basic calculation, ratio equivalent, base, change of base, multiplying factor, percentage change, increment, decrement, successive percentages, word problems	**5 Hours**
Unit-3:	**Profit Loss Discount** Basic definition, formula, concept of mark up, discount, relation with successive change, faulty weights	**5 Hours**
Unit-4:	**SI and CI** Simple Interest, finding time and rate, Compound Interest, difference between SI and CI, Installments	**4 Hours**
Unit-5:	**Averages** Basic Averages, Concept of Distribution, Weighted Average, equations	**3 Hours**
Unit-6:	**Mixtures and allegations** Mixtures of 2 components, mixtures of 3 components, Replacements	**5 Hours**
Unit-7:	**Blood relations** Indicating type, operator type, family tree type	**3 Hours**
Unit-8:	**Direction sense** Simple statements, shadow type	**2 Hours**
Reference Books:	• R1:-Arun Shrama:- How to Prepare for Quantitative Aptitude • R2:-Quantitative Aptitude by R.S. Agrawal • R3:-M Tyra: Quicker Maths • R4:-Nishith K Sinha:- Quantitative Aptitude for CAT • R5:-Reference website:- Lofoya.com, gmatclub.com, cracku.in, handakafunda.com, tathagat.mba, Indiabix.com • R6:-Logical Reasoning by Nishith K Sinha • R7:-Verbal and Non Verbal Reasoning by R.S. Agrawal *** Latest editions of all the suggested books are recommended.**	

Mahaveer University, Moradabad (U.P.) Registrar

New Course Added

Course Code: TMUGA-401	Value Added Course B.Tech.- Semester-IV **Analytical Reasoning**	L-2 T-1 P-0 C-0
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	Applying the arithmetical concepts in Ratio Proportion Variation.	
CO2.	Employing the techniques of Percentage; Ratios and Average in inter related concepts of Time and Work, Time Speed and Distance.	
CO3.	Identifying different possibilities of reasoning based problems of Syllogisms and Venn diagram.	
CO4.	Examining the optimized approach to solve logs and Surds.	
Course Content:		
Unit-1:	**Ratio, proportions and variations** Concept of ratios, proportions, variations, properties and their applications	**5 Hours**
Unit-2:	**Time and Work** Same efficiency, different efficiency, alternate work, application in Pipes and Cisterns	**6 Hours**
Unit-3:	**Time Speed Distance** Average speed, proportionalities in Time, Distance, trains, boats, races, circular tracks	**6 Hours**
Unit-4:	**Logs and Surds** Concept and properties of logs, surds and indices	**4 Hours**
Unit-5:	**Coding and decoding** Sequential coding, reverse coding, abstract coding	**3 Hours**
Unit-6:	**Syllogisms** Two statements, three statements	**4 Hours**
Unit-7:	**Venn diagram** Basic concept and applications	**2 Hours**
Reference Books:	• R1:-Arun Shrama:- How to Prepare for Quantitative Aptitude • R2:-Quantitative Aptitude by R.S. Agrawal • R3:-M Tyra: Quicker Maths • R4:-Nishith K Sinha:- Quantitative Aptitude for CAT • R5:-Reference website:- Lofoya.com, gmatclub.com, cracku.in, handakafunda.com, tathagat.mba, Indiabix.com • R6:-Logical Reasoning by Nishith K Sinha • R7:-Verbal and Non Verbal Reasoning by R.S. Agrawal *** Latest editions of all the suggested books are recommended.**	

Registrar

New Course Added

Course Code: TMUGA-501	Value Added Course B.Tech.- Semester-V **Modern Algebra and Data Management**	L-2 T-1 P-0 C-0
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	Applying the concepts of modern mathematics Divisibility rule, Remainder Theorem, HCF /LCM in Number System.	
CO2.	Relating the rules of permutation and combination, Fundamental Principle of Counting to find the probability.	
CO3.	Applying calculative and arithmetical concepts of ratio, Average and Percentage to analyze and interpret data.	
CO4.	Correlating the various arithmetic concepts to check sufficiency of data	
Course Content:		
Unit-1:	**Number theory** Classification of Numbers, Divisibility Rules, HCF and LCM, Factors, Cyclicity(Unit Digit and Last Two digit), Remainder Theorem, Highest Power of a Number in a Factorial, Number of trailing zeroes	**8 Hours**
Unit-2:	**Data interpretation** Data Interpretation Basics, Bar Chart, Line Chart, Tabular Chart, Pie Chart, DI tables with missing values	**7 Hours**
Unit-3:	**Data Sufficiency** Introduction of Data Sufficiency, different topics based DS	**5 Hours**
Unit-4:	**Permutations and combinations** Fundamental counting, and or, arrangements of digits, letters, people in row, identical objects, rank, geometrical arrangements, combination: - basic, handshakes, committee, selection of any number of objects, identical and distinct, grouping and distribution, de-arrangements	**6 Hours**
Unit-5:	**Probability** Introduction, Probability based on Dice and Coins, Conditional Probability, Bayes Theorem	**4 Hours**
Reference Books:	• R1:-Arun Shrama:- How to Prepare for Quantitative Aptitude • R2:-Quantitative Aptitude by R.S. Agrawal • R3:-M Tyra: Quicker Maths • R4:-Nishith K Sinha:- Quantitative Aptitude for CAT • R5:-Reference website:- Lofoya.com, gmatclub.com, cracku.in, handakafunda.com, tathagat.mba, Indiabix.com • R6:-Logical Reasoning by Nishith K Sinha • R7:-Verbal and Non Verbal Reasoning by R.S. Agrawal *** Latest editions of all the suggested books are recommended.**	

New Course Added

Course Code: TMUGA-601	Value Added Course B.Tech.- Semester-VI **Advance Algebra and Geometry**	L-2 T-1 P-0 C-0
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	Recognizing the rules of Crypt-arithmetic and relate them to find out the solutions.	
CO2.	Illustrating the different concepts of Height and Distance and Functions.	
CO3.	Employing the concept of higher level reasoning in Clocks, Calendars and Puzzle Problems.	
CO4.	Correlating the various arithmetic and reasoning concepts in checking sufficiency of data.	
Course Content:		
Unit-1:	**Clocks and calendars** Introduction , Angle based , faulty Clock, Interchange of hands, Introduction of Calendars, Leap Year , Ordinary Year	**5 Hours**
Unit-2:	**Set theory** Introduction , Venn Diagrams basics, Venn Diagram – 3 sets, 4-Group Venn Diagrams	**4 Hours**
Unit-3:	**Heights and Distance** Basic concept, Word problems	**3 Hours**
Unit-4:	**Functions** Introduction to Functions, Even and Odd Functions, Recursive	**3 Hours**
Unit-5:	**Problem Solving** Introduction, Puzzle based on 3 variable, Puzzle based on 4 variable	**6 Hours**
Unit-6:	**Data Sufficiency** Introduction, Blood relation based, direction based, ranking based	**5 Hours**
Unit-7:	**Crypt Arithmetic** Introduction of Crypt Arithmetic, Mathematical operations using Crypt Arithmetic, Company Specific Pattern	**4 Hours**
Reference Books:	• R1:-Arun Shrama:- How to Prepare for Quantitative Aptitude • R2:-Quantitative Aptitude by R.S. Agrawal • R3:-M Tyra: Quicker Maths • R4:-Nishith K Sinha:- Quantitative Aptitude for CAT • R5:-Reference website:- Lofoya.com, gmatclub.com, cracku.in, handakafunda.com, tathagat.mba, Indiabix.com • R6:-Logical Reasoning by Nishith K Sinha • R7:-Verbal and Non Verbal Reasoning by R.S. Agrawal *** Latest editions of all the suggested books are recommended.**	

New Course Added

Course Code: TMUGS-501	B.Tech- Semester-V **Managing Self**	L-2 T-1 P-0 C-0
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	Utilizing effective verbal and non-verbal communication techniques in formal and informal settings	
CO2.	Understanding and analyzing self and devising a strategy for self growth and development.	
CO3.	Adapting a positive mindset conducive for growth through optimism and constructive thinking.	
CO4.	Utilizing time in the most effective manner and avoiding procrastination.	
CO5.	Making appropriate and responsible decisions through various techniques like SWOT, Simulation and Decision Tree.	
CO6.	Formulating strategies of avoiding time wasters and preparing to-do list to manage priorities and achieve SMART goals.	
Course Content:		
Unit-1:	**Personal Development:** Personal growth and improvement in personality Perception Positive attitude Values and Morals High self motivation and confidence Grooming	**10 Hours**
Unit-2:	**Professional Development:** Goal setting and action planning Effective and assertive communication Decision making Time management Presentation Skills Happiness, risk taking and facing unknown	**8 Hours**
Unit-3:	**Career Development:** Resume Building Occupational Research Group discussion (GD) and Personal Interviews	**12 Hours**
Reference Books:	1. Robbins, Stephen P., Judge, Timothy A., Vohra, Neharika, Organizational Behaviour (2018), 18th ed., Pearson Education 2. Tracy, Brian, Time Management (2018), Manjul Publishing House 3. Hill, Napolean, Think and grow rich (2014), Amazing Reads 4. Scott, S.J., SMART goals made simple (2014), Createspace Independent Pub 5. https://www.hloom.com/resumes/creative-templates/ 6. https://www.mbauniverse.com/group-discussion/topic.php 7. Rathgeber, Holger, Kotter, John, Our Iceberg is melting (2017), Macmillan 8. Burne, Eric, Games People Play (2010), Penguin UK 9. https://www.indeed.com/career-advice/interviewing/job-interview-tips-how-to-make-a-great-impression *** Latest editions of all the suggested books are recommended.**	

Registrar

New Course Added

Course Code: TMUGS-601	B.Tech - Semester-VI **Managing Work and Others**	L-2 T-1 P-0 C-0
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	Communicating effectively in a variety of public and interpersonal settings.	
CO2.	Applying concepts of change management for growth and development by understanding inertia of change and mastering the Laws of Change.	
CO3.	Analyzing scenarios, synthesizing alternatives and thinking critically to negotiate, resolve conflicts and develop cordial interpersonal relationships.	
CO4.	Functioning in a team and enabling other people to act while encouraging growth and creating mutual respect and trust.	
CO5.	Handling difficult situations with grace, style, and professionalism.	
Course Content:		
Unit-1:	**Intrapersonal Skills:** Creativity and Innovation Understanding self and others (Johari window) Stress Management Managing Change for competitive success Handling feedback and criticism	**8 Hours**
Unit-2:	**Interpersonal Skills:** Conflict management Development of cordial interpersonal relations at all levels Negotiation Importance of working in teams in modern organisations Manners, etiquette and net etiquette	**12 Hours**
Unit-3:	**Interview Techniques:** Job Seeking Group discussion (GD) Personal Interview	**10 Hours**
Reference Books:	1. Robbins, Stephen P., Judge, Timothy A., Vohra, Neharika, Organizational Behaviour (2018), 18th ed., Pearson Education 2. Burne, Eric, Games People Play (2010), Penguin UK 3. Carnegie, Dale, How to win friends and influence people (2004), RHUK 4. Rathgeber, Holger, Kotter, John, Our Iceberg is melting (2017), Macmillan 5. Steinburg, Scott, Nettiquette Essentials (2013), Lulu.com 6. https://www.hloom.com/resumes/creative-templates/ 7. https://www.mbauniverse.com/group-discussion/topic.php 8. https://www.indeed.com/career-advice/interviewing/job-interview-tips-how-to-make-a-great-impression * **Latest editions of all the suggested books are recommended.**	

Registrar

New Course Added

Course Code: EHM613	B. Tech (Electrical)- Semester-VI **Human Values & Professional Ethics**	L-2 T-0 P-0 C-2
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	**Understanding** the importance of value education in life and method of self-exploration.	
CO2.	**Understanding** 'Natural Acceptance' and Experiential Validation- as the mechanism for self-exploration.	
CO3.	**Applying** right understanding about relationship and physical facilities.	
CO4.	**Analysing** harmony in myself, harmony in the family and society, harmony in the nature and existence.	
CO5.	**Evaluating** human conduct on ethical basis.	
Course Content:		
Unit-1:	Understanding of Morals, Values and Ethics; Introduction to Value Education- need for Value Education. Self- Exploration–content and process; 'Natural Acceptance' and Experiential Validation- as the mechanism for self-exploration. Continuous Happiness and Prosperity- basic Human Aspirations. Gender Issues: Gender Discrimination and Gender Bias (home & office), Gender issues in human values, morality and ethics.	**8 Hours**
Unit-2:	Conflicts of Interest: Conflicts between Business Demands and Professional Ethics. Social and Ethical Responsibilities of Technologists. Ethical Issues at Workplace: Discrimination, Cybercrime, Plagiarism, Sexual Misconduct, Fraudulent Use of Institutional Resources. Intellectual Property Rights and its uses. Whistle blowing and beyond, Case study.	**8 Hours**
Unit-3:	Harmony in the Family and Society- Harmony in Human-Human Relationship, Understanding harmony in the Family- the basic unit of human interaction. Understanding values in human-human relationship; meaning of Nyaya; Trust (Vishwas) and Respect (Samman) as the foundational values of relationship. Understanding the meaning of Vishwas; Difference between intention and competence. Understanding the meaning of Samman and other salient values in relationship.	**8 Hours**
Unit-4:	Understanding Harmony in the Nature and Existence – Whole existence as Co-existence. Interconnectedness and mutual fulfillment among the four orders of nature- recyclability and self-regulation in nature. Understanding Existence as Coexistence (Sah-astitva) of mutually interacting units in all pervasive space. Holistic perception of harmony at all levels of existence.	**8 Hours**
Unit-5:	Implications of the above Holistic Understanding of Harmony on Professional Ethics. Natural acceptance of human values. Definitiveness of Ethical Human Conduct. Competence in professional ethics: a) Ability to utilize the professional competence for augmenting universal human order b) Ability to identify the scope and characteristics of people friendly and eco-friendly production systems c) Ability to identify and develop appropriate technologies and management patterns for above production systems.	**8 Hours**
Text Book:	1. R R Gaur, R Sangal, G P Bagaria, A Foundation Course in Value Education.	

Post. Revision

Course Code: TMUGE101	B.Tech- Semester-I **English Communication – I**	L-2 T-0 P-2 C-3
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	**Remembering and understanding** of the basic of English grammar and vocabulary.	
CO2.	**Understanding** of the basic Communication process.	
CO3.	**Applying** correct vocabulary and tenses in sentences construction.	
CO4.	**Analyzing** communication needs and developing communication strategies using both verbal & non-verbal method.	
CO5.	**Drafting** applications in correct format for common issues.	
CO6.	**Developing** self-confidence.	
Course Content:		
Unit-1:	**Introductory Sessions** • Self-Introduction • Building Self Confidence: Identifying strengths and weakness, reasons Failure, strategies to overcome Fear of Failure • Importance of English Language in present scenario (Practice: Self-introduction session)	**6 Hours**
Unit-2:	**Basics of Grammar** • Parts of Speech • Tense • Subject and Predicate • Vocabulary: Synonym and Antonym (Practice: Conversation Practice)	**12 Hours**
Unit-3:	**Basics of Communication** • Communication: Process, Types, 7Cs of Communication, Importance & Barrier • Language as a tool of communication • Non-verbal communication: Body Language • Etiquette & Manners • Basic Problem Sounds (Practice: Pronunciation drill and building positive body language)	**10 Hours**
Unit-4:	**Application writing** • Format & Style of Application Writing • Practice of Application writing on common issues.	**8 Hours**
Unit-5:	**Value based text reading:** Short Story (Non- detailed study) • Gift of Magi - O. Henry	**4 Hours**
Text Books:	1. Singh R.P., An Anthology of Short-stories, O.U.P. New Delhi.	
Reference Books:	1. Kumar, Sanjay. & Pushp Lata. "Communication Skills" New Delhi: Oxford University Press. 2. Carnegie Dale. "How to win Friends and Influence People" New York: Simon & Schuster. 3. Goleman, Daniel. "Emotional Intelligence' Bantam Book. ***Latest editions of all the suggested books are recommended.**	

Pre-Revision

Semester I

English Communication and Soft Skills – I

[EHM199/BHM199 amended vide approval dt. July 23, 2018 of V.C]

Course Code: EHM199/BHM199

L	T	P	C
1	1	2	2

Objectives:

1. To remove the phobia of conversing in English.
2. To make the learners enable to express themselves among peers & teachers.
3. To enable students, improve their vocabulary.
4. To introduce them with basic communicative skills in real life situations

Course Contents:

Unit – I Fear of Failure, Reasons of Fear of Failure & How to overcome it (12 hours)

- Self-Introduction
- Identifying strengths and weakness
- Fear of Failure: Signs of Fear of Failure, Reasons of Fear of Failure, Strategies to overcome Fear of Failure
- Positive Attitude
- Motivation
- Building Self Confidence

Unit – II Confidence, Presentability, Etiquettes & Manners (10 hours)

- Body Language: Facial Expression, Eye Contact, Gesture, Posture, Tips to have appropriate body language
- Grooming & Dressing Sense
- Etiquette & Manners: Social Etiquettes, Telephonic Etiquettes, Dining Etiquettes, Etiquettes to handle cultural differences, Etiquettes of Effective Conversation.
- Problem Sounds (s-sh,j-z,v-b)

Unit – III Conversation Practice, commonly made mistake & Initiating a conversation (10 hours)

- Vocabulary of commonly used words (50 Words)
- Conversation Practice: At College, At Bank, At Ticket Counter (Railway Station & Movie Theatre)
- How to initiate a conversation
- Commonly made mistakes in conversation
- Basic of Communication: 7Cs of Communication

Unit – IV Application writing (08 hours)

- Format & Style of Application Writing
- Practice of Application writing on common issues.

Reference Books:

- Mitra, Barun. K. "*Personality Development and Soft skills*" New Delhi: Oxford University Press.
- Kumar, Sanjay. &Pushp Lata. "*Communication Skills*" New Delhi: Oxford University Press.
- Carnegie Dale. "*How to win Friends and Influence People*" New York: Simon & Schuster.
- Harris, Thomas. A. "*I am ok, You are ok*" New York: Harper and Row.
- Coleman, Daniel. "*Emotional Intelligence*" Bantam Book.

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Post Revision

Course Code: TMUGE201	B.Tech - Semester-II **English Communication – II**	L-2 T-0 P-2 C-3
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	**Remembering & understanding** the basics of English Grammar and Vocabulary..	
CO2.	**Understanding** the basics of Listening, Speaking & Writing Skills.	
CO3.	**Understanding** principles of letter drafting and various types of formats.	
CO4.	**Applying** correct vocabulary and grammar in sentence construction while writing and delivering presentations.	
CO5.	**Analyzing** different types of listening, role of Audience & Locale in presentation.	
CO6.	**Drafting** Official Letters, E-Mail & Paragraphs in correct format.	
Course Content:		
Unit-1:	**Functional Grammar** • Prefix, suffix and One words substitution • Modals • Concord	**10 Hours**
Unit-2:	**Listening Skills** • Difference between listening & hearing, Process and Types of Listening • Importance and Barriers to listening	**04 Hours**
Unit-3:	**Writing Skills** • Official letter and email writing • Essentials of a paragraph, • Developing a paragraph: Structure and methods Paragraph writing (100-120 words)	**12 Hours**
Unit-4:	**Strategies & Structure of Oral Presentation** • Purpose, Organizing content, Audience & Locale, Audio-visual aids, Body langauge • Voice dynamics: Five P's - Pace, Power, Pronunciation, Pause, and Pitch. • Modes of speech delivery and 5 W's of presentation	**8 Hours**
Unit-5:	**Value based text reading:** Short Essay (Non- detailed study) How should one Read a book? - Virginia Woolf	**6 Hours**
Text Books:	1. Singh R.P., An Anthology of English Essay, O.U.P. New Delhi	
Reference Books:	1. Nesfield J.C. "*English Grammar Composition & Usage*" Macmillan Publishers 2. Sood Madan "*The Business letters*" Goodwill Publishing House, New Delhi 3. Kumar Sanjay & Pushplata "*Communication Skills*" Oxford University Press, New Delhi. ***Latest editions of all the suggested books are recommended.**	
Additional Electronics Reference Material	1. https://www.youtube.com/watch?v=A0uekze2GOU 2. https://www.youtube.com/watch?v=JIKU_WT0BIs 3. https://www.youtube.com/watch?v=3Tu1jN65slw 4. https://youtu.be/sb6ZZ2p3hEM	

Pre Revision

Semester II

English Communication and Soft Skills-II

[EHM249/BHM249 amended vide approval dt. July 23, 2018 of V.C]

Course Code: EHM249/BHM249

L	T	P	C
1	1	2	2

Objectives:

1. To enhance the vocabulary of learners to address competitive exams like GATE
2. To develop ability of sentence construction.
3. To enhance learner's writing ability.
4. To make the learner effective in presenting himself/herself.

Course Contents:

Unit – I Vocabulary & Grammar **(14 hours)**

- Homophones, Homonyms, Synonyms, Antonyms and One-word substitution.
- Parts of Speech, Modals, Tenses and Simple sentence construction.

Unit – II Listening Skills **(05 hours)**

- Difference between listening & hearing, Types of Listening, Process
- Importance and Barriers to listening

Unit – III Writing Skills **(08 hours)**

- Letters and Email writing
- Story Narration

Unit – IV Strategies & Structure of Presentation and Problem Sounds **(13 hours)**

- Managing Time, Audience & Locale, Structure and Organization of Content and 5 W's
- Problem Sounds: S- Sh, J-Z and V-B

Reference Books:

- Nesfield J.C. "*English Grammar Composition & Usage*" Macmillan Publishers
- Sood Madan "*The Business letters*" Goodwill Publishing House, New Delhi
- Kumar Sanjay &Pushplata "*Communication Skills*" Oxford University Press, New Delhi.

Methodologies:

1. Words and exercises, usage in sentences.
2. Sentence construction on daily activities and conversations.
3. Format and layout to be taught with the help of samples and preparing letters on different subjects.
4. JAM sessions and Picture presentation.
5. Tongue twisters, Newspaper reading and short movies.

Teerthanker Mahaveer University, Moradabad (U.P.) Registrar

Post Revision

Course Code: TMUGE301 TMUGE401	B. Tech (Electronics & Communication)- Semester-III **English Communication- III**	L-2 T-0 P-2 C-3
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	**Understanding** knowledge of grammar to face competitive exams.	
CO2.	**Understanding** advance English language by using variety of words i.e. idioms and phrase in variety of sentences in functional context.	
CO3.	**Understanding** listening for effective communication.	
CO4.	**Applying** their English grammar knowledge in day to day context.	
CO5.	**Applying** writing and comprehensive skills in English.	
CO6.	**Analyzing** Comprehending & enriching their vocabulary through prescribed text.	
Course Content:		
Unit-1:	**English Grammar & Vocabulary** • Correction of Common Errors (with recap of English Grammar with its usage in practical context.) • Synthesis: Simple, complex and compound sentence • Commonly used Idioms & phrases (Progressive learning whole semester)	**14 Hours**
Unit-2:	**Speaking Skills** • Art of public speaking • Common conversation • Extempore • Power Point Presentation (PPt) Skills: Nuances of presenting PPTs	**10 Hours**
Unit-3:	**Comprehension Skills** • Strategies of Reading comprehension: Four S's • How to solve a Comprehension (Short unseen passage: 150-200 words)	**6 Hours**
Unit-4:	**Professional Writing** • Preparing Notice, Agenda & Minutes of the Meeting	**7 Hours**
Unit-5:	**Value based text reading:** Short story • The Barber's Trade Union - Mulk Raj Anand	**3 Hours**
Text Books:	1. Singh R.P., An Anthology of English Essay, O.U.P. New Delhi	
Reference Books:	1. Wren & Martin *"High School English Grammar and Composition"* S.Chand & Co.Ltd., New Delhi. 2. Kumar Sanjay &Pushplata *"Communication Skills"* Oxford University Press, New Delhi. 3. Agrawal, Malti *"Professional Communication"* Krishana Prakashan Media (P) Ltd. Meerut. ***Latest editions of all the suggested books are recommended.**	
Additional Electronics Reference Material	1- https://www.youtube.com/watch?v=dpYltVtsS_Q 2- https://www.youtube.com/watch?v=Z8HttKW8jVE 3- https://www.youtube.com/watch?v=srn5jgr9TZo 4- https://www.youtube.com/watch?v=En9-8xWYWqk 5- https://www.youtube.com/watch?v=aUEpmAo0OvM	
Methodology:	1. Idiom & Phrases and exercises, usage in sentences. 2. Language Lab software. 3. Power Point presentation. 4. Newspaper reading, short articles from newspaper to comprehend and short	

Be Revision

Semester-III

English Communication and Soft Skills-III

[EHM349 amended vide approval dt. July 23, 2018 & January 23, 2019 of V.C]

Course Code: EHM349/449/BHM349 **L T P C**
1 1 2 2

Objectives:

1. To enable the learners to upgrade their knowledge of grammar and vocabulary to address competitive exams like GATE.
2. To enable the learner to improve their listening.
3. To enable the learners to improvise their voice modulation in reading and speaking.
4. To enable the learners to enhance their writing and comprehensive skills in English
5. To enable the learners to proactively participate in activities in situational context.

Course Contents:

Unit – I Grammar & Vocabulary **(14 hours)**

- Correction of Common Errors (with recap of English Grammar with its usage in practical context.)
- Transformation of sentences
- Commonly used Idiom & Phrases (Progressive learning whole semester)

Unit – II Essence of Effective listening & speaking **(12 hours)**

- Listening short conversation/ recording (TED talks / Speeches by eminent personalities) *Critical Review of these abovementioned*
- Voice Modulation: Five P's - Pace, Power, Pronunciation, Pause, and Pitch.
- Impromptu
- Power Point Presentation (PPt) Skills: Nuances of presenting PPTs

Unit – III Reading and Comprehension Skills **(08 hours)**

- Strategies of Reading comprehension: Four S's
- How to solve a Comprehension (Short unseen passage: 150-200 words)
- Reading Newspaper (Progressive learning whole semester)

Unit – IV Writing Skills **(06 hours)**

- Essentials of a paragraph
- Paragraph writing (100-120 words)

Reference Books:

1. Allen, W. "*Living English Structure*" Pearson Education, New Delhi.
2. Joseph, Dr C.J. & Myall E.G. "*A Comprehensive Grammar of Current English*" Inter University Press, Delhi
3. Wren & Martin "*High School English Grammar and Composition*" S. Chand & Co. Ltd., New Delhi.
4. Norman Lewis "*Word Power Made Easy*" Goyal Publications & Distributers, New Delhi.
5. Chaudhary, Sarla "Basic Concept of Professional Communication" Dhanpat Rai Publication, New Delhi.
6. Kumar Sanjay & Pushplata "*Communication Skills*" Oxford University Press, New Delhi.
7. Agrawal, Malti "*Professional Communication*" Krishana Prakashan Media (P) Ltd. Meerut.

Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur
Registrar

Post Revision

Course Code TMUGE501 TMUGE 601	B. Tech (Electronics & Communication)- Semester-V **English Communication – IV**	L-2 T-0 P-2 C-3
Course Outcomes:	**On completion of the course, the students will be :**	
CO1.	**Remembering** adequate knowledge of grammar and vocabulary through prescribed text to address competitive exams.	
CO2.	**Understanding** the value of listening to understand the basic content.	
CO3.	**Understanding** the usage of English grammar in day to day context.	
CO4.	**Understating** about the skills required in corporate world.	
CO5.	**Applying** writing and comprehensive skills in English.	
CO6.	**Creating** a simple proposal and report.	
Course Content:		
Unit-1:	**Vocabulary & Grammar** • Homophones and Homonyms • Correction of Common Errors (with recap of English Grammar with its usage in practical context.) • Transformation of sentences	**12 Hours**
Unit-2:	**Essence of Effective listening & speaking** • Listening short conversation/ recording (TED talks / Speeches by eminent personalities) *Critical Review of these abovementioned* • Impromptu	**5 Hours**
Unit-3:	**Professional Writing** • Proposal: Significance, Types, Structure & AIDA • Report Writing: Significance, Types, Structure& Steps towards Report writing	**8 Hours**
Unit-4:	**Job Oriented Skills** • Cover Letter • Preparing Resume and Curriculum-Vitae • Interview: Types of Interview, Tips for preparing for Interview and Mock Interview • Corporate Expectation & Professional ethics: Skills expected in corporate world.	**10 Hours**
Unit-5:	**Value based text reading:** Short story • A Bookish Topic - R.K. Narayan	**5 Hours**
Text Books:	1. Singh R.P., An Anthology of English Essay, O.U.P. New Delhi	
Reference Books:	1. Joseph, Dr C.J. & Myall E.G. "A *Comprehensive Grammar of Current English*" Inter University Press, Delhi 2. Chaudhary Sarla "Basic Concept of Professional Communication" Dhanpat Rai Publication, New Delhi. 3. Kumar Sanjay &Pushplata "Communication Skills" Oxford University Press, New Delhi. ***Latest editions of all the suggested books are recommended.**	
Additional Electronics Reference Material	1- https://www.youtube.com/watch?v=dpYltVtsS_Q 2 - https://www.youtube.com/watch?v=QthdqIB0WS8 3 - https://www.youtube.com/watch?v=MrgHfK8Pcfk 4 - https://www.youtube.com/watch?v=860LtRxP3rw 5 - https://www.youtube.com/watch?v=0nN7Q7DrI6Q	
Methodology	1. The content will be conveyed through Real life situations, Pair Conversation, Group Talk and Class Discussion. 2. Language Lab software. 3. Sentence transformation on daily activities and conversations.	

Semester V

Pre Revision

English Communication and Soft Skills – IV

[EHM599/EHM699/BHM499 amended vide approval dt. July 23, 2018 of V.C]

Course Code: EHM599/699/BHM499

L	T	P	C
1	1	2	2

Objectives:

1. To enable the learners to inculcate the skills of technical writing.
2. To enable the learners to proactively participate in Job Oriented activities.
3. To enable the learners to be aware of corporate Skills.

Course Contents:

Unit – I: Job Oriented Skills **(10 Hours)**

- Cover Letter
- Preparing Resume and Curriculum-Vitae
- Writing Joining Report

Unit – II: Technical Communication **(12 Hours)**

- Technical description of engineering objects
- Data Interpretation: Tables, Charts, & Graphs
- Preparing Agenda & Minutes of the Meeting
- Technical Proposal: Types, Significance, Structure & AIDA
- Report Writing: Types, Structure& Steps towards Report writing

Unit- III: Interview Skills **(10 Hours)**

- Branding yourself
- Interview: Types of Interview, Tips for preparing for Interview and Mock Interview
- Group Discussion: Do's and Don'ts of Group Discussion
- Negotiation skills

Unit – IV: Corporate Skills **(8 Hours)**

- Corporate Expectation
- Service mindset: Selling a product - Ad made shows
- Goal setting
- Team Building & Leadership
- Professional Ethics

Reference Books:

- Raman Meenakshi & Sharma Sangeeta, *"Technical Communication-Principles & Practice"* Oxford University Press, New Delhi.
- Mohan K. & Sharma R.C., "*Business Correspondence of Report Writing",* TMH, New Delhi.
- Chaudhary, Sarla "Basic Concept of Professional Communication" Dhanpat Rai Publication, New Delhi.
- Kumar Sanjay & Pushplata "*Communication Skills*" Oxford University Press, New Delhi.
- Agrawal, Malti "*Professional Communication*" Krishana Prakashan Media (P) Ltd. Meerut.

Methodology:

1. The content will be conveyed through Real life situations, Pair Conversation, Group Talk and Class Discussion.
2. Conversational Practice will be effectively carried out by Face to Face & Via Media (Audio-Video Clips)
3. Modern Teaching tools (PPT Presentation & Motivational videos with sub-titles) will be utilized.

Mahaveer University Registrar