

MS in Civil Engineering

Program Overview:

The MS program in Civil Engineering at BUIITEMS aims to produce visionary professionals and future leaders for academia, industry, government, and society equipped with advanced knowledge, analytical skills, creativity, perspective and ethics.

The prime objectives of M.S. Civil Engineering are to;

- Produce graduates equipped with advanced knowledge, skills and competencies to meet the diverse demands of academia and industries both in the public and private sectors.
- Prepare students for careers in consulting, design, development, regulation, or construction.
- Develop the abilities to design and conduct experiments and to analyze and interpret data.
- Develop the abilities to identify, formulate and solve Civil Engineering complex design problems.

These objectives are achieved through a program of carefully prepared and research work. The core courses and a variety of other elective courses are offered along with the research work which allows individuals to complete their career goals. Additionally, the MS program is designed to also prepare the students more interested in research, or specialization to pursue the PhD degree.

Main Areas of Research:

- Structure Engineering
- Concrete Technology
- Geotechnical Engineering
- Transportation Engineering
- Environmental Engineering
- Water resources and hydraulic Engineering

For more information, please refer to the list of faculty members for their research field on the Department website.

Admission Requirement:

16 years of education or equivalent e.g. B.E/BS – 4 years in Civil Engineering from HEC recognized university with at least 60% marks (Annual System) or CGPA 2.5 out of 4.0 (Semester System).

GAT general with at least 50% marks or GAT subject with at least 60% marks or HAT for the admission /scholarship in the specific program of study.

For more information on application deadlines, tests and other admission requirements, please visit the admissions section of the Graduate Studies Office.

Program Requirement:

The minimum and maximum duration of the MS program is 1.5 to 4 years. Students must meet the following requirements for graduation:

- A minimum of 24 credit hours course work with a minimum CGPA of 2.5
- Successful defense of synopsis/ research proposal and its approval from Advanced Studies and Research Board (AS&RB).
- A minimum of 6 credit hours research work/ thesis.
- Thesis defense and viva.

Program structure

S#	Course Codes	Course Title	Credit Hours
FIRST SEMESTER			
1		Research methods and techniques	3 + 0
2		Core-I	3 + 0
3		Elective-I	3 + 0
SECOND SEMESTER			
1		Core-II	3 + 0
2		Core-III	3 + 0
3		Elective-II	3 + 0
THIRD SEMESTER			
1		Core-IV	3 + 0
2		Core-V	3 + 0
FOURTH SEMESTER			
1		Thesis	6 + 0
TOTAL			6
Total Courses			24
Total Credit Hours			30

The core/elective courses will be selected by the department from the following list.

List of Core Courses			
S.No	Course Code	Course Title	Credit Hours
01	RES-503	Research methods and techniques	3-0
02	CIVILE-508	Advanced Reinforced Concrete	3-0
03	CIVILE-509	Advanced Structural Analysis	3-0
04	CIVILE-510	Advanced Soil Mechanics	3-0
05	CIVILE-615	Foundation Engineering and Design	3-0
06	CIVILE-613	Traffic Engineering	3-0
07	CIVILE-511	Pavement Analysis & Design	3-0
08	ENGG-641	Construction Project Management	3-0
09	ENVIRON-601	Disaster Management	3-0
10	CIVILE-621	Water Resources Engineering	3-0

11	CIVILE-612	Design of Hydraulic Structures	3-0
12	THESIS-601	Research Thesis	6
List of Elective courses			
S.No	Course Code	Course Title	Credit Hours
01	CIVILE-605	Prestressed Concrete Design	3-0
02	CIVILE-604	Structural Dynamics	3-0
03	CIVILE-606	Finite Element Method	3-0
04	CIVILE-614	Ground Improvement Techniques	3-0
05	CIVILE-607	Geotechnical Earthquake Engineering	3-0
06	CIVILE-611	Earth Retaining Structures	3-0
07	CIVILE-502	Highway Materials & Construction	3-0
08	CIVILE-503	Remote Sensing In Water Resources	3-0
09	CIVILE-504	Irrigation System Design and Management	3-0
10	CIVILE-608	Bridge Analysis and Design	3-0
11	CIVILE-505	Structural Mechanics	3-0
12	CIVILE-609	Assessment of Civil Infrastructures	3-0
13	CIVILE-610	High-Performance Construction Materials Engineering	3-0
14	CIVILE-506	Multiscale Characterization of Materials	3-0
15	CIVILE-507	Advanced Construction Materials	3-0
16	CIVILE-601	Advanced Concrete Technology	3-0

Contact Information:

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