

(PROGRAMME DETAILS)

Introduction to the Undergraduate Programme (UG)

B. Tech in **Civil Engineering** programme of **SETGOI** is designed with an endeavour to create globally competitive and employable engineers. The programme offers the students a conducive and rewarding environment by contributing to seminars, live projects and case studies to pursue the ideas, cultivate the spirit of curiosity and sustain passion for excellence. The perfect blend of Industry-Academia environment develops students with practical hands-on sessions offering a dynamic teaching program for creating vibrant and successful community of professionals who can develop both concept and skill essential for drawing, design, analysis, construction and maintenance of various kinds of Civil Engineering projects; teaching, research for academia. Dedicated faculty of the programmes tries to disseminate amongst the students the latest developments in Structural Design, Precast & Pre-stressed Building Construction, Roadway Design, AI Technology in Traffic Engineering, Hydro-dynamic Projects, Advanced Surveying, CAD, STAAD Pro,

Who is the Programme for?

The programme is designed for those who are interested to make a career in-

Major Career Opportunities	Higher Education Opportunities	Alternative Career Options
<ul style="list-style-type: none">● Construction sector● Project Planning & Management● Design Sector● Consultancy● Software design sector● Software based design sector● Academia● Research Field● Power plant sector● IT sector	<ul style="list-style-type: none">● In India, M.E. / M. Tech programmes from all IITs, NITs and other major universities● M.S/PhD programmes are offered by many prestigious global universities in all specializations of Civil Engineering (Structural Engg/ Geotechnical Engg/ Water Resource Engg/Transportation Engg/Environmental Engg/Building Technology and Construction Management/ Any inter-disciplinary domain).	<ul style="list-style-type: none">● Management consulting● Finance, economics and banking● Business analysis● Project management● Technical sales, marketing and communications● Intellectual property management● Government and policy● Entrepreneurship

Curriculum Structure

Curriculum Structure

Sl. No.	Category	Breakup of Credits	Credit Distribution %
1.	Humanities & Social Sciences + Management Courses	12	7.5
2.	Basic Science Courses	24	15
3.	Engineering Science Courses	32	20
4.	Professional Core Courses	52	32.5
5.	Project / Internship	12	7.5
6.	Professional Elective Courses	20	12.5
7.	Open Elective Courses	8	5
8.	Mandatory Courses	0	0
Total Credits		160	100

Curriculum Details (Semester wise link PDFs)

[CE-CURRICULAM.pdf](#)

[0-COVER PAGE \(makautexam.net\)](#)

[Microsoft Word - 3rd sem detail syllabus\(Civil Engineering\) \(makautexam.net\)](#)

[Microsoft Word - Semester IV \[Second year\] \(makautexam.net\)](#)

[Microsoft Word - Semester V \[Third year\] \(makautexam.net\)](#)

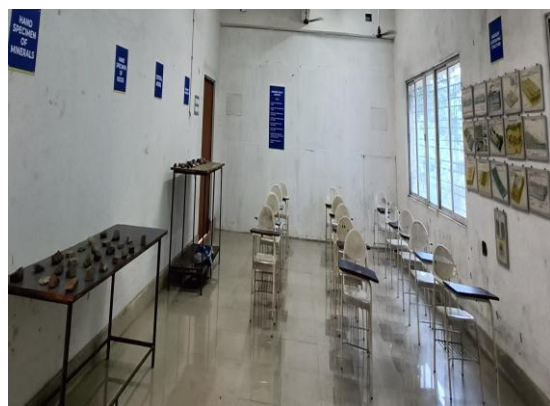
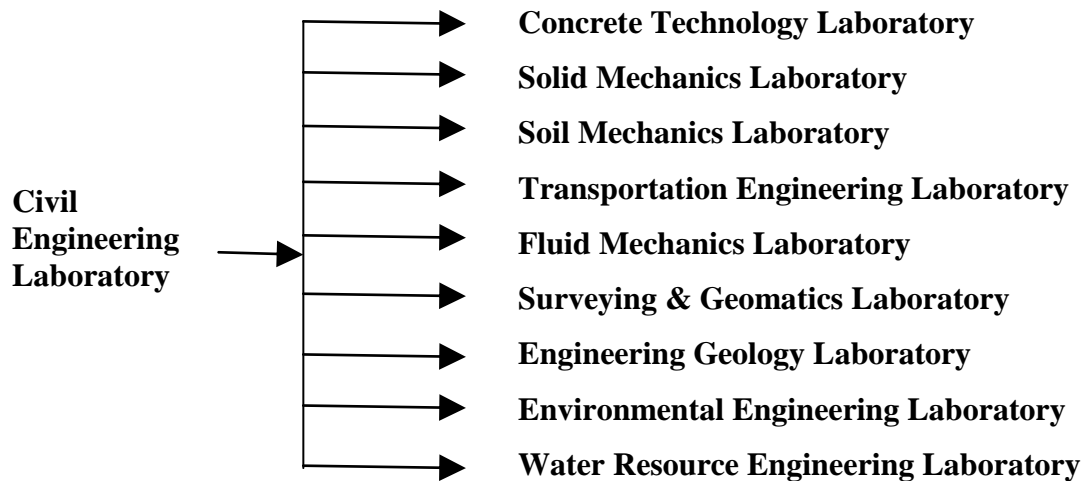
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[Microsoft Word - Semester VIII \[Fourth year\] \(makautexam.net\)](#)

Civil Engineering Laboratory

Civil Engineering Laboratory is very important for gaining knowledge regarding building and road construction; strength of materials; field surveying; bearing capacity of soil; characteristics of various types soil particles; measurement of fluid flow; various types of rock minerals; and water quality measurement.



Civil Engineering Laboratory

Concrete Technology Laboratory

The concrete technology lab is very important for Civil Engineering Constructions. The tests are conducted to determine the properties in terms of strength, fatigue, durability, workability of cement concrete and for preparing concrete mix design. The major equipments in this laboratory are: Compressive Testing Machine (CTM), Compacting Factor Testing Machine, Slump Test Apparatus, Vee Bee Apparatus, Vicat Apparatus, Concrete Compacting Vibration equipment etc.



Compressive Testing Machine (CTM)



Compacting Factor Testing Machine

Solid Mechanics Laboratory

In this laboratory experiments perform with applying various types of loads to various materials under different conditions for finding out the strength of materials. The major equipments in this laboratory are: Universal Testing Machine (UTM), Torsion Testing Machine, Hardness Testing Equipment (Brinnel and Rockwell), Impact Testing Testing Machine (Izod and Charpy), etc.



Universal Testing Machines (UTM)



Impact Testing Testing Machine (Izod and Charpy)

Soil Mechanics Laboratory

Soil Mechanics Laboratory has an important role in the design, construction, maintenance of engineering structure. Soil properties and characteristics; natural moisture content; specific gravity of cohesion-less and cohesive soils; density of soil by Core Cutter method and Sand Replacement method; Liquid Limit; Compaction characteristics of soil by Standard Proctor Compaction Test (SPCT) are studied in this Laboratory.



Direct Shear Testing Apparatus



California Bearing Ratio Testing Apparatus

Transportation Engineering Laboratory

The laboratory provides experiments setup for finding out the characteristics of Fine and Coarse Aggregates; properties of Bitumen by Softening Point Test, Flash Point Fire Point Test, Ductility Tests and Marshall Stability Test; which are very important for pavement construction.



Loss Angeles



Marshall Stability Test

Fluid Mechanics Laboratory

In this laboratory, the behaviour of fluid studies with application of various forces and at different conditions. The major equipment of this laboratory are: Orifice-meter, Venturi-meter, Centrifugal Pump, Reciprocating Pump, Wheel Turbine etc.



Orifice-meter Apparatus



Venturi-meter Apparatus

Surveying & Geomatics Laboratory

The objective of surveying laboratory is to make student familiar to draw map and cross sectional drawing with suitable scale by using different surveying instruments like Total Station (TS), Theodolite, Auto Level, Global Positioning System (GPS).



Total Station



Theodolite

Engineering Geology Laboratory

The application of this laboratory to Civil Engineering is to study about the geological factors regarding the location, design, construction, operation and maintenance of the engineering works. Polarised Microscope is very important apparatus in this laboratory.



Polarised Microscope



Hand Specimen of Minerals and Rocks

Environmental Engineering Laboratory

Environmental engineering laboratory is concerned with the natural resource management, use of water, environmental pollution and human health. An environmental engineer is responsible for improving the quality of environment, public health and develops solutions to minimize the degradation of natural resources. Important apparatus are: Turbidity meter, pH meter etc.



Turbidity meter



pH meter

Water Resource Engineering Laboratory

Water resources engineers fulfil a wide variety of roles in designing and managing Water-Based Systems. These roles include designing major water distribution systems that transport water to water users and collection systems that convey waste and storm water, managing surface and ground water resources, metering and quantifying flows in rivers and streams, modelling and designing major water resources projects. Major equipments are: Raingauge, Pan Evaporometer etc.



Symons's Raingauge



Pan Evaporometer

Software useful for Civil Engineering

AutoCAD 2022.

Stad Pro V8i.

MatLab 2014.

MS Word-Excel 2010.

(ACTIVITIES)

Industrial Visits / Study Tours (Joydev Bridge)



Joydev Bridge under construction

Achievements of Students

Students got job through **Campus Selection Interview (SETGOI).**

Sl. no.	Name of Student	Branch	Year	Company name	Designation
1.	Sankha Subhra Samanta	B.Tech. (Civil Engineering)	2022	QC Construction	Graduate Engineer
2.	Ashis Satvaya	B.Tech. (Civil Engineering)	2022	QC Construction	Graduate Engineer

Achievements of Faculty Members

Sl. no.	Name of Student	PhD	Selected Publication	
			Journal	Conference
1.	Mr. Kush Kumar Dey. (Head of the Department)	Pursuing (NIT Durgapur)	A Rainfall-Runoff model using Artificial Neural Networks for the district of Bankura in a time of Climate Change. Indian Journal of Science and Technology.2020.	The study of Drought prone district Purulia: Development, planning and Managing water resource in a Time of Climate Change. 7th International Ground Water Conference (IGWC-2017).
2.	Dr. Singhadip Ghosh. (Assistant Professor)	2021 (NIT Durgapur)		
3.	Dr. Pranab Kumar Das. (Assistant Professor)	2019 (IIT Dhanbad)	Seismic behaviour of plan and vertically irregular structures: State of the art and future challenges. Natural Hazards Review , American Society of Civil Engineers (ASCE). 2021	Seismic vulnerability of vertically irregular structures. Structural Engineering Convention (SEC'18), Jadavpur University (India),

Membership of Professional Societies

Mr. Kush Kumar Dey (Head of the Department)			
Sl No	Name of the Society	Membership ID / No	Category of Membership
1.	International Association of Engineers, Hong Kong.	193401	IAENG Member
2.	International Management Research and Technology Consortium, USA.	IndApp_RT_364334	Professional Trainer
3.	Asia Society of Researchers,	R218081402	Senior Member
4.	International Economics Development and Research Centre, Hong Kong.	90081228	IEDRC Member
5.	International Association of Educators and Researchers. London	180815	Member
6.	Eurasia Research, Jaipur, Rajasthan.	TERA-M19861	Life-Time