INSTITUT SUPERIEUR DE TECHNOLOGIES

Sarl au capital de 10 000 000

IFU 00003441L CMMBF OUA 2002 B00316/CNSS n°3111OR

Autorisation n°204/2000/MESSRS/DGESRS/SPdu 14 mars 2001

Agréé par le FAFPA (ministère de l'emploi)

Diplômes reconnus par le CAMES

Vingt (20) ans au service de la formation des ressources humaines

www.istburkina.com; Email : infos@isburkina.com

MASTER OF ENGINEERING IN GEOTECHNICAL ENGINEERING

1. TITLE OF PROGRAMME

The programme shall be master of engineering in geotechnical engineering **MEng. (GE)**

2 PREAMBLE

2.1 Background

The Master of Engineering (Geotechnical Engineering) program will provide you with in-depth knowledge on both the good practices and important theories related to the design, analysis and construction of complex geotechnical systems such as deep excavations, tunneling, deep foundations and ground improvement.

Whether you are a fresh engineer or a licensed professional engineer, this is an ideal program if you are looking to enhance and deepen your knowledge and understanding in the various key geotechnical disciplines.

The course modules are specially designed to train and equip you with the practical skillsets and analytical abilities needed to tackle many of these challenging geotechnical problems that may be encountered during the course of your professional practice. Our program mission is to produce competent engineers who can plan, design and supervise the safe construction of complex geotechnical systems.

2.2 Justification

Our Geotechnical Engineering Masters/MSc is designed for recent graduates or experienced professionals, the programme is ideal for civil engineers and geologists seeking to extend their professional scope or specialize in geotechnical engineering. The Master of Engineering in Geotechnical Engineering and Engineering Geology is a 2-year full-time postgraduate degree at Burkina Faso's leading engineering faculty. The degree was developed to provide a deeper understanding of geotechnical theory to solve practical problems in areas including soil mechanics, rock mechanics, slope stability, foundation design, earthworks and dam engineering.

This degree is designed for students who already have a four-year accredited engineering degree and want to broaden their job prospects through cross-training, re-training or specialization. This

postgraduate degree will allow you to meet or maintain professional accreditation standards and provide opportunities for continuing professional development.

2.3 Target Group

To gain a place at IST Burkinafaso you will need to meet our general entry requirements and the specific entry requirements of your chosen course. Your application will be reviewed by the Admissions Tutor for your course, who will decide whether your application should receive an offer.

The targeted group includes holders of:

Applicants must have completed a UTS recognized bachelor's degree, or an equivalent or higher qualification, or submitted other evidence of general and professional qualifications that demonstrates potential to pursue graduate studies.Bachelor's in Engineering and other related Science and Technology fields.It is a requirement that the bachelor's degree be in engineering or the natural and physical sciences, with no more than 25 per cent of subjects failed. A total of 120 credits is required for both Professional Master's Program and research track master's programs. Students in both tracks take many of the same courses. Research track students have fewer required class credits due to their research activities, for which they receive credit. Master's students enrolled in on-campus programs may take online courses as electives. Learn more about prerequisites and required coursework to complete each degree.

3.Programme Objectives

3.1. General Objectives

The course modules are specially designed to train and equip you with the practical skillsets and analytical abilities needed to tackle many of these challenging geotechnical problems that may be encountered during the course of your professional practice. Our program mission is to produce competent engineers who can plan, design and supervise the safe construction of complex geotechnical systems.

3.2. Specific Objectives

You'll gain in-depth knowledge of geotechnical topics and be trained in relevant field and laboratory techniques for the practice of geotechnical engineering. You'll develop the skills required to use modern analytical and numerical approaches to solve geotechnical problems such as the design of foundations, slopes, retaining structures, and underground space. Geotechnical engineers integrate the skills of investigation, characterization, analysis and design to deal with uncertainty and risk within a business context. These skills are developed in six core modules: geotechnical investigation and characterization; groundwater pollution and contaminated land; geotechnical engineering; foundation engineering; energy geotechnics; and constitutive models and numerical analysis and Transport Infrastructure Strategy.

Duration of the Programme:

This course is offered on a Two-year (Four semesters), full-time or online basis for students with a UTS-recognized bachelor's degree in engineering or the natural and physical sciences.

Programme Structure

Courses codes	Courses Names	Credit Units
	Year one	
	Semester one	
RM M01	Advanced research methods	3
OB M03	Organization Behavior	3
CS M02	Communication Skills	3
ESD M04	Entrepreneurship and Development	3
MBEC 2632	Business Ethics and Corporate Governance	3
MSM 9450	Strategic Management	3
MAE 421	Academic Essay	3
MEGE100	Finite Element Analysis	3
MEGE111	Computer Ethics and Social Culture	3
	Semester Two	
MEGE120	Engineering Geology and Geotechnics	3
MEGE121	Engineering Power	3
MEGE122	Mine Feasibility	3
MEGE123	Hydrology and Hydraulics Design	3
MEGE124	Environment Geological Engineering	3
MEGE125	Geotechnical seismic Design Dynamics & Soil structure	3
MEGE126	Advanced Foundation	3
MEGE127	Earth structures and slope stability	3
MEGE128	Soil modification and improvement	3
MEGE129	Advanced soil Mechanics	3
		60
	Year Two	
	Semester One	
MEGE 416	Advanced Mechanics of Materials	6
MEGE 417	Fundamental of goetechnical Engineering	6
MEGE 418	Evolution of Structures in Deformed Rock	6
MEGE220	Environmental Management	6
MEGE 421	Advanced project planning &Management	6
		60
	Semester Two	
MEGE 429	Internship	10
MEGE 430	Thesis	20
		60
GCU		**120**