

## **INSTITUT SUPERIEUR DE TECHNOLOGIES**

Sarl au capital de 10 000 000

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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](http://www.istburkina.com); Email : [infos@isburkina.com](mailto:infos@isburkina.com)

### **MASTER OF ENGINEERING IN HIGHWAY ENGINEERING**

#### **1. TITLE OF PROGRAMME**

The programme shall be master of engineering in highway engineering **MEng. (HE)**

#### **2 PREAMBLE**

##### **2.1 Background**

you'll study a variety of modules, all designed to build your understanding of strategic engineering principles and to provide you with the management skills needed to add value to your organisation. Modules include: Operations and Supply Chain Management, Project Management Techniques, Sustainability in Theory and Practice as well as Data Handling and Decision Making.

Tailored towards those with an existing academic background in engineering, our Master's in highway engineering and management combines technical know-how with a variety of innovative topics from management theory and practice. The master's in Engineering Management at IST is designed to train you in strategic decision-making and engineering processes, giving you the expertise needed to take on high-level management responsibilities in an international environment.

##### **2.2 Justification**

Highways form a critical infrastructure for society, supporting the country's economy through the quick and efficient transport of people and goods. This infrastructure is developed within a complex engineering system governed by a specific set of legislative requirements. The highway is maintained and operated within a highly political environment through central government, and particularly by local highway authorities. Such an asset is often managed and maintained through complex contract arrangements, requiring key skills in leading, managing and developing services through partnership between the public and private sectors.

### **2.3 Target Group**

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

## **3. Programme Objectives**

### **3.1. General Objectives**

Our master of engineering in highway engineering and management Masters programme will equip you with the skills and knowledge you need for the planning, appraisal, design construction and maintenance of road networks. you will learn to originate innovative research, transfer current thinking into practice and respond effectively to the road industry needs. The programme is relevant to conditions found in both developed and developing countries and are suitable for road engineers and civil engineering graduates who want to pursue a career in road management

### **3.2. Specific Objectives**

Why study master of engineering in highway engineering and management at IST Burkinafaso?

- ❖ Study in our new system blended mode : <http://www.ist-ecampus.online/blended/> after registration you will get usernames and password for your studies.
- ❖ Postgraduate study at IST Burkinafaso is a chance to learn from world leaders in their fields. This guarantees you a first-class learning experience, leading to a qualification that is respected the world over, making you an attractive prospect in a very competitive job market. We offer a stimulating, thriving research environment, and offer a warm welcome to postgraduate students seeking to contribute to our work.
- ❖ Discover how civil engineering, in all its aspects, is a cornerstone of both the development and sustainability of civilisations.
- ❖ Benefit from our broad range of academic staff and research skills, giving you the opportunity to study subjects that lie between the traditional disciplines or which focus in depth on a particular field.
- ❖ Research at Ist burkinafaso places a strong emphasis on tackling the problems faced by society today, and many of our projects have already made a significant impact on society.
- ❖ We have a long tradition of distinguished research that benefits from being funded by industry, charities and research councils, encouraging innovative thinking and creating internationally recognised results.

By the end of the course, graduates will have knowledge and understanding of the:

- political, commercial and legislative context in which highway engineers operate
- environmental and ecological context in which sustainable highway engineering operates
- types and forms of contract and contractual arrangements within a highway engineering context, their applications and constraints

- engineering principles underpinning safe highway construction and its associated engineering aspects
- management strategies for maintaining highway assets across a range of scenarios
- design standards relevant to highway engineering
- design and modelling tools appropriate to highway design
- contracting partner and other stakeholder organisation context including their structures, political environment and corporate social responsibilities
- tools, methods and underlying theories which enable successful leadership and the management of design, construction, and maintenance having regards to risk particularly on large projects in a collaborative context.
- **Duration of the Programme:**

This course is offered on a Two-year (Four semesters), full-time or online.

### Programme Structure

Courses codes	Courses Names	Credit Units
	<b>Year one</b>	
	<b>Semester one</b>	
RM M01	Advanced research methods	3
MOB 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
MS110	Pavement Materials and Construction	3
MEHE111	Road Asset Management	3
	<b>Semester Two</b>	
MEHE120	Pavement Design	3
MEHE121	Highway Project Management, Evaluation and fundings	3
MEHE122	Management of Bridges	3
MEHE123	Geometric Design of Highways	3
MEHE124	Transport Data Collection and	3
MEHE125	Quantitative Research Methods	3
MEHE126	Highway Drainage and Maintenance	3
MEHE127	Traffic Engineering	3
MEHE128	Highway Asset Management	3
MEHE129	Highway Engineering Design and Construction	3
		<b>60</b>
	<b>Year Two</b>	
	<b>Semester One</b>	
MEHE 416	Highway Engineering Maintenance	5

MEHE 417	Highway ethics	5
MEHE 418	Highway Engineering Theory and Design	5
MEHE220	Highway Context and Contracts	5
MEHE 421	Highways and Transportation Engineering	5
		60
	<b>Semester Two</b>	
MEHE 429	Internship	10
MEHE 430	Thesis	20
		<b>60</b>
GCU		<b>120</b>