



Ministry of Industry,
Science, Technology & Innovation



Embassy of India,
Phnom Penh, Cambodia



Guidebook

Science, Technology & Innovation



ពង្រឹងវិស័យវិទ្យាសាស្ត្រ បច្ចេកវិទ្យា និងនវានុវត្តន៍ ក្នុងខេត្តកំពត
Kampot Enrichment in Science, Technology & Innovation

FIRST EDITION



STEM MAJORS

Based on the preliminary study and data collection, the description of STEM majors in this section was derived from the integration of various university curricula.





Industrial and Mechanical Engineering

វិស្វកម្មឧស្សាហកម្ម និងមេកានិច

This major focuses on the design, development and improvement of operating system and machinery.

Engineers in this field use **mathematics**, **physics**, and **computers** to create a complete product, ranging from small to large production chains.

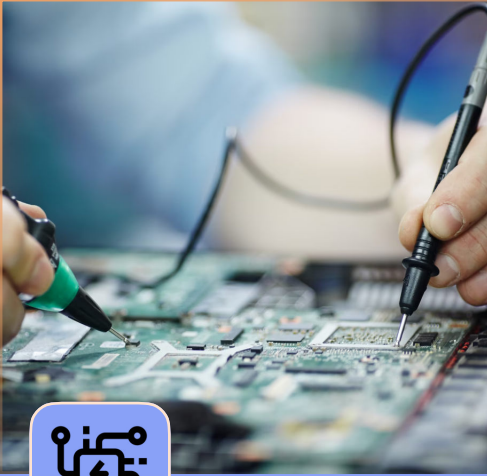


Information Technology

ព័ត៌មានវិទ្យា

This major utilizes technology to assist a person or a company in managing and transmitting data.

Experts in this field work with **computer systems**, **telecommunications networks**, **software**, and **databases**. etc.



Electrical Engineering

វិស្វកម្មអេឡិចត្រូនិច

This major involves the design, the production chain development, and the maintenance of electronic systems, spare parts, and other electronic devices.

Electrical engineers work in areas such as **telecommunications, medical devices, and electrical equipment.**



Civil Engineering

វិស្វកម្មសំណង់ស៊ីវិល

This major focuses on the design, construct, and maintenance and repair of infrastructure including roads, bridges, buildings, and water supply systems.

Civil engineers use their **mathematical, physical,** and scientific knowledge of the components of a unit to study and process the construction of a construction project.



Food and Chemical Engineering

វិស្វកម្មគីមី និងអាហារ

This major combine science and engineering in the study to improve the quality, safety and nutrients in food and create new products.

Food engineers are responsible for **developing new approaches to food production chain, food preservation and packaging.**



Geo-Resource & Geo-Technical Engineering

វិស្វកម្មធនធានដី និងភូគព្ភសាស្ត្រ

This major focuses on the exploration, processing, and efficient use of natural resources such as minerals, water, and energy.

This specialty **studies and analyses the characteristics of soil and rocks related to buildings and topography on earth.**



Telecommunication & Networking

ទូរគមនាគមន៍ និងបណ្តាញ

This major focuses on the development and design of telecommunications systems, networks, and electronic equipment.

Engineers in this field work with **technologies available on mobile phones, the Internet and wireless communication systems.**



Computer Science

វិទ្យាសាស្ត្រកុំព្យូទ័រ

Computer Science major focuses on the study of computers and computer programs.

Engineers in this field design and **develop both software and computer components** to improve their capabilities and outputs.



Medicine

វេជ្ជសាស្ត្រ

This major focuses on the study and practice of the diagnosis, treatment and prevention of various human diseases.

Experts in this field work in **hospitals, clinics,** and **research institutes.**



Laboratory and Medicine

បច្ចេកទេសមន្ទីរពិសោធន៍ វេជ្ជសាស្ត្រ

Experts in this field work in the laboratory to test samples using diagnostic and therapeutic techniques.

This major covers a wide range of specialties, including **biochemistry, microbiology,** and **hematology.**

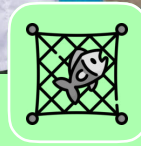


Animal Science and Medicine

វិទ្យាសាស្ត្រ និងវេជ្ជសាស្ត្រសត្វ

This major focuses on studying and understanding animal production and animal health.

Veterinarians **diagnose, treat, and prevent animal infections** as well as improve animal welfare.



Fisheries Science

វិទ្យាសាស្ត្រជលផល

This major focuses on the study of marine and freshwater resource management.

Experts in this field work to **maintain sustainable fisheries and protect aquatic ecosystems.**



Crop Science

វិទ្យាសាស្ត្រដំណាំ

This major focuses on the study of growth, development, and management of crops.

Experts in this field are responsible for improving the **food production chain** through **research and development for sustainable cultivation**.



Environmental Engineering

វិស្វកម្មបរិស្ថាន

This major focuses on environmental protection, including air, water, and soil.

Environmental engineers develop strategies to **manage waste, prevent emissions and protect natural resources**.



Robotic and Automatic Engineering

វិស្វកម្មរ៉ូបូត និងស្វ័យប្រវត្តិកម្ម

This major utilizes computers to develop and design robots as well as automation systems.

Engineers in this field work in the **industrial automation**.



គិលានុបដ្ឋាក

Nursery

Nursing is a profession within the health care sector focused on the care of individuals, families, and communities so they may attain, maintain, or recover optimal health and quality of life.