ASTU Fresh Student Guide (RAG Document)

This document provides a structured overview of the first-year academic fields, schools, and departments at Adama Science and Technology University (ASTU). It is designed for a university assistant chatbot (RAG-based system) to answer questions from fresh students about available study areas, colleges, and departments.

1. Pre-Engineering Field

Pre-Engineering is one of the main academic fields for fresh students. It prepares students for engineering and technology-related programs. Within Pre-Engineering, students are grouped into three major schools:

Schools under Pre-Engineering:

• College of Electrical Engineering and Computing (CoEEC)

• College of Civil and Construction Engineering (CoCCA)

• College of Mechanical and Manufacturing Engineering (CoMME)

1.1 College of Electrical Engineering and Computing (CoEEC)

The College of Electrical Engineering and Computing (CoEEC) focuses on computing, software development, electronics, communication systems, and power engineering. It is a major hub for students interested in technology, programming, embedded systems, and electrical infrastructure.

Departments under CoEEC:

• Software Engineering (SE)

• Computer Science and Engineering (CSE)

• Electronics and Communication Engineering (ECE)

• Electrical Power and Control Engineering (EPCE)

1.2 College of Civil and Construction Engineering (CoCCA)

The College of Civil and Construction Engineering (CoCCA) is responsible for training engineers who design and build infrastructure such as buildings, roads, bridges, dams, and water supply systems. It is ideal for students who are interested in construction, structural design, and urban development.

Departments under CoCCA:

• Civil Engineering

• Water Engineering

• Architectural Engineering

1.3 College of Mechanical and Manufacturing Engineering (CoMME)

The College of Mechanical and Manufacturing Engineering (CoMME) focuses on the design, production, and maintenance of machines, manufacturing systems, industrial processes, and materials. Students in this school often work with mechanical design, thermodynamics, industrial production, and advanced manufacturing techniques.

Departments under CoMME:

• Material Engineering

• Chemical Engineering

• Mechanical Engineering

2. Pre-Science Field (Applied Science)

Pre-Science (Applied Science) is the second major academic field for fresh students. It prepares students for science-based programs and research-focused departments. Applied Science departments often focus on experimentation, laboratory skills, and scientific problem-solving.

Departments under Applied Science:

• Applied Mathematics

• Applied Physics

• Pharmacy

• Applied Chemistry

• Applied Biology

• Applied Geology

• Industrial Chemistry

2.1 Applied Science Department Descriptions

Applied Mathematics: Focuses on mathematical modeling, statistics, computational methods, and problem-solving techniques used in science and engineering.

Applied Physics: Covers physical principles and practical applications such as mechanics, electricity, optics, materials science, and experimental physics.

Pharmacy: Prepares students for healthcare and pharmaceutical sciences, including drug development, clinical pharmacy, and patient-centered healthcare support.

Applied Chemistry: Deals with chemical reactions, laboratory experiments, analytical techniques, and the application of chemistry in industries and research.

Applied Biology: Studies living organisms, genetics, microbiology, ecology, and laboratory-based biological research.

Applied Geology: Focuses on earth sciences, mineral resources, environmental geology, geotechnical studies, and geological fieldwork.

Industrial Chemistry: Specializes in chemical processes used in industries, production of chemicals, quality control, and industrial laboratory practices.

Note: This document is prepared as a structured information source for an AI assistant chatbot system. It can be used for indexing and retrieval in a Retrieval-Augmented Generation (RAG) pipeline.