Ministry of Higher Education and Scientific Research

Northern Technical University - Department of Civil techniques

Technical Institute / Kirkuk - Construction and Building Branch

Academic Program Description for the Academic Year 2022-2023

This academic program description provides a concise summary of the essential features of the program and the expected learning outcomes for students, indicating whether they have maximized the available opportunities. Each course within the program is accompanied by its description.

Educational Institution: Northern Technical University / Kirkuk Technical Institute

Academic Department: Civil Technologies

Academic Program Name: Construction and Building Branch

Final Certificate: Two-year Technical Diploma, equivalent to three academic years

Study System: Courses

Other External Factors

There is a close relationship between the department's outcomes and the job market. The job market's feedback is incorporated into the academic curriculum based on graduate follow-up forms.

Academic Program Objectives

The specialization aims to produce technically proficient individuals capable of:

- Conducting various civil works tasks.
- Performing laboratory and field tests.
- Executing mapping and surveys.
- Quantifying labor, materials, and equipment for civil works projects.
- Managing construction machinery operations and calculating their productivity.
- Expected Learning Outcomes and Teaching and Learning Methods
- Knowledge and Understanding
- Construction Materials
- Surveying
- Concrete Technology
- Soil Mechanics
- Civil Drafting
- Quantity Surveying
- Specialized Skills
- Executing sections of civil works projects.
- Conducting laboratory and field tests for construction materials.
- Performing engineering surveys for civil works projects.
- Skill in drafting construction details manually.
- Skill in computer-aided design (CAD) applications.
- Internet skills.
- Teaching and Learning Methods
- Lectures.

- Training workshops.
- Scientific labs.
- Summer training.
- Curriculum-based training.
- Field visits.
- Scientific film presentations.
- Assessment Methods
- Oral examinations.
- Daily evaluations.
- Daily drawings.
- Laboratory reports.
- Surprise written tests.

Assessment Methods

Midterm exams for the first and second semesters.

- Final exams.

Thinking Skills

- Supervising the implementation of engineering projects through map reading and understanding.
- Surveying work.
- Calculating quantities and resources for civil works projects.
- Student graduation projects.
- Skill in detailed structural drawing.

Personal Development Planning

- Seminars
- Lectures

- Developmental courses
- Workshops
- Competitions
- Sports activities
- Participation in student research
- Scientific visits
- Presentations

General and Transferable Skills (Other skills related to employability and personal development)

- **Computing**: Use of computers in map drawing and applying software for quantity calculations.
- **Laboratory**: Learning how to perform engineering tasks and tests.
- **Contract Management**: Organizing contracts for subcontracting.
- **Machinery Work Records**: Managing logs for construction machinery.
- **Mechanical Workshops**: Operations including sheet metal work, carpentry, plumbing, welding, turning, and forging.

Teaching and Learning Methods

- Lab.
- Workshop.
- Drafting.
- Lecture.
- Summer training.

Evaluation Methods

- Written exams.
- Oral exams.
- Daily evaluations.
- Laboratory reports.
- Midterm exams.

Scientific Updates and Study Circles

- Scientific research.

Admission Criteria (Systems related to enrollment in the college or institute)

- High school graduation rate.
- Type of high school specialization (Applied, Biological, Vocational / Construction).
- Physical condition of the student according to medical examination.

Key Sources of Information about the Program

- Concrete Technology / Jalal Bashir Sarsam.
- Surveying / William Irvin.
- Construction Materials / Yusuf Al-Dawaf.
- Construction Machinery / Mohammed Ayub Al-Azzi.
- Quantity Surveying / Medhat Fadil Fathallah.
- Resources available in the institute library.
- Resources available in the institute's electronic library.

- Resources available in the virtual library of the Ministry of Higher Education and Scientific Research.
- Specialized websites on the Internet.