

Fareast International University

Faculty of Science

DEPARTMENT OF SOIL, WATER AND ENVIRONMENT

**Syllabus for:
Master of Science in Soil, Water and Environment**

**Degree Title:
Master of Science in Soil, Water and Environment**

ADMISSION REQUIREMENTS

- Candidates must have a four-year Bachelors Degree or Master Degree in relevant disciplines. Candidates having a 2-year or 3-year Bachelor Degree in the relevant disciplines may also apply. But they will need to do register for specified pre-requisite courses of at least 18 credits as recommended by the Curriculum Committee of the Department and approved by the Academic Council of the University.
- The applicant must not have third division/class or CGPA less than 2.50 in the scale of 5.00 or CGPA 2.25 in the scale of 4.00 in any public examinations.

GRADUATION REQUIREMENTS

There are three semesters in every year- Spring, summer and fall. Candidates will be selected on the basis of an Admission Test and their merit in past academic records. A list of successful candidates will be notified as per the university decision mentioning the number of seats available. Incomplete or improperly filled up forms may be rejected.

A candidate should apply in the Prescribed Form available in the Admission Office of the university on payment of Tk. 500.00. The filled-in application form along with the necessary documents should be submitted to the Admission Office within the notified date. Necessary documents to be attached with the completed Application Form are:

- Two recent passport size photographs.
- Attested copies of transcripts- SSC + HSC + Bachelor or equivalent.
- Attested copies all other certificates/testimonials.
- Any other document(s) as asked by the university.

MEDIUM OF INSTRUCTION

The medium of instructions is English; as such proficiency in English is a prerequisite for the candidates to get admission in the program. However, in case of need as determined by the Curriculum Committee of the Department student may require to take a non-credit introductory English course offered by the Dept. of English of the University.

ATTENDANCE

In Soil, Water and Environment (SWE) program, the students are required to attend 80% of the classes held in each course in a semester failing which they will not be allowed to sit for the Semester Final Examination. However, the authority may relax this requirement on individual basis on grounds acceptable to the authority.

PROBATION OF PARTICIPANTS

Participants earning a GPA of less 2.50 in a semester will be kept on “probation”. If he/she fails to improve, even after 3 semesters of probation, and still GPA is below 2.50, he/she may be dropped from the program.

AWARD OF DEGREE

Fareast International University awards Master's degree in SWE on the recommendation of the Faculty of Science and approval by the university Academic Council and Syndicate to the participants who fulfill all the requirements of the degree.

STRUCTURE OF THE PROGRAM

Each academic year is divided into three semesters to be called as Spring (January-April), Summer (May-August), Fall (September-December). Distribution of weeks in each semester shall be as follows:

| | |
|--|------------|
| (i) Lectures | = 14 Weeks |
| (ii) Preparation time for semester final examination | = 1 Week |
| (iii) Final examination | = 1 Week |
| <hr/> | |
| Total Week | = 16 Weeks |

The program will be administered by 'Open Credit System'. As such an exact time of completion of the program may differ on an individual case basis. The normal duration of the Master of Soil Water and Environment (SWE) is one-year (3 semesters) program for those students who do not require taking any pre-requisite courses and 5 semesters for those requiring prerequisite courses. Only in exceptional cases, a student may be allowed to complete the program in maximum of 2 (6 semesters) years including leave of absence or semester leave for those without pre-requisite and a maximum of 3 (9 semesters) years for students requiring pre-requisite.

The M. Sc in Soil, Water and Environment degree will be awarded in three different major areas. The major areas will be Soil, Water and Environment. The students do not require any prerequisite will give option for their major at the beginning of the program and the students requiring prerequisite will give options after completing the prerequisite courses.

The 24 credits will be the core courses including 6 credits for thesis and 18 credit for 6 courses of 3 credits each. The remaining 12 credits will be chosen by the students from their major areas.

Core Courses (compulsory for all students)

| Course Title | Credit |
|---|--------|
| Thesis | 6 |
| Soil and Soil Water | 3 |
| Soil Fertility and Plant Nutrition | 3 |
| Environmental Analysis | 3 |
| Soils and Water Conservation | 3 |
| Geographical Information System | 3 |
| Analytical Techniques and Experimental Design | 3 |

Major in Soil (Any four)

| Course Title | Credit |
|-------------------------------------|--------|
| Soil Classification | 3 |
| Advanced Soil Chemistry | 3 |
| Coastal and Wetland Soil Management | 3 |
| Soil Technology | 3 |
| Advanced Soil Physics | 3 |
| Soil Microbiology | 3 |

Major in Water (Any four)

| Course Title | Credit |
|-------------------------------|--------|
| Floodplain Hydrology | 3 |
| Groundwater Resources | 3 |
| Water Resources Management | 3 |
| Land and Watershed Management | 3 |
| Agricultural Water Management | 3 |

Major in Environment (Any four)

| Course Title | Credit |
|---------------------------------|--------|
| Environmental Microbiology | 3 |
| Environmental Impact Assessment | 3 |
| Environmental Ecology | 3 |
| Solid Waste Management | 3 |
| Water Quality Management | 3 |

Pre-requisite Courses

| Course Title | Credit |
|---------------------------|---------------|
| Soil Science | 3 |
| Soil Science Lab | 1.5 |
| Fundamental Mathematics | 3 |
| Environmental Science | 3 |
| Environmental Science Lab | 1.5 |
| Water Resources | 3 |
| Statistics-1 | 3 |