

# Environmental Systems

Special Subjects  
Elective 2 credit

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## 1. Course Description

In this course students will learn how to evaluate various problems in view of statistics at first. Then, they will study a number of energy saving techniques being used in companies, factories, schools, etc., and evaluate those from a standpoint of statistics. Finally, they will learn about the nuclear accident at the Fukushima Daiichi Nuclear Power Plant, and its effect upon particularly some municipalities in Fukushima prefecture. This course corresponds to the diploma policies 1, 3, and 4.

## 2. Course Objectives

Students will learn a variety of energy saving techniques being used in this society. Students will learn how to evaluate the efficiency of each technique described above, by utilizing statistics. Students will learn the working principle of a nuclear power plant and its environmental effects at the time and after the accident.

## 3. Grading Policy

Students are evaluated on the basis of contributions to the class through discussions etc.(10%), reports(60%) and presentation(30%), the last two of which are due at the end of the semester.

## 4. Textbook and Reference

Textbook  
Needed information will be provided in the class.

## 5. Requirements(Assignments)

Some requirements will be assigned specifically in the classes. However, it is advised to study basic statistics in advance.

## 6. Note

## 7. Schedule

- [1] Status quo of the earth's environments and global warming
- [2] Energy crisis and mixing
- [3] Some fundamental statistics 1
- [4] Some fundamental statistics 2
- [5] Energy saving tools used at some companies
- [6] Energy saving tools used at some public offices etc.
- [7] Energy saving tools used at some schools, etc.
- [8] Nuclear power plants and radiations
- [9] Status of radio-contamination in Japan 1
- [10] Status of radio-contamination in Japan 2
- [11] Individual research on radio-contamination in Fukushima 1
- [12] Individual research on radio-contamination in Fukushima 2
- [13] Individual research on radio-contamination in Fukushima 3
- [14] Individual research on radio-contamination in Fukushima 4
- [15] Individual presentation of research project, and submission of reports.