This course aims to teach students the basic theories of economic policy. The first part of the course will introduce students to examples of market failure, so they will understand the necessity of government intervention. Furthermore, looking at environmental problems as an example of market failure, students will also learn about government policies to solve environmental problems. The course will start by introducing several examples of policy tools to solve environmental problems; specifically, the problem of trash, which is intimately connected with local communities, and global warming, which must be looked at from an international perspective. The course will use basic theories of economic policy to deepen students understanding of policies by national and local governments to solve such environmental problems, their effects, and social consequences.

Course Objectives
Students will:
1. gain understanding of the necessity of government intervention
2. gain understanding of trash problems and waste policies of the cities where they live.
3. gain understanding of countries’ efforts to combat global warming
4. examine the difficulty of international cooperation on global warming, and measures to solve it

Expected Outcomes
1. learn how to think from an economics perspective
2. gain the ability to discuss common economic problems using the basic theories of economic policy

Prerequisites
This course applies microeconomic theory, so it is recommended that students first take Microeconomics

Class Materials
This course will not use a textbook.

References:
Kuriyama Kouichi and Managi Shunsuke (2012), Kankyo keizaigaku wo tsukamu (Grasping environmental economics), Second edition, Yuhikaku.
Doi Takeru (2002), Nyumon kokyo keizaigaku (Introduction to public economics), Nippon Hyoron sha.
Hibiki Akira and Arimura Toshihide (2002), Nyumon kankyo keizaigaku (Introduction to environmental economics), Chuko-Shinsho.

Course Method
The course will follow a lecture format using mainly the blackboard, and PowerPoint slides when necessary.

Grading
20% Assignments
80% Final exam

Course Schedule
Week 1: Why is government necessary?
This lecture will explain the role of a market economy and market failure (when a market economy does not function), using several examples. Students will also learn about the role of government.

**Week 2: How should the supply of public goods be decided?**
Looking at public goods as an example of market failure, this lecture will explain the definition of public goods and the free rider problem that occurs due to the nature of public goods. Students will also think about how public goods can be efficiently supplied.

**Week 3: How are public service fees decided?**
Looking at the problem of natural monopoly in decreasing cost industries, such as electricity, gas, and water, as an example of market failure, students will study how prices (public service fees) are decided to rectify market failure.

**Week 4: Why do environmental problems occur?**
Looking at environmental problems (externalities) as an example of market failure, students will think about why environmental problems occur from an economics perspective.

**Week 5: Solving environmental problems with direct regulations**
Lectures 5 through 7 will explain about policy tools to solve environmental problems. In this lecture, students will think about the advantages and disadvantages of command-and-control direct regulations traditionally used as environmental policies, and their impact on society.

**Week 6: Solving environmental problems with incentives**
This lecture will explain about taxation and subsidies as environmental policies that utilize market mechanisms. Students will think about the advantages and disadvantages of such policies and their impact on society. The lecture will also compare this with direct regulations covered in the previous class.

**Week 7: Can environmental problems be solved by negotiations?**
In this lecture, students will think about solving environmental problems not through government intervention, but stakeholders only. The lecture will also explain about emissions trading as an example of a solution based on negotiations between stakeholders.

**Week 8: Ever-increasing trash and lack of disposal sites**
Looking at the trash problem as an example of an environmental problem closely related to our lives, this lecture will explain about the current volume of waste produced in Fukui and in Japan as a whole. Students will think about what problems can occur when the volume of waste increases.

**Week 9: Is charging for trash disposal effective?**
Looking at charging for trash disposal as an example of one solution to the trash problem, in this lecture students will think about how to charge for the service and the effects of charging.

**Week 10: What should be done to prevent illegal dumping?**
This lecture will explain about the problem of illegal dumping which occurs as a negative consequence of charging for trash disposal. Students will think about what can be done to prevent it.

**Week 11: Ideal waste policies**
After considering the problems of charging for garbage disposal and illegal dumping, students will think about what the best waste policies are to reduce waste volume and control illegal dumping. The lecture will also introduce efforts by local governments.

**Week 12: What is global warming?**
This lecture will explain the relationship between economic growth and global warming, and the impact global warming has on society.

**Week 13: The Kyoto Protocol and Kyoto Mechanisms**
This lecture will explain about the Kyoto Protocol, an international framework to solve the global warming problem. Students will think about why international frameworks are needed to solve the global warming problem.

**Week 14: Carbon tax or emissions trading?**
This lecture will compare carbon taxes and emissions trading as tools to solve the global warming problem. It will also introduce the US SO2 allowance-trading program as an example of a successful emissions trading system.

**Week 15: Countries’ measures to prevent global warming and the difficulties of international cooperation**
This lecture will introduce the efforts of countries to address global warming. Students will think about what problems we face today and how they should be dealt with in the future.

**Preparation and Follow-up**

*Preparation:* Before each class, read the appropriate chapter of the reference materials (about 1 hour).

*Follow-up:* An assignment will be given each class meeting. Complete the assignment, review your notes of the lecture, and prepare any questions you may have for the next class (about 1 hour).