

Project Exercises in Student Formula 2

Syllabus Number

1L307

Special Subjects

Elective 2 credit

FUKUDA Naoki

1. Course Description

In the Formula Project, by consistently planning, designing, manufacturing, and running small formula cars, students acquire the specialized skills and problem-solving skills required as an automobile engineer, and at the same time participate in the Student Formula Japan Tournament. In addition, we aim to acquire a sense of responsibility as an engineer by running a vehicle that we made.

Here, in order to acquire a high level of design technology, the specifications required for each part of the vehicle are determined, and the design to realize it is tackled. This will enable the planning and design of the entire formula car.

Although this lesson is mainly in the form of exercises, pair work and group work are carried out in the activity, and the results are presented and discussed throughout.

In this lesson, you will comprehensively acquire knowledge, techniques, and attitudes regarding degree awarding policies DP1 to DP6.

2. Course Objectives

Students will learn and acquire the following through project activities.

- ① You can proactively plan the formula cars you produce.
- ② Vehicle design based on target performance can be performed. Highly difficult parts can be manufactured
- ③ You can supervise the entire automobile development and train juniors as a member in the leadership position of the team.

3. Grading Policy

The faculty member in charge will make an active evaluation of the activity status, the submitted materials below, and the final results report meeting.

- ① Evaluation of deliverables related to vehicle design and manufacturing (design drawings, manufactured parts, etc.)
- ② Evaluation of activity reports and activity results (progress status against goals, activity time, participation status in workshops, results of public relations activities, etc.)
- ③ Contribution to the team

We will give feedback on the progress of each individual activity at the weekly general meeting.

*Submissions: Activity report (monthly) A description of progress toward the target plan, activity content/activity time, participation status in various external courses, public relations activities, etc.

4. Textbook and Reference

Textbook

Technical core human resources development committee of JSAE Automotive Development and Production Guide -Using Student Formula Cars- Society of Automotive Engineers of Japan, Inc.

5. Requirements(Assignments)

As a preparation

- ① Review the contents learned in Formula Project I.
- ② If necessary, attend a seminar held by the company.

As a review,

- ① Clarify the plan for the next item to be implemented based on the results of the project's regular meetings (see minutes)
- ② To carry out the above items concretely and independently

6. Note

The following criteria must be met when taking the course:

- ① Must have a track record of project activities for at least one year in the past
- ② In the project activity, be engaged in design and manufacturing with an attitude of applying engineering techniques and methods such as 4 mechanics
- ③ To be able to set goals that can be expected to improve engineering skills through this class
- ④ The faculty member in charge acknowledges that past achievements and the goals set in this lesson are worth taking.

7. Schedule

Activity period: One year from April to March of the following year

Activity time: 150 hours or more

*Lecture will not be given in this class.

*This year's "Student Formula Japan Tournament 2021" will be held on-site September 7th (Tuesday) to 11th (Saturday), 2021 (Ecopa (Ogasayama Sports Park, Shizuoka Prefecture)), online (static examination) 2021 It is scheduled around August of the year.

*After the end of this tournament, we will hold a tournament result report meeting.