Title of the project

Explore Japan's cutting-edge technologies from a different point of view in science and engineering through symposium.

The operation of Japanese train ~relationship between train's operation facilities and train diagrams~

Concept of the project

'Japanese trains are known for their punctuality and having few accidents.' 'When Japanese people ride on the train, they can change train lines easily due to the accurate trains contact and precise schedule'. Any international students who have visited Japan and ridden trains must feel the same. So we think about them deeply by using knowledge we have and we get by studying ourselves and then, we approach how Japanese railway companies provide us with these advanced service from views of making railroad service planning diagram and control.

Contents of the lecture and visiting facilities

We visit West Japan Railway Company Employee Training Center on February 18th and conducted a facility tour and lecture of relationship between operation facilities and train diagram.

In a lecture, we learned ways of making diagram based on operation facilities by a person from transport department. Especially, we learned conditions and standard way of thinking about operation facilities we need in order to realize the punctual train service considering several restrictions.

As an output, we have done a quiz of adding essential operation equipment in order to enable diagrams to be utilized. It included difficult contents, but participatory style, not just learning passively must have expanded an understanding.

In a tour, we have looked see how divergences and signals which we have learned in the lecture are actually been controlled. We also experienced a driving operation for Shinkansen and learned how drivers are actually using diagrams for operation. Number of conditions drivers are considering was wondering. Participants said they have enjoyed both lecture and tour with interesting content. The event has been a meaningful experiment.