

Course Type	Basic Courses		
Division at course	Master's Course		
Class Format	Lecture		
Course Name	Electrical Engineering	Electronics	Information and Communication Engineering
	Automotive Engineering		
Starts 1	1 Spring Semester 1 Spring Semester	1 Spring Semester	1 Spring Semester
Lecturer	Associated Faculty	Associated Faculty	Associated Faculty

Course Purpose

The purpose of this seminar is to understand the principle of the main method and the evaluation method of the error on the signal measurement of the voltage / current etc. in the experiment of the electronic information system. In addition, we will be able to process and analyze measured data using software (LabView and SCILAB). These are aimed at understanding the techniques necessary for acquisition and analysis of experimental data and training of practical skills.

Prerequisite Subjects

electromagnetics, electric circuits, electronics Circuits, mathematics1 & 2, programming, probability / statistics

Course Topics

1. Signal measurement
 - 1.1 Measuring instrument definition and specification
 - 1.2 Basics of circuit design
 - 1.3 Voltage measurement, current measurement, resistance measurement
 - 1.4 Error source in measurement
 - 1.5 Configuration of PC-based instrument
 - 1.6 Collection and programming of experiment data
2. Data analysis
 - 2.1 Statistical analysis (sampling and population, basic statistics, statistical error, test)
 - 2.2 Time series analysis (FT, FFT, WT, transfer function, chaos)
 - 2.3 Correlation analysis (autocorrelation, cross-correlation)
 - 2.4 Spectral analysis (Fourier analysis, Fourier transform, spectral density function)
 - 2.5 Simulation · Observation Experimental Data Analysis (Basic)
 - 2.6 Simulation / Observation Experimental Data Analysis (Application)

Textbook

"Low Level Measurements Handbook (6th Ed.), Keithley" will be distributed,
Distribution of data analysis print

Additional Reading

LabView Programming Guide ASCII

Piersol, John Wiley & Sons

"Random Data: Analysis and Measurement Procedures" by J. S. Bendat and A. G. Piersol (John Wiley and Sons)

"Atarashii Gosa-Ron (in Japanese)" by K. Yoshizawa (Kyoritsu)

"Spectral Analysis (in Japanese)" by M. Hino (Asakura)

Grade Assessment

Evaluate the target achievement level by comprehensively summarizing the presentation content of the seminar, the degree of understanding of the lecture, and the analysis result report of the exercise. Pass score of 60 points or more with 100 full marks.

Notes

Contacting Faculty

Basically, it is accepted in the classroom during lecture time or at the end.

For questions beyond the time, arrange time in advance by telephone or e-mail to the teacher in charge.

Automotive Engineering Seminar 1A (2.0credits) (自動車工学セミナー1A)

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Seminar	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Autumn Semester	1 Autumn Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

The aim of this course is to help students acquire deep understanding of the fundamental science and engineering related to automobiles.

Prerequisite Subjects

All courses in undergraduate course.

Course Topics

This seminar deals with the basis of fundamental science and engineering related to automobiles.

Textbook

Will be introduced in the class.

Additional Reading

Grade Assessment

Grading will be decided based on attendance and the quality of the students' contribution to the seminar.

Notes

Contacting Faculty

Automotive Engineering Seminar 1B (2.0credits) (自動車工学セミナー1B)

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Seminar	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Spring Semester	1 Spring Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

The aim of this course is to help students acquire deep understanding of the fundamental science and engineering related to automobiles.

Prerequisite Subjects

All courses in undergraduate course.

Course Topics

This seminar deals with the basis of fundamental science and engineering related to automobiles.

Textbook

Will be introduced in the class.

Additional Reading

Grade Assessment

Grading will be decided based on attendance and the quality of the students' contribution to the seminar.

Notes

Contacting Faculty

Automotive Engineering Seminar 1C (2.0credits) (自動車工学セミナー1C)

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Seminar	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	2 Autumn Semester	2 Autumn Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

The aim of this course is to help students acquire deep understanding of the fundamental science and engineering related to automobiles.

Prerequisite Subjects

All courses in undergraduate course.

Course Topics

This seminar deals with the basis of fundamental science and engineering related to automobiles.

Textbook

Will be introduced in the class.

Additional Reading

Grade Assessment

Grading will be decided based on attendance and the quality of the students' contribution to the seminar.

Notes

Contacting Faculty

AutomotiveEngineering Seminar 1D (2.0credits) (自動車工学セミナー1D)

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Seminar	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	2 Spring Semester	2 Spring Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

The aim of this course is to help students acquire deep understanding of the fundamental science and engineering related to automobiles.

Prerequisite Subjects

All courses in undergraduate course.

Course Topics

This seminar deals with the basis of fundamental science and engineering related to automobiles.

Textbook

Will be introduced in the class.

Additional Reading

Grade Assessment

Grading will be decided based on attendance and the quality of the students' contribution to the seminar.

Notes

Contacting Faculty

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Lecture	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Autumn Semester	1 Autumn Semester
Lecturer	HOSSAIN Akter Designated Lecturer	

Course Purpose

In this course, students will learn about the advanced direct injection gasoline and gas engines.

Course objectives include

- (1) developing an understanding of the design and mechanics of direct injection gasoline and gas engines and,
- (2) reviewing revolutionary enabling technologies for direct injection gasoline and gas engines.

Prerequisite Subjects

Thermodynamics, Fluid Mechanics

Course Topics

1. Overview of gasoline direct injection engines
2. Stratified-charge combustion in gasoline direct injection engines
3. Turbocharged direct injection spark-ignition engines
4. Lean boost combustion system for improved fuel economy
5. EGR boosted gasoline direct injection engines
6. Gasoline direct injection engines with autoignition combustion
7. Design and optimization of direct injection engines using CFD
8. Natural gas direct injection engines
9. Biofuels for spark-ignition engines

Textbook

Printed handouts will be provided.

Additional Reading

Advanced direct injection combustion engine technologies and development, Volume1: Gasoline and gas engines, Edited by Hua Zhao, Woodhead Publishing Ltd. 2010

Grade Assessment

Grades will be based on class participation and reports.

30% for attendance

30% for interim report

40% for final report

Notes

Contacting Faculty

Students can ask questions at any time during classes.

Questions during off-class hours can be asked at the lecturer's room (Engineering Building No.3 North Wing, Room 223 (3125) or via e-mail: akter.hossain@mae.nagoya-u.ac.jp

Electric Power and Energy Engineering (2.0credits) (電気エネルギー工学特論)

Course Type	Specialized Courses		
Division at course	Master's Course		
Class Format	Lecture		
Course Name	Automotive Engineering		
Starts 1	1 Autumn Semester		
Lecturer	Naoki HAYAKAWA Professor	Yasunobu YOKOMIZU Professor	Takeyoshi KATOH Professor
	Hiroki KOJIMA Associate Professor		

Course Purpose

Fundamentals on electric power and energy engineering will be studied.

Goal:

1. To understand fundamentals on electric circuit theory, electromagnetic theory, electric energy
2. To understand principles and examples on electric power apparatus, electric power transmission system
3. To understand technical problems of motor systems for electric vehicles (EV) and hybrid vehicles (HEV)

Prerequisite Subjects

Electric Circuits and Engineering, Thermodynamics and Tutorial, Electricity and Magnetism

Course Topics

1. Fundamentals: electric circuit, electromagnetics, etc.
2. Electric energy: 3-phase ac, rotating magnetic field, etc.
3. Electric power transmission system for inverter-fed motors, etc.
4. Future electric power system with EV and HEV, etc.

Textbook

Distribution of handout

Additional Reading

Grade Assessment

Reports

Credits will be awarded to those students who score 60 or more.

Grades are as follows:

S:100-90, A:89-80, B:79-70, C:69-60, F:59-0.

Notes

Contacting Faculty

Yasunobu Yokomizu: yokomizu@nuee.nagoya-u.ac.jp

Hiroki Kojima: kojima@nuee.nagoya-u.ac.jp

Naoki Hayakawa: nhayakaw@nuee.nagoya-u.ac.jp

Takeyoshi Kato: tkato@nuee.nagoya-u.ac.jp

Semiconductor Devices (2.0credits) (半導体デバイス工学特論)

Course Type	Specialized Courses		
Division at course	Master's Course		
Class Format	Lecture		
Course Name	Automotive Engineering		
Starts 1	1 Autumn Semester		
Lecturer	Hiroshi AMANO Professor	Yutaka ONO Professor	Hiroki KONDOH Associate Professor
	Markus PRISTOVSEK Designated Professor		

Course Purpose

Fundamental properties of semiconductors and physics of electron and photonic devices for micro- and nano electronics are studied. A guideline of novel device designs is mastered in this lecture.

Prerequisite Subjects

Fundamental physics Thermodynamics Quantum mechanics Solid state physics

Course Topics

Ch.1 Energy Bands and Carrier Concentration in Thermal Equilibrium Ch.2 Carrier Transport Phenomena Ch.3 p-n Junction Ch.4 Bipolar Transistor and Related Devices Ch.5 MOS Capacitor and MOSFET Ch.6 Advanced MOSFET and Related Devices Ch.7 MESFET and Related Devices Ch.8 Microwave Diodes; Quantum-Effect and Hot-Electron Devices Ch.9 Light Emitting Diodes and Lasers Ch.10 Photodetectors and Solar Cells Ch.11 Crystal Growth and Epitaxy Ch.12 Film Formation Ch.13 Lithography and Etching Ch.14 Impurity Doping Ch.15 Integrated Devices

Textbook

Semiconductor Devices: Physics and Technology, International Student Version, Third Edition by S.M. Sze and M. K. Lee, Wiley, ISBN: 978-0-470-87367-0

Additional Reading

Physics of low dimensional semiconductors, J. H. Davis (Springer) The Physics of Semiconductors, Marius Grundmann (Springer) Basic Semiconductor Physics, C. Hamaguchi (Springer)

Grade Assessment

report (100%) or paper test (100%) S:100-90 points, A:89-80 points, B:79-70 points, C:69-60 points, F:<60 points

Notes

Contacting Faculty

Hiroshi Amano <amano@nuee.nagoya-u.ac.jp> Yutaka Ohno <yohno@nagoya-u.jp> Hiroki Kondo <hkondo@nagoya-u.jp> Markus Pristovsek <pristovsek@imass.nagoya-u.ac.jp>

Advanced Lectures on Communication and Image Processing (2.0credits) (通信・画像信号処理工学特論)

Course Type	Specialized Courses		
Division at course	Master's Course		
Class Format	Lecture		
Course Name	Automotive Engineering	Automotive Engineering	
Starts 1	1 Spring Semester	1 Spring Semester	
Lecturer	Masaaki KATAYAMA Professor Keita Takahashi Associate Professor	Takaya YAMAZATO Professor	"FUJII Toshiaki" Professor

Course Purpose

This lecture focuses on wireless communication and image processing technologies which are fundamental to automotive engineering.

Prerequisite Subjects

Course Topics

- Basics of wireless LAN- Experimental practice on wireless LAN - Basics of image signal processing- Programming practice on image signal processing

Textbook

Books and papers will be introduced during the classes when necessary.

Additional Reading

Books and papers will be introduced during the classes when necessary.

Grade Assessment

Credits will be awarded to those students who score 60 or more in course works and reports. Grades are as follows: S:100-90, A:89-80, B:79-70, C:69-60, F:59-0.

Notes

Contacting Faculty

Questions are attended during the classes.

Course Type	Specialized Courses		
Division at course	Master's Course		
Class Format	Lecture		
Course Name	Automotive Engineering		
Starts 1	1 Autumn Semester		
Lecturer	Satoshi SATOH Professor	Nobuo KAWAGUCHI Professor	Tetsu IWATA Associate Professor
	Takuro YONEZAWA Associate Professor	Tomohiro YOSHIKAWA Associate Professor	

Course Purpose

This class covers several topics related to information systems, which includes statistical hypothesis testing, operating system, distributed systems, algorithmic techniques, and information security.

Prerequisite Subjects

Mathematics and computer science (computer systems, algorithms, and programming languages) in undergraduate course

Course Topics

1. statistics, statistical hypothesis testing, multiple comparison
2. network protocols, operating system, programming languages
3. distributed systems, synchronized communication, sensor networks
4. algorithmic techniques, search
5. information security, cryptography, data authentication

Textbook

Printed handouts will be provided.

Additional Reading

Andrew S. Tanenbaum, Maarten van Steen, "Distributed Systems: Principles and Paradigms" (for distributed systems)

Grade Assessment

Grades will be based on class participation and reports.

40% for attendance

60% for report (for each topic)

Notes

Contacting Faculty

Students can ask questions at any time during classes.

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Lecture	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Autumn Semester	1 Autumn Semester
Lecturer	Toshiro MATSUMOTO Professor	

Course Purpose

The purpose of this course is to acquire the fundamentals of the finite element method for solids. Through this course, students will develop an understanding of (1) the fundamentals of elastostatics and the principles used as the starting point of the finite element method, and (2) discretization of the integral form to obtain the numerical solutions and solution algorithms of the finite element method (students will also solve some simple practical examples using the given finite element code).

Prerequisite Subjects

Mathematics, Physics, Computer Software, Mechanics of Materials, Solid Mechanics

Course Topics

1. Stress, traction, strain
2. Equilibrium equation and Hooke's law
3. Virtual work principle and method of weighted residuals
4. Weak form
5. Discretization of weak form
6. Shape functions
7. Stiffness matrix
8. Numerical integration formulas
9. Solution algorithms

Textbook

Additional Reading

Introduction to Approximate Solution Techniques, Numerical Modeling, and Finite Element Methods, Marcel Dekker Inc

Grade Assessment

Grades will be based on class participations, reports.

Notes

Contacting Faculty

Students can ask questions at any time during classes.

Questions during off-class hours can be asked at the lecturers' rooms:

Room 323, Engineering Building No.2 North Wing 3F, (2780), E-mail: t.matsumoto@nuem.nagoya-u.ac.jp

Industrial Uses of Radiation (2.0credits) (工業における放射線利用)

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Lecture	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Spring Semester	1 Spring Semester
Lecturer	Akira URITANI Professor	

Course Purpose

In this course, students study ionizing radiations, activity, radiation detections, and so on. Students will also study how ionizing radiations are used as powerful tools in manufacturing industries. We will visit radiation related facilities and deepen understanding of industrial use of radiation.

Prerequisite Subjects

nothing in particular

Course Topics

Radioactivity and ionizing radiation

Environmental radiation

Generation of ionizing radiation, nuclear reactions, accelerators

Radiography(X-rays, neutrons)

Radiation detection and measurement

Utilization of ionizing radiations in manufacturing industries

Lab tours (Visiting candidates: National Institute on Nuclear Fusion, Accelerator Facility in the Higashiyama Campus, Aichi Synchrotron Center, Hamaoka Nuclear Power Station, etc. Travel expenses will be supported by Nagoya University for G30 students.)

Textbook

nothing in particular

Additional Reading

nothing in particular

Grade Assessment

Grades will be assigned based on reports.

Grade points

S:100-90

A:89-80

B:79-70

C:69-60

F:59-0

Notes

Travel expenses will be supported by Nagoya University for G30 students.

NUPACE students can also take this course, but travel expenses will not be paid.

Contacting Faculty

Phone ext.3797

e-mail to uritani@energy.nagoya-u.ac.jp

Advanced Experiments and Exercises in Automotive Engineering A (1.0credits) (自動車工学特別実験及び演習A)

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Experiment and Practice	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Autumn Semester	1 Autumn Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

The aim of this course is to help students acquire deep understanding of the fundamental science and engineering related to automobiles through experiments.

Prerequisite Subjects

All courses in undergraduate course.

Course Topics

This course deals with the basis of fundamental science and engineering related to automobiles through experiments.

Textbook

Additional Reading

Grade Assessment

Grading will be decided based on attendance and the quality of the students' contribution to the experiments.

Notes

Contacting Faculty

Advanced Experiments and Exercises in Automotive Engineering B (1.0credits) (自動車工学特別実験及び演習B)

Course Type	Specialized Courses	
Division at course	Master's Course	
Class Format	Experiment and Practice	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Spring Semester	1 Spring Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

The aim of this course is to help students acquire deep understanding of the fundamental science and engineering related to automobiles through experiments.

Prerequisite Subjects

All courses in undergraduate course.

Course Topics

This course deals with the basis of fundamental science and engineering related to automobiles through experiments.

Textbook

Additional Reading

Grade Assessment

Grading will be decided based on attendance and the quality of the students' contribution to the experiments.

Notes

Contacting Faculty

Latest Advanced Technology and Tasks in Automobile Engineering (3.0credits) (先端自動車工学特論)

Course Type	Comprehensive engineering courses		
Division at course	Master's Course		
Class Format	Lecture		
Course Name	Molecular and Macromolecular Chemistry	Materials Chemistry	Biomolecular Engineering
	Applied Physics	Materials Physics	Materials Design Innovation Engineering
	Materials Process Engineering	Chemical Systems Engineering	Electrical Engineering
	Electronics	Information and Communication Engineering	Mechanical Systems Engineering
	Micro-Nano Mechanical Science and Engineering	Aerospace Engineering	Department of Energy Engineering
	Department of Applied Energy	Civil and Environmental Engineering	Automotive Engineering
	Automotive Engineering		
Starts 1	1 Spring Semester	1 Spring Semester	1 Spring Semester
	1 Spring Semester	1 Spring Semester	1 Spring Semester
	1 Spring Semester	1 Spring Semester	1 Spring Semester
	1 Spring Semester	1 Spring Semester	1 Spring Semester
	1 Spring Semester	1 Spring Semester	1 Spring Semester
	1 Spring Semester	1 Spring Semester	1 Spring Semester
	1 Spring Semester		
Lecturer	Yukio ISHIDA Designated Professor		

Course Purpose

This course is intended to study the latest advanced technology of automobile engineering from top researchers of universities and industries. The topics of lectures are related to almost all fields of automotive industries.

Prerequisite Subjects

lectures related to fundamental physics, mechanical, electrical and information engineering.

Course Topics

A. Lectures
 1. The Car Industry, Market Trend, Circumstance and Its Future.
 2. Overview of Automotive Development Process.
 3. Observation and Evaluation of Drivers' Behavior Perspective.
 4. Car Materials and Processing.
 5. Movements and Control of a Car.
 6. Safety Engineering for the Prevention of Accidents.
 7. Crash Safety.
 8. Automobile Embedded Computing System.
 9. Wireless Technologies in ITS.
 10. Applications of CAE to Vehicle Development.
 11. Energy Saving Technology for Automobiles.
 12. Fuel and Automobile Catalysts for Environmental Friendly Cars.
 13. Traffic Flow Characteristics.
 14. Cars and Roads in Urban Transportation Context.
 15. Automobile in Aging Society.
 B. Factory Visits
 1. Toyota Motors Corp., 2. Mitsubishi Motors Corp., 3. Yokohama Rubber Co. Ltd., 4. Suzuki Museum, 5. Toyota Higashi-Fuji Technical Center, 6. Nissan Technical Center
 C. Group Research Project
 Several students form one group and each group selects one topic. They investigate and discuss about this topic and make presentations.

Textbook

None (Handout delivered)

Additional Reading

Introduced in the lectures

Grade Assessment

Evaluation will be based on (a) Discussions in the lectures 20%, (b) report for each lecture 20%, (c) group presentation 30%. and (d) report on research subject 30%. It is necessary to attend factory visits.

Notes

Contacting Faculty

Mainly accepted during each lecture. Other general questions are accepted by Professor Yukio Ishida.

<Contact> TEL: 052-747-6797, Email: ishida@nuem.nagoya-u.ac.jp

Introduction to Academic Communication (1.0credits) (コミュニケーション学)

Course Type	Comprehensive engineering courses		
Division at course	Master's Course		
Class Format	Lecture		
Course Name	Molecular and Macromolecular Chemistry	Materials Chemistry	Biomolecular Engineering
	Applied Physics	Materials Physics	Materials Design Innovation Engineering
	Materials Process Engineering	Chemical Systems Engineering	Electrical Engineering
	Electronics	Information and Communication Engineering	Mechanical Systems Engineering
	Micro-Nano Mechanical Science and Engineering	Aerospace Engineering	Department of Energy Engineering
	Department of Applied Energy	Civil and Environmental Engineering	Graduate Chemistry
	Graduate Chemistry	Automotive Engineering	Automotive Engineering
	Civil and Environmental Engineering Graduate		
Starts 1	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester		
Lecturer	ReikoFURUYA Associate Professor		

Course Purpose

This course is intended to help students learn the skills necessary for making an effective presentation in a language (either Japanese or English) different from their native tongue. Japanese students will make presentations in English, and international students in Japanese.

Prerequisite Subjects

Course Topics

(1) Observing video-taped presentations:By watching model presentations, students will see how an effective presentation is made and learn techniques useful for their own presentations. :(2) Making a presentation:By using presentation techniques discussed

Textbook

none

Additional Reading

Please refer to the Japanese version of this syllabus.

Grade Assessment

Evaluation will be based on presentations and class participation.:

Notes

Contacting Faculty

Research Internship 1 U2 (2.0credits) (研究インターンシップ1 U2)

Course Type	Comprehensive engineering courses	
Division at course	Master's Course	
Class Format	Practice	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Spring and Autumn Semester	1 Spring and Autumn Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

Prerequisite Subjects

Course Topics

Textbook

Additional Reading

Grade Assessment

Notes

Contacting Faculty

Research Internship 1 U3 (3.0credits) (研究インターンシップ1 U3)

Course Type	Comprehensive engineering courses	
Division at course	Master's Course	
Class Format	Practice	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Spring and Autumn Semester	1 Spring and Autumn Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

Prerequisite Subjects

Course Topics

Textbook

Additional Reading

Grade Assessment

Notes

Contacting Faculty

Research Internship 1 U4 (4.0credits) (研究インターンシップ 1 U4)

Course Type	Comprehensive engineering courses	
Division at course	Master's Course	
Class Format	Practice	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Spring and Autumn Semester	1 Spring and Autumn Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

Prerequisite Subjects

Course Topics

Textbook

Additional Reading

Grade Assessment

Notes

Contacting Faculty

Research Internship 1 U6 (6.0credits) (研究インターンシップ 1 U6)

Course Type	Comprehensive engineering courses	
Division at course	Master's Course	
Class Format	Practice	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Spring and Autumn Semester	1 Spring and Autumn Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

Prerequisite Subjects

Course Topics

Textbook

Additional Reading

Grade Assessment

Notes

Contacting Faculty

Research Internship 1 U8 (8.0credits) (研究インターンシップ1 U8)

Course Type	Comprehensive engineering courses	
Division at course	Master's Course	
Class Format	Practice	
Course Name	Automotive Engineering	Automotive Engineering
Starts 1	1 Spring and Autumn Semester	1 Spring and Autumn Semester
Lecturer	Faculty of Automotive Engineering	

Course Purpose

Prerequisite Subjects

Course Topics

Textbook

Additional Reading

Grade Assessment

Notes

Contacting Faculty

Advanced Lectures on Scientific English (1.0credits) (科学技术英語特論)

Course Type	Comprehensive engineering courses		
Division at course	Master's Course		
Class Format	Lecture		
Course Name	Molecular and Macromolecular Chemistry	Materials Chemistry	Biomolecular Engineering
	Applied Physics	Materials Physics	Materials Design Innovation Engineering
	Materials Process Engineering	Chemical Systems Engineering	Electrical Engineering
	Electronics	Information and Communication Engineering	Mechanical Systems Engineering
	Micro-Nano Mechanical Science and Engineering	Aerospace Engineering	Department of Energy Engineering
	Department of Applied Energy	Civil and Environmental Engineering	Automotive Engineering
	Automotive Engineering	Civil and Environmental Engineering Graduate	
Starts 1	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
	1 Autumn Semester	1 Autumn Semester	1 Autumn Semester
Lecturer	Part-time Faculty		

Course Purpose

Students will acquire basic skills to summarize their research as a paper in English and to make a presentation in English.

Prerequisite Subjects

Various subjects relating to English

Course Topics

This course focuses on guided practice in written and spoken English in academic and scientific contexts. Students are expected to write short essays, respond to questions from peers and improve their academic quality.

1. Basics of academic writing
2. Unity and coherence
3. Paragraph structures in scientific context
4. Audience-friendly presentation

Textbook

Additional Reading

Glasman-Deal, Hilary. "Science Research Writing: A Guide for Non-Native Speakers of English" Imperial College Press.

Grade Assessment

Quality of written and oral presentation, active participation in discussion, and attendance

Notes

This course is open to native and non-native speakers of English who have not received training in logical and critical thinking skills in English.

Contacting Faculty

Email address to be announced in the first class