

Application Procedures

Applicants are requested to send the following application documents to Nagoya University via staff at the International Office of their university or a faculty member in charge of liaison with Nagoya University. If this is not possible, applicants are asked to contact Nagoya University before submission.

- NUSIP application form
- Statement of purpose
- Health certificate
- (Non-native English Speaker) Supporting documents of English Proficiency (i.e., TOEFL, TOEIC, IELTS or the equivalent)
- Three identical photographs (3.0 cm x 4.0 cm), signed on the reverse side, one of which should be attached to the 'NUSIP Application Form'.
- A copy of the passport page which shows the applicant's name, date of birth and nationality. (Applicants who do not possess a passport at the time of application must send a copy by facsimile or e-mail as soon as they obtain one.)
- Resume

Application Deadline

Completed application forms must reach the Student Affairs Division, Graduate School / School of Engineering by the following date:

February 28, 2018

Contact Address

Student Affairs Division
Graduate School / School of Engineering
Nagoya University
Furo-cho, Chikusa-ku, Nagoya, 464-8603 Japan

Tel: 81-52-789-3603/3563

Fax: 81-52-789-3979

E-mail: nusip@engg.nagoya-u.ac.jp

Website: <http://www.engg.nagoya-u.ac.jp/en/nusip/>

Notification of Results

The results of document screening, as conducted by Nagoya University, will be made available to applicants by the **end of March 2018**.

JAPAN

NUSIP2018

Nagoya University Summer Intensive Program

Latest Advanced Technology & Tasks in Automobile Engineering

+ Japanese Language



Nissan

Honda

Toyota

Mitsubishi
(New model for the exhibition
in a motor show)

Image courtesy of Toyota, Honda, Mitsubishi

Earn college credits while immersed in another culture and engage your intellectual curiosity with the latest findings in automobile industries in Japan that focus and succeed on a level you never thought possible. Join **NUSIP** for six weeks and experience the full range of Japanese cultural life. Course-related excursions will also provide you with an opportunity to discover amazing Japanese cultural scene that has enticed and entranced observers for generations.

Time schedule:

Application Deadline: February 28, 2018

Course Duration: June 13 to July 19, 2018

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Outline

Courses Offered

1. Seminars on Latest Advanced Technology and Tasks in Automobile Engineering (400 level) (3 credits)
2. Elementary Japanese Language Course (100 level) (3 credits)
(Students with previous Japanese language experience will be offered a more advanced language course.)
3. Automobile industry factory and laboratory visits
4. Cultural excursions

Student Capacity

40 overseas students (including maximum of 5 students from the universities NOT having concluded academic exchange agreements with Nagoya University), and 10 Nagoya University students

Program Fee

- US\$2,000 for students enrolled in the universities having concluded academic exchange agreements with Nagoya University
- US\$2,500 for students enrolled in the universities NOT having concluded academic exchange agreements with Nagoya University

Both fees exclude meal and air-ticket expenses. Accommodations in Nagoya, the Japanese language course, orientation, cultural excursion and social activities are included in the program fees.

(Nagoya University students will have the fee for the Automobile Engineering course waived, but will be charged for cultural excursions and social activities.)

Language

English

General Information

Overview

The 2018 summer program at Nagoya University will provide students with a rare opportunity to connect with and play a role in automobile technology. The program offers academic credits towards students' engineering degrees and beyond the core curriculum, students may further supplement their practical know-how with enrichment as they are exposed to the authentic environment of the automobile factory and research center. A Japanese language course is also offered.

Study with an Advanced Curriculum that Gets Results

- Each lecture invites you to learn in a new context, in new ways, gaining perspectives that shape the way you engage with the automobile world.
- Each lecture is as demanding as it is rewarding, resulting from the commitment of Nagoya University faculty and, in most cases, collaboration with industrial researchers from Toyota, Honda, Nissan, Mitsubishi and so forth.
- Unlike many study opportunities abroad, the NUSIP program is led exclusively by faculty, ensuring the same quality education that students encounter on their own campus.

Accommodations

University dormitory (single room)

Meals

Lunch and dinner are available at the campus cafeteria at a reasonable price.

Visa

Those who need a visa to enter Japan are responsible for getting a temporary visitor (tourist) visa.

Health Insurance

NUSIP requires health insurance coverage for all overseas participants. Japan's National Health Insurance system is available to foreigners with long-term visas for Japan only. Therefore, overseas participants must purchase overseas health insurance prior to arrival in Japan. They are required to show proof of health insurance coverage on the first day of summer program.

Learn from Staff Committed to Excellence

Program Director:

Professor Tomohiko Tagawa,
Vice-Dean, Graduate School of Engineering

Chief Coordinator:

Designated professor Yukio Ishida,
International Education Exchange

Instructors (Omnibus):

Researchers or engineers from automobile companies and professors at Nagoya University

Course Overview

1. Latest Advanced Technology and Tasks in Automobile Engineering (3 credits)

Class hours: Three 45-minute classes a day
(13:30-14:15, 14:30-15:15, 15:30-16:15).
Three to four days a week. Days are not fixed.

1 The Car Industry, Market Trend, Circumstance and Its Future

Global market trend by region / Development process overview / Global automotive regulation and counter measures / Safety features / Cars in future / Electric vehicles [Lecturers] Mr. Kazuaki Iwamoto (Mitsubishi Motor Corp.), Mr. Yuji Tozuka (ibid.) , Prof. Yukio Ishida (Nagoya Univ.)

2 Overview of Automotive Development Process

New car model / Development process / Production / Sales and marketing / Impact zero emission on technology [Lecturers] Dr. Chinmoi Pal (Nissan Motor Corp.), Prof. Yukio Ishida (Nagoya Univ.)

3 Observation and Evaluation of Drivers' Behavior Perspective

Measurement of drivers' behavior / Data centric approach / Evaluations of risk factors / Improving drivers' behavior using drive recorders [Lecturers] Prof. Kazuya Takeda (Nagoya Univ.), Dr. Eijiro Takeuchi (ibid), Dr. Chiyomi Miyajima (ibid.)

4 Car Materials and Deformation Processing

Metal forming / High Strength Steel / Aluminum alloy / CFRP / Plastic working technology in the automotive industry / [Lecturers] Mr. Hirokazu Morishita (Toyota Motor Corp.), Prof. Nobuki Yukawa (Nagoya Univ.)

5 Movement and Control of a Car

Introduction of automatic control and control engineering / Design of vehicle dynamics and control / Overviews of aerodynamics development of Formula 1 [Lecturers] Dr. Masaki Nakagawa (Toyota Central R&D Labs., Inc.), Mr. Tatsuya Miyano (ibid.) and Prof. Toru Asai (Nagoya Univ.)

6 Safety Engineering for the Prevention of Accidents

Driving behavior analysis and assistance system design / Design of Automated Vehicle / Innovative safety concept in Nissan [Lecturers] Prof. Yousuke Akatsu (Nagoya Univ.), Prof. Tatsuya Suzuki (ibid.)

7 Crash safety

Traffic injuries and impact biomechanics / Sudden illness while driving / Reconstruction of the car to pedestrian collision / Regulation & NCAP / Crash compatibility for small cars safety [Lecturers] Prof. Masahito Hitosugi (Shiga Univ. of Medical Science), Mr. Kazuo Imura (Honda R&D Labs., Inc.) , Prof. Koji Mizuno (Nagoya Univ.)

8 Automotive Embedded Computing Systems

Introduction to automotive embedded system / In-vehicle network technologies / E/E systems and ADAS/ E/E systems and BSR / AUTOSTAR Classic / AUTOSTAR Adaptive [Lecturers] Mr. Kazuhiro Kajio (Toyota Motor Corp.) , Prof. Hiroaki Takada (Nagoya Univ.)

9 Wireless Technologies in ITS

Wireless technologies for "Safe Driving" / VICS, ETC/DSRC, V2V and R2V communication systems / Sensors for safe driving: Radar, LIDAR, Camera / ITS + Big Data [Lecturers] Dr. Tsuneo Nakata (DENSO Corp.), Dr. Yasuhiro Hirayama (ibid.) , Prof. Masaaki Katayama (Nagoya Univ.)

10 Application of CAE to Vehicle Development

Introduction to CAE / Finite element method / CAE application to vehicle development / Noise and vibration / Computational fluid dynamics
[Lecturers] Not determined (Toyota Motor Corp.), Prof. Toshiro Matsumoto (Nagoya Univ.)

11 Energy-Saving Technologies for Automobiles

Environmental change and energy-saving movement / Hybrid vehicles / Electric vehicles / Automotive power electronics / Integration of the vehicle system into the infrastructure
[Lecturers] Mr. Tatsuo Teratani (Toyota Motor Corp.), Prof. Shinji Doki (Nagoya Univ.)

12 Fuel and Automobile Catalysts for Environmental Friendly Cars

Automotive catalysts for gasoline engines / Role of catalysts and metal surface / Automotive catalysts for diesel engines / Production of fuels / Fuels in future
[Lecturers] Prof. Atsushi Satsuma (Nagoya Univ.)

13 Fundamentals of Traffic Flow Characteristics

Roles of traffic engineering / Fundamentals of traffic flow analysis / Traffic congestion and bottleneck phenomena / Motorway congestion countermeasures with V21
[Lecturer] Prof. Hideki Nakamura (Nagoya Univ.)

14 Cars and Roads in Urban Transportation Context

Transportation systems in cities / Vehicle measures for environmentally sustainable transport (EST) / Travel behavior for EST / Trip reduction
[Lecturers] Prof. Takayuki Morikawa (Nagoya Univ.)

15 Automobile in Aging Society

Aging society / Why they didn't notice? / Meaning of driving for elderly / Driving cessation / Approach to drive longer and safer
[Lecturers] Prof. Hirofumi Aoki (Nagoya Univ.)

Evaluation:

Attendance & participation: 20%
Written reports for seminars (15 reports): 20%
Presentation of group project work: 30%
Report of group project work: 30%

2. Japanese (3 credits)

Class hours: Approximately two hours per day for 6 weeks (total 45 hours)

2.1 Elementary Japanese

This class is designed for students who have little or no knowledge of Japanese. This level aims to acquire the most essential language patterns for everyday life, and be able to express intentions in uncomplicated adult-level Japanese.

2.2 Intermediate Japanese

This class is designed for students who have already learned Japanese to some extent.

2.3 Advanced Japanese

This class is designed for students who can speak Japanese rather fluently.

3. Automobile Industry Factory and Laboratory Visits

Toyota, Mitsubishi, Nissan, Suzuki and Yokohama Rubber, National Traffic Safety and Environment Laboratory

4. Cultural Excursions

Kyoto, Nara and Tokyo

Eligibility

• Applicants **MUST** be enrolled in universities having concluded academic exchange agreements with Nagoya University at the inter-university level or with the Graduate School of Engineering at the inter-school level. However, maximum of 5 students from the universities **NOT** having concluded academic exchange agreements with Nagoya University may join this program.

• Applicants **MUST** be of senior undergraduate or graduate status during the NUSIP period (including junior undergraduates who are completing their junior program).

• Applicants **MUST** enclose a resume and brief statement of purpose with the program application materials. Application may be downloaded.

• Applicants who are non-native speakers of English must possess a TOEFL score of 550 <CBT =213; iBT=79>, TOEIC score of 730, an IELTS overall band score of 5.5, or the equivalent, and should attach a copy of the official score record to the application. However, those studying full time at a university where the medium of instruction is the English language are exempted from this requirement.