


Japan-US Advanced Collaborative Education Program (JUACEP)

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What Is JUACEP?


Graduate School of Engineering at Nagoya University was awarded the "Re-Inventing Japan Project" grant by the Japanese government. The grant aims to provide Japanese University students more international experience and enhancing internationalization of the Japanese Universities.

Nagoya University's program

**Research-based education through co-study of
the Nagoya University and American University
graduate students of Engineering Depts.**


For American University students

- Research environment and atmosphere at Nagoya University
- Experience true Japan (hospitality, beauty of the country, etc.)

 Nagoya University
JUACEP

Nagoya University



- Began its history in 1871. The Nagoya Imperial University was established with the addition of the School of Science and Engineering and the School of Medicine in 1939. The name of the university was changed to Nagoya University in 1947.
- 13 graduate schools, 3 research institutes, 2 facilities open to the public, and 16 research centers.
- One of the top research universities (like Ivy league) in Japan.
- 5 Nobel prize winners in the 21st century (including 2014; Profs. Akasaki and Amano for blue LED innovation).
- There are a variety of multinational industrial companies and the School of Engineering has strong intercommunion with them, in terms of both people and research.

 Nagoya University
JUACEP


Nagoya City

- Located at the center of Japan.
- The fourth-largest city in Japan (2.2 million people).
- A core region for Japan's industrial technology
- A cultural city with a long history


Japan map


Downtown




Nagoya castle



Bullet train



Raced Toyota LFA




Program Outline

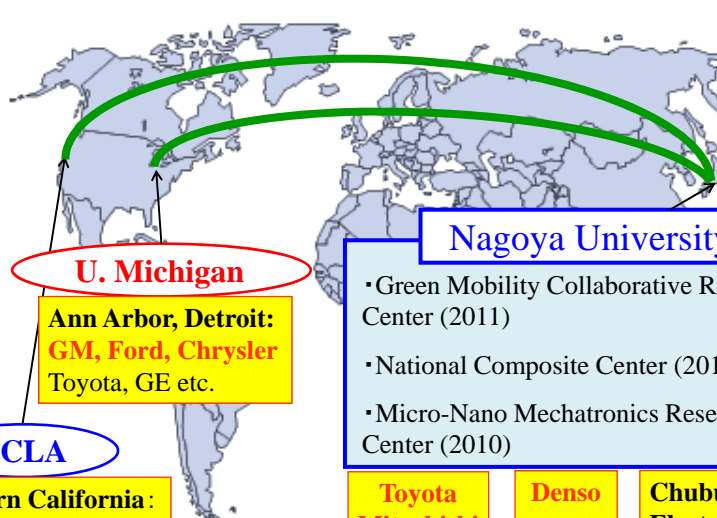
- **Student exchange**
Short (2~3 months), medium (6 months), long (12 months)
- **Seminars and workshop**
Lectures by professors, researchers, engineers, and students
- **Faculty exchange and workshop**

Past and Future Student Exchange

		AY2011	AY2012	AY2013	AY2014	AY2015	Sum
Nagoya → USA	Short	0	16	14	12	(10)	207
	Medium	0	4	3	9	(10)	
	Long	0	2	3	1	(2)	
	WS	37	29	35	(20)	(0)	
USA → Nagoya	Short	0	9	18	17	(12)	65
	Medium	0	1	0	2	(4)	
	Long	0	0	0	0	(2)	
	WS	0	0	0	0	(0)	



Partner Universities



U. Michigan

UCLA

Nagoya University

Ann Arbor, Detroit:
GM, Ford, Chrysler
Toyota, GE etc.

Southern California:
Boeing etc.

Toyota
Mitsubishi

Denso
AISIN

Chubu
Electric Power
Toho Gas

• Green Mobility Collaborative Research Center (2011)
 • National Composite Center (2011)
 • Micro-Nano Mechatronics Research Center (2010)


Summer Program at Nagoya University


Participants: 5-10 UM graduate students

Programs:


- Research internship
- Lectures on production engineering
- Japanese class (beginner's level)
- Toyota plant tour
- Short excursion
- Workshop








Examples of Research Themes

- Ultra-High Pressure Synthesis and Properties of Energy-related Materials
- Design of renewable energy-based resilient electric power system
- Uncertainty quantification of fission product inventories of nuclear fuel due to numerical modeling
- Development of Non-destructive Inspection System using Neutron and Gamma Detectors
- Development of crack healing technique for metals
- Photovoltaic/Thermoelectric Hybrid Solar Cell
- Scalar mixing in regular and fractal grid turbulence
- Ultra low friction coating for high efficient advanced
- What will be the next generation of a large-scale battery?



Comments by the participated UM students

- Thanks to both the Sensei for their effort. My research team was very co-operative and gave me space to do my work which made my research fun and interesting. (N.V.)
- The moments when professor stopped my talk to ask me questions is when I learned the most. My research project in Japan has significantly stimulated my interest in further studying turbulence. (L.W.)
- JUACEP Summer Program curriculum is extremely conducive in exposing students to contemporary Japanese culture and the latest technological developments in Japan. (S.W.)
- The land of the rising sun has given me new experiences and there is a lot I will take back home. (N.R.)




Credits

- International Research Project (3 credits)

Grading: Oral presentation (50%) and research report (50%)

⇒ **ME590 (Independent research, U Michigan)**
- Japanese class (1 credit, optional)

Studentship	Undergrad (under USGS)	Master's	PhD	Memo
Credits at Nagoya U	Yes	Yes	Yes	Independent research (and Japanese)
Credit transfer to the UM	Yes	Yes	No	Non-ME students needs to check if the transfer from ME590 to XX590 is allowed.




Financial Support

Air ticket	Nagoya University does not cover the air ticket if the participants (1) do not take the designated flight between Detroit and Nagoya, (FYI, the Short Stay Visa is valid for 90 days from the arrival date.) (2) are planning to renew the US visa during the program.
Housing	Everyone
Scholarship (80,000yen/month)	Students who receive the following scholarships can NOT get this scholarship: a) Honors Scholarship for Privately Financed International Students by the Japanese Government and/or Japanese Government Scholarship; (b) any scholarship awarded particularly to participate in the program and more than 80,000 JPY (\$700) /month.


We are sorry but our budget has not been fixed yet and we do not know how many students we can accept. However, we think

- 5-6 UM students can get the air ticket, housing, and scholarship,
- 5-8 UM students can get the scholarship.

The budget will be fixed by the end of February and we should be able to let the students know who gets what at the notice of acceptance. (Worst case scenario, it will be delayed to early March.)



Schedule of the Study in Nagoya 2015



2/25 Application deadline
Apply through the U Michigan website
(https://mcompass.umich.edu/index.cfm?FuseAction=Programs.ViewProgram&Program_ID=10544)

3/7 Notice of acceptance
3/30 Due to find your host professor
and determine your research theme
(Visa application)
(Pre-study and online meeting)

5/10 Arrival at Nagoya
(Study, work, research, *and fun*)

8/7? Workshop & farewell party
8/8 Departure

 Nagoya University JUACEP Program

Find more in our homepage:
<http://www.juacep.engg.nagoya-u.ac.jp>



The screenshot shows the homepage of the JUACEP program. At the top left is the logo for Nagoya University JUACEP. The main heading reads "Gain Engineering Research Experience in Nagoya and USA" followed by "JUACEP Japan-US Advanced Collaborative Education Program". Below this is a navigation menu with links for HOME, About, Programs, Downloads, Participants voices, Links, Archives, and Achievements. The main content area features a section titled "What is JUACEP? Why JUACEP?" with a brief description of the program. To the right, there is a "News" section with two entries: one dated 2014.1.4 about Prof. Kurabayashi's visit, and another dated 2014.12.19 about medium-term students completing the program. At the bottom, there is a "Project Members" section and a footer for Nagoya University.