

Course Requirement Guide Book

(October 2011)

Master's Program Given in English

TOYOHASHI UNIVERSITY OF TECHNOLOGY

I Requirements for graduation

1. Requirements for graduation

To complete the master's course, a student must participate in the Master's course for two or more years, and must acquire the minimum credits required as follows. Also, the student must carry out a research under a proper guidance by faculty members and must submit a master's thesis, and pass the review and final examination.

Note that students showing excellent achievements may finish in a shorter study period.

Classification	Required credits for graduation	Remarks	
General Courses	6		
Specialized Courses			
Mechanical Engineering major	24	6 credits	(1) When considered appropriate by the supervisor, the credits shown on the left (6 credits) can be substituted in other majors. (2) When considered appropriate by the supervisor, courses held in Japanese can be taken up to 6 credits.
Electrical and Electronic Information Engineering major	24	6 credits	
Computer Science and Engineering major	24	6 credits	
Environmental and Life Science major	24	6 credits	
Architecture and Civil Engineering major	24	6 credits	
Grand total	30		

2. Application for degree

Only a student who has acquired the credits required for finishing, or who is expected to acquire the credits can apply for a master's degree. Submission procedures of thesis for master's degree shall be posted on a bulletin board before the submission period.

II Class registration, examination, attendance period

1. Class registration method

Classes shall be registered according to the program schedule of the respective major.

(1) Making a study plan

Read this manual thoroughly, and follow the instructions and advice given during the orientation at the beginning of the academic year or that given by the supervisor, and set your class schedule in the course timetable.

Provide enough time-allowance to your schedule.

Note that some elective courses may be held in once in two year only.

The course timetable will be provided at the beginning of each academic year.
Schedule for special intensive courses will be posted up on a bulletin board as soon as the details are fixed.

(2) Class registration

The student must register the classes by Dream Campus (through TUT website) during the designated date. (<https://www.ead.tut.ac.jp/portal/>) or by the sheet of "Course Registration List"

Those courses not registered will not be accredited in any case.

NOTE:

- 1 To take classes of other majors in the English Course or regular course given in Japanese, the student must obtain approval from the supervisor and course instructor with the "Other Major Course Approval Form", before registering the course.
- 2 If the student does not attend the class nor take the examinations, credits will not be given even if the registration is made.
- 3 A student can not re-register the courses once credits are given.
- 4 Courses held at the same class time cannot be registered. Note that this does not apply for courses being taken again for examinations only, or intensive courses.

(3) Confirming and amending the registration

To confirm your class registration and to amend it, please access to Dream Campus. Please refer to the manuals of Dream Campus for how to use .

(4) Repeating courses

Basically, a student who has failed in a class with the regular examination, or some other reasons, must take again the class in the next academic year.

The student must make registration again even if the class is a compulsory course for graduation and for the repeating.

(5) Repeating courses by examination, etc.

Only when the course instructor approves of crediting by passing the examination only without re-attend the classes, the student can submit and register the class with the "Request for repetition through examination".

2. Examination

Examination includes regular examination and makeup examination.

(1) Regular examination

As a principle, regular examination shall be held during the set period at the end of each term. Note that examination may be held at any time when found necessary by the course instructor.

The regular examination period and examination timetable, etc., will be posted up on a bulletin board.

(2) Make-up examination

a) Make-up examination shall be held only when the student could not take the regular examination for the concerned course due to the following reasons. The student must gain the approval of the course instructor with the "Request for makeup examination" before taking the examination.

- 1) When the student is sick (doctor's medical certificate must be submitted)
- 2) When considered appropriate due to accidents or disaster (certificate of proof must be submitted), and other special reasons (a letter explaining the reason must be submitted).

b) The "Request for makeup examination" must be submitted to the Academic Affairs Division within one week from the final date of regular examination.

c) If the student fails to take the makeup examination, further examination will not be held.

(3) Approval of credits and evaluation

The course instructor shall approve the credits for the course through the means of examinations, etc.

Examinations are basically conducted at the end of each term.

All students are to check the exam schedules on the academic calendar on Dream Campus (through TUT website), bulletin board at A-bldg. or printed calendar at the office of Academic Affairs Section. In addition, your instructor may schedule extra tests. All tests scheduling will be placed on the bulletin boards at lecture hall of A-bldg. 2 weeks before the day of start.

1) Your grades are calculated according to the following basis.

Grade	Scores	Approval
A	Over 80	Units certified
B	65-79	Units certified
C	55-64	Units certified
D	Under 55	Units NOT certified

2) The new grades will be available on Dream Campus after the certain days of the examination.

3. Maximum years of attendance

It is not possible for a student to be in the master's course at the university exceeding four years.

4. Leave of absence

If the student cannot attend classes for two or more months successively due to illness or other special reasons, the student may submit "Request for leave of absence" to the Academic Affairs Division after getting the approval from the supervisor and department head. Upon approval from the President, the student may have a leave of absence (within two years in total).

The period that the student is absent will not be counted in the above "3. Maximum years of attendance".

To return to school after the end of the approved period, the student must submit the "Notification of return to school".

To return to school before the approved period due to the elimination of the reason, the student must submit the "Request to return to school" and obtain approval.

5. Withdrawal

If the student wants to withdraw from the university, the student must submit "Request for withdrawal" to the Academic Affairs Division after getting the approval from the supervisor and department head. Upon approval from the President, the student may have withdrawal from the university.

6. Elimination from the university

The student will be eliminated from the university for following reasons.

- 1) When the student exceed the period mentioned in above "3. Maximum years of attendance"
- 2) When the student cannot return to school after the period mentioned in above "4. Leave of absence."
- 3) When the student is died, or disappeared.
- 4) Those who are approved for the admission fee half exemption or postponement and who did not pay for the admission fee before the designated period.
- 5) Those who failed to pay for the tuition and did not pay for it even after the warning.

7. Information about canceled or makeup classes.

All students may need to double-check about your class schedule and other information onfollowing bulletin boards:

Location		information
Lecture hall at 1 st floor, A-bldg.	Central Bulletin Board (panel board)	Class schedule change (all term)
	Electronic Bulletin Board (LCD)	Canceled or makeup classes, rescheduled notices
	Glass-covered Bulletin Board	Others
TUT website	http://annai00.gakumu.tut.ac.jp/adlight/adlightwww/conduct_list_a.asp	Canceled or makeup classes
	http://annai00.gakumu.tut.ac.jp/adlight/adlightweb/conduct_list_b.asp	Class schedule or classroom change
TUT website for mobile phones	http://osirabe.net/tut/ *Mobile tagging by camera phones	Canceled or makeup classes

*** TUT's policy for conducting classes/exams in case A STORM WARNING is announced.**

In case a Storm Warning (*Bo-fu Keiho*) is announced in South East Aichi Prefecture, TUT will conduct classes or examinations as follows:

- 1) In order to prevent any accident, All classes will be CANCELED (exams will be RESCHEDULED) during the Storm Warning.
- 2) If the Storm Warning is CLEARED BEFORE AM7:00, all classes (and tests) are on SCHEDULE.
- 3) If the Storm Warning is CLEARED Between AM7:00 and AM11:00, all classes (and tests) STARTS on 4TH HOUR (*1st, 2nd and 3rd hr will be CANCELED)
- 4) If the Storm Warning is still ANNOUNCED AFTER AM11:00, ALL classes will be CANCELED (and tests will be RESCHEDULED).

***Information about RESCHEDULED CLASSES/EXAMS**

TUT will reschedule classes/exams canceled by natural disasters on occasional dates. The dates may also be used for makeup classes, students may check the schedules TWO WEEKS BEFORE THE DATES at lecture hall at A-Bldg.

However, rescheduled classes (tests) will COME FIRST on the occasional dates and scheduled makeup classes on the dates will be canceled. You must double check the information from TUT especially on unusual cases.

III Curriculum

1. Classes and credits.

(1) Classes

Your classes are divided into General subjects and Specialized subjects. Numbers of credits are set for each subject.

(For the details of classes, see the General subjects and Specialized subjects written in the following pages.
See the web syllabus for details of the classes.)

(2) Compulsory subjects and elective subjects

- 1) Compulsory subjects are the subjects that must be completed as the requirement of the major.
- 2) Elective subjects can be selected and taken from those subjects being offered for the designated numbers of credits.

(3) Calculating credits

Classes whose teaching type is lectures, seminars, experiments, practical or hands-on training, are offered individually or in combination among them. The class time for one credit is calculated under the following standards.

- 1) For lectures, one credit requires 15 hours of classes.
- 2) For exercise, one credit requires 30 hours of classes.
- 3) For experiments, practical or hands-on training, one credit requires 45 hours of classes.

(4) Class period

The class period is determined according to the academic year calendar, and consists of two terms; Spring term (from April 1 until September 30) and Fall term (from October 1 until March 31)

General courses

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week				Instructor	note	
			1st grade						2nd grade
			Fall 1	Fall 2	Spring 1	Spring 2			
			2011.10 -2012. 3		2012. 4 -2012. 9				2012.10 -2013. 9
Elective	Management Science	2			1	(1)	Y. Miyata, T. Fujiwara		
	Industrial Policies	2	1			(1)	H. Shibusawa		
	Environmental Planning	2	1				T. Hiramatsu		
	Culture and Communication I	2				(1)			
	Culture and Communication II	2	1				A. Yamamoto		
	Japanese Life Today	2			1	(1)	T. Hayashi		
	Intercultural Communication	2			1	(1)	Y. Muramatsu		

◆ Those subjects whose numbers marked with “()” will be held every year. Those subjects without “()” will be held every two years.

Mechanical Engineering

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week				Instructor	note	
			1st grade						2nd grade
			Fall 1	Fall 2	Spring 1	Spring 2			
			2011.10 -2012. 3		2012. 4 -2012. 9				2012.10 -2013. 9
Compulsory	Seminar on Mechanical Engineering I	4	4				Supervisor		
	Seminar on Mechanical Engineering II	2					2	Supervisor	
	Thesis Research on Mechanical Engineering	6	9				Supervisor		
Elective	Vibration and Impact Mechanics	1			1		S. Kawamura, H. Minamoto		
	Deformation Processing Technology	1				0.5	K. Mori		
	Applied Mechanics of Materials	1				0.5	T. Adachi		
	Micromachining Engineering	1		1			T. Shibata		
	Biomechanics of Human Locomotion	1	1				Y. Yasuda		
	Practical Surface Analysis	1				0.5	Y. Takeichi		
	Joining and Surfacing of Materials	1			1		M. Fukumoto		
	Science and Technology of Thin Films	1				0.5	M. Izaki		
	Deformation and Fracture of Materials	1				0.5	H. Toda		
	Phase Transformation in Materials	1				0.5	M. Umemoto		
	Engineering Safety	1	1				R. Batres		
	Time-frequency Analysis and Wavelet Transform	1		1			Z. Zhang		
	Modeling and Analysis of Dynamical Control Systems	1			1		K. Terashima		
	Robotics	1				0.5	N. Uchiyama		
	Flight Mechanics	1				0.5	S. Suzuki		
	Applied Thermal Engineering	1				0.5	K. Kitamura		
	Advanced Applied Fluid Engineering	1	1				M. Nakagawa, H. Yanada		
	Applied Fluid Dynamics	1				1	T. Suzuki, N. Sekishita		
	Applied Combustion Engineering	1	1				S. Noda		
	Advanced Aeroacoustics	1				0.5	A. Iida		
	Advanced Mechanical Systems Design I	2		1			(1)	Supervisor	
	Advanced Mechanical Systems Design II	2			1		(1)	Supervisor	
	Advanced Materials and Manufacturing Process I	2		1			(1)	Supervisor	
	Advanced Materials and Manufacturing Process II	2			1		(1)	Supervisor	
Advanced System, Control and Robotics I	2		1			(1)	Supervisor		
Advanced System, Control and Robotics II	2			1		(1)	Supervisor		
Advanced Energy and Environmental Engineering I	2		1			(1)	Supervisor		
Advanced Energy and Environmental Engineering II	2			1		(1)	Supervisor		

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Electrical and Electronic Information Engineering

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week			Instructor	note
			1st grade		2nd grade		
			Fall	Spring			
			2011.10 - 2012. 3	2012. 4 - 2012. 9	2012.10 - 2013. 9		
Compulsory	Seminar on Electrical and Electronic Information Engineering	3	3			Supervisor	
	Thesis Research on Electrical and Electronic Information Engineering	6	9			Supervisor	
	Advanced Mathematics for EEI	1.5	1		(1)	Supervisor	
Elective	Applied Physics	1.5	1		(1)	Supervisor	Choose one subject
	Applied Materials Chemistry	1.5	1		(1)	Supervisor	
	Applied Circuit Theory	1.5	1		(1)	Supervisor	
	Material Science for Electronics	2			1	Y. Nakamura, K. Hattori, T. Hattori, H. Muto	
	Physics for Electronics	2		1		M. Fukuda, M. Inoue,	
	Electrical Energy Systems	2			1	M. Nagao, H. Takikawa, Y. Sakurai	
	Electrical Technology and Materials	2	1			Y. Murakami, Y. Suda, R. Inada	
	Semiconductor Physics	2			1	A. Wakahara,	
	LSI Process	2	1			K. Sawada, T. Kawano, H. Okada	
	Information and Communication Technology	2			1	T. Ohira, H. Uehara	
	Advanced Electronic Information System	2		1		S. Ichikawa,	
Methodology of R & D	2	1		(1)	Supervisor		

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Computer Science and Engineering

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week			Instructor	note
			1st grade		2nd grade		
			Fall	Spring			
			2011.10 - 2012. 3	2012. 4 - 2012. 9	2012.10 - 2013. 9		
Compulsory	Seminar on Computer Science and Engineering I	4	4			Supervisor	
	Seminar on Computer Science and Engineering II	2			2	Supervisor	
	Thesis Research on Computer Science and Engineering	6	9			Supervisor	
Elective	Technical English Presentation	2	2		(2)	Supervisor	
	System Design Project	2		3	(3)	Supervisor	
	Speech and Language Processing	2		1	(1)	S. Nakagawa, T. Akiba	
	Networking, Advanced	2	1		(1)	K. Umemura, R. Ohmura	
	Advanced Robotics and Informatics	2	1		(1)	M. Okada, J. Miura	
	Web Data Engineering	2		1	(1)	S. Kuriyama, M. Aono	
	Applied Informatics	2			1	H. Kato	
	Computers and Education	2		1		K. Kawai	
	Multimodal Information Processing	2			1	K. Katsurada	
	Image Processing, Advanced	2		1	(1)	Y. Kanazawa, Y. Sugaya	
	High Performance Computing	2		1		H. Goto	
	Software Engineering, Advanced	2			1		
	Communication Systems, Advanced	2			1	T. Ohira, H. Uehara	
	Algorithm Engineering, Advanced	2	1		(1)	S. Masuyama, T. Fujito	
	Computer Systems, Advanced	2	1		(1)	R. Kobayashi	
	Quantum Biology and Materials Science	2		1	(1)	H. Sekino, N. Kurita	
	Complex Systems and Intelligent Informatics	2	1		(1)	Y. Ishida, K. Murakoshi	
	Advanced Chemoinformatics	2		1		Y. Takahashi	
	Bio-physical Information Systems	2	1		(1)	J. Horikawa, N. Fukumura	
Advanced Topics in Brain and Cognitive Sciences	2	1			S. Nakauchi, M. Kitazaki		

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Environmental and Life Sciences

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week				Instructor	note	
			1st grade						2nd grade
			Fall 1	Fall 2	Spring 1	Spring 2			
			2011.10 -2012. 3		2012. 4 -2012. 9				2012.10 -2013. 9
Compulsory	Seminar on Environmental and Life Science I	3	3				Supervisor		
	Seminar on Environmental and Life Science II	3					3	Supervisor	
	Thesis Research on Environmental and Life Science	6	9				Supervisor		
Elective	Advanced Separation Chemistry I	1			1		Y. Saito		
	Advanced Separation Chemistry II	1				1	Y. Hirata		
	Special Topics in Inorganic Chemistry	1					0.5	N. Kakuta	
	X-ray Spectroscopy for Catalytic Engineering	1					0.5	T. Mizushima	
	Applied Physical Chemistry I	1	1					A. Matsumoto	
	Applied Physical Chemistry II	1					0.5	T. Ohgushi	
	Advanced Polymer Chemistry	1					0.5	S. Itsuno	
	Advanced Polymer Engineering	1					0.5	E. Yoshida	
	Advanced Composite Science	1		1				T. Takeichi	
	Special Topics in Applied Organic Chemistry	1					0.5	S. Iwasa	
	Developmental Neuroscience	1				1		S. Yoshida	
	Advanced Molecular Life Science	1					0.5	Y. Kikuchi, T. Tanaka	
	Advanced Applied Biochemistry and Biotechnology	1	1					A. Hiraishi, T. Eki	
	Advanced Electrical and Electronic Technology for Ecological Engineering	1			1			S. Tanaka, Y. Hatsukade A. Mizuno, K. Takashima	
	Advanced Eco-Materials Engineering	1				1		H. Tsuji	
	Advanced Reaction Engineering	1					0.5	T. Oguchi	
	Advanced Sustainable Coordinator	1			1			N. Goto	
	Advanced Supercritical Fluid Engineering	1				1		H. Daimon	
	※ Advanced Life Science and Biotechnology I	2		1			(1)	Supervisor	
	※ Advanced Life Science and Biotechnology II	2			1		(1)	Supervisor	
※ Advanced Environmental Technology I	2		1			(1)	Supervisor		
※ Advanced Environmental Technology II	2			1		(1)	Supervisor		
※ Advanced Environmental and Ecological Systems I	2		1			(1)	Supervisor		
※ Advanced Environmental and Ecological Systems II	2			1		(1)	Supervisor		

※ Please ask your academic adviser about class schedule of this subject

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Architecture and Civil Engineering

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week			Instructor	note
			1st grade		2nd grade		
			Fall	Spring			
			2011.10 - 2012. 3	2012. 4 - 2012. 9	2012.10 - 2013. 9		
Compulsory	Seminar on Architecture and Civil Engineering I	3	3			Supervisor	
	Seminar on Architecture and Civil Engineering II	3			3	Supervisor	
	Thesis Research on Architecture and Civil Engineering	6	9			Supervisor	
Elective	Elasticity and Stability	2	1			S. Yamada	
	Finite Element Method for Continua and Bar Structures	2			1	S. Nakazawa	
	Seismic Evaluation of Existing Buildings	2	1			Y. Sanada	
	Geologic Hazard and Mitigation Planning	2		1		M. Kawamura	
	Geotechnical Analysis	2			1	K. Miura	
	Building Science: Indoor Air Quality and Ventilation	2	1			H. Matsumoto	
	Building and Urban Thermal Environment	2			1	Y. Masuda	
	Wave Forces on Offshore and Coastal Structures	2			1	S. Aoki	
	Coastal Hydraulics	2		1		S. Kato	
	Water Environment Engineering	2	1			T. Inoue	
	Computer Applications in Urban Planning	2			1	A. Ohgai	
	Human Settlement: Its History and Theory	2	1			H. Izumida	
	Advanced Study on Housing System and Housing Policy	2			1	S. Matsushima	
	Advanced District Planning	2		1		J. Asano	
	Advanced Architectural Planning	2			1	Y. Kakino	
	Advanced Transportation and Traffic Engineering	2		1		Y. Hirobata	
	Modeling Regional Environment	2			1	Y. Miyata	
	Management of Technology	2			1	T. Fujiwara	
	Advanced Computational Economics	2		1		H. Shibusawa	
	※ Advanced Structural System Planning and Design I	2	1		(1)	Supervisor	
	※ Advanced Structural System Planning and Design II	2		1	(1)	Supervisor	
	※ Advanced Environmental System Planning and Design I	2	1		(1)	Supervisor	
	※ Advanced Environmental System Planning and Design II	2		1	(1)	Supervisor	
※ Advanced Regional System Planning and Design I	2	1		(1)	Supervisor		
※ Advanced Regional System Planning and Design II	2		1	(1)	Supervisor		

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Twinning Program Course Requirement Guide Book

(October 2011)

Master's Program Given in English

TOYOHASHI UNIVERSITY OF TECHNOLOGY

I Requirements for graduation

1. Requirements for graduation

To complete the master's course, a student must participate in the Master's course for one or more years, and must acquire the minimum credits required as follows. Also, the student must carry out a research under a proper guidance by faculty members and must submit a master's thesis, and pass the review and final examination.

Note that students showing excellent achievements may finish in a shorter study period.

Classification	Required credits for graduation	Remarks
General Courses	6	
Specialized Courses		
Mechanical Engineering major	24	
Production Systems Engineering major	24	
Electrical and Electronic Engineering major	24	
Information and Computer Sciences major	24	
Materials Science major	24	
Architecture and Civil Engineering major	24	
Knowledge-based Information Engineering major	24	
Ecological Engineering major	24	
Grand total	30	

For the students in the Twinning Course, up to 10 credits that the students had acquired at his/her university before coming to TUT can be transferred to TUT Master's Program only if TUT admits after being examined. However the 10 credits admitted by TUT shall be determined by TUT's criterion.

2. Application for degree

Only a student who has acquired the credits required for finishing, or who is expected to acquire the credits can apply for a master's degree. Submission procedures of thesis for master's degree shall be posted on a bulletin board before the submission period.

II Class registration, examination, attendance period

1. Class registration method

Classes shall be registered according to the program schedule of the respective major.

(1) Making a study plan

Read this manual thoroughly, and follow the instructions and advice given during the orientation at the beginning of the academic year or that given by the supervisor, and set your class schedule in the course timetable.

Provide enough time-allowance to your schedule.

Note that some elective courses may be held in once in two year only.

The course timetable will be provided at the beginning of each academic year.
Schedule for special intensive courses will be posted up on a bulletin board as soon as the details are fixed.

(2) Class registration

The student must register the classes by Dream Campus (through TUT website) during the designated date (<https://www.ead.tut.ac.jp/portal/>) or by the sheet of "Course Registration List" .

Those courses not registered will not be accredited in any case.

NOTE:

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- 2 If the student does not attend the class nor take the examinations, credits will not be given even if the registration is made.
- 3 A student can not re-register the courses once credits are given.
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To confirm your class registration and to amend it, please access to Dream Campus. Please refer to the manuals of Dream Campus for how to use .

(4) Repeating courses

Basically, a student who has failed in a class with the regular examination, or some other reasons, must take again the class in the next academic year.

The student must make registration again even if the class is a compulsory course for graduation and for the repeating.

(5) Repeating courses by examination, etc.

Only when the course instructor approves of crediting by passing the examination only without re-attend the classes, the student can submit and register the class with the "Request for repetition through examination".

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Examination includes regular examination and makeup examination.

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As a principle, regular examination shall be held during the set period at the end of each term. Note that examination may be held at any time when found necessary by the course instructor.

The regular examination period and examination timetable, etc., will be posted up on a bulletin board.

(2) Make-up examination

a) Make-up examination shall be held only when the student could not take the regular examination for the concerned course due to the following reasons. The student must gain the approval of the course instructor with the "Request for makeup examination" before taking the examination.

- 1) When the student is sick (doctor's medical certificate must be submitted)
- 2) When considered appropriate due to accidents or disaster (certificate of proof must be submitted), and other special reasons (a letter explaining the reason must be submitted).

b) The "Request for makeup examination" must be submitted to the Academic Affairs Division within one week from the final date of regular examination.

c) If the student fails to take the makeup examination, further examination will not be held.

(3) Approval of credits and evaluation

The course instructor shall approve the credits for the course through the means of examinations, etc.

Examinations are basically conducted at the end of each term.

All students are to check the exam schedules on the academic calendar on Dream Campus (through TUT website), bulletin board at A-bldg. or printed calendar at the office of Academic Affairs Section. In addition, your instructor may schedule extra tests. All tests scheduling will be placed on the bulletin boards at lecture hall of A-bldg. 2 weeks before the day of start.

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2) The new grades will be available on Dream Campus after the certain days of the examination.

3. Maximum years of attendance

It is not possible for a student to be in the master's course at the university exceeding two years.

4. Leave of absence

If the student cannot attend classes for two or more months successively due to illness or other special reasons, the student may submit "Request for leave of absence" to the Academic Affairs Division after getting the approval from the supervisor and department head. Upon approval from the President, the student may have a leave of absence (within two years in total).

The period that the student is absent will not be counted in the above "3. Maximum years of attendance".

To return to school after the end of the approved period, the student must submit the "Notification of return to school".

To return to school before the approved period due to the elimination of the reason, the student must submit the "Request to return to school" and obtain approval.

5. Withdrawal

If the student wants to withdraw from the university, the student must submit "Request for withdrawal" to the Academic Affairs Division after getting the approval from the supervisor and department head. Upon approval from the President, the student may have withdrawal from the university.

6. Elimination from the university

The student will be eliminated from the university for following reasons.

- 1) When the student exceed the period mentioned in above "3. Maximum years of attendance"
- 2) When the student cannot return to school after the period mentioned in above "4. Leave of absence."
- 3) When the student is died, or disappeared.
- 4) Those who are approved for the admission fee half exemption or postponement and who did not pay for the admission fee before the designated period.
- 5) Those who failed to pay for the tuition and did not pay for it even after the warning.

7. Information about canceled or makeup classes.

All students may need to double-check about your class schedule and other information on following bulletin boards:

Location		information
Lecture hall at 1 st floor, A-bldg.	Central Bulletin Board (panel board)	Class schedule change (all term)
	Electronic Bulletin Board (LCD)	Canceled or makeup classes, rescheduled notices
	Glass-covered Bulletin Board	Others
TUT website	http://annai00.gakumu.tut.ac.jp/adlight/adlightwww/conduct_list_a.asp	Canceled or makeup classes
	http://annai00.gakumu.tut.ac.jp/adlight/adlightweb/conduct_list_b.asp	Class schedule or classroom change
TUT website for mobile phones	http://osirabe.net/tut/ *Mobile tagging by camera phones	Canceled or makeup classes

*** TUT's policy for conducting classes/exams in case A STORM WARNING is announced.**

In case a Storm Warning (*Bo-fu Keiho*) is announced in South East Aichi Prefecture, TUT will conduct classes or examinations as follows:

- 1) In order to prevent any accident, All classes will be CANCELED (exams will be RESCHEDULED) during the Storm Warning.
- 2) If the Storm Warning is CLEARED BEFORE AM7:00, all classes (and tests) are on SCHEDULE.
- 3) If the Storm Warning is CLEARED Between AM7:00 and AM11:00, all classes (and tests) STARTS on 4TH HOUR (*1st, 2nd and 3rd hr will be CANCELED)
- 4) If the Storm Warning is still ANNOUNCED AFTER AM11:00, ALL classes will be CANCELED (and tests will be RESCHEDULED).

***Information about RESCHEDULED CLASSES/EXAMS**

TUT will reschedule classes/exams canceled by natural disasters on occasional dates. The dates may also be used for makeup classes, students may check the schedules TWO WEEKS BEFORE THE DATES at lecture hall at A-Bldg.

However, rescheduled classes (tests) will COME FIRST on the occasional dates and scheduled makeup classes on the dates will be canceled. You must double check the information from TUT especially on unusual cases.

III Curriculum

1. Classes and credits.

(1) Classes

Your classes are divided into General subjects and Specialized subjects. Numbers of credits are set for each subject.

(For the details of classes, see the General subjects and Specialized subjects written in the following pages.
See the web syllabus for details of the classes.)

(2) Compulsory subjects and elective subjects

- 1) Compulsory subjects are the subjects that must be completed as the requirement of the major.
- 2) Elective subjects can be selected and taken from those subjects being offered for the designated numbers of credits.

(3) Calculating credits

Classes whose teaching type is lectures, seminars, experiments, practical or hands-on training, are offered individually or in combination among them. The class time for one credit is calculated under the following standards.

- 1) For lectures, one credit requires 15 hours of classes.
- 2) For exercise, one credit requires 30 hours of classes.
- 3) For experiments, practical or hands-on training, one credit requires 45 hours of classes.

(4) Class period

The class period is determined according to the academic year calendar, and consists of two terms; Spring term (from April 1 until September 30) and Fall term (from October 1 until March 31)

General courses (Twinning Program)

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week		Instructor	note
			Fall	Spring		
			2011.10 - 2012. 3	2012. 4 - 2012. 9		
Elective	Management Science	2		1	Y. Miyata, T. Fujiwara	
	Industrial Policies	2	1		H. Shibusawa	
	Environmental Planning	2	1		T. Hiramatsu	
	Culture and Communication I	2				
	Culture and Communication II	2	1		A. Yamamoto	
	Japanese Life Today	2		1	T. Hayashi	
	Intercultural Communication	2		1	Y. Muramatsu	

Mechanical Engineering(Twinning Program)

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week				Instructor	note
			Fall 1	Fall 2	Spring 1	Spring 2		
			2011.10 -2012. 3		2012. 4 -2012. 9			
Compulsory	Seminar on Mechanical Engineering	6	6				Supervisor	
	Thesis Research on Mechanical Engineering	6	9				Supervisor	
Elective	Vibration and Impact Mechanics	1			1		S. Kawamura, H. Minamoto	
	Deformation Processing Technology	1					K. Mori	
	Applied Mechanics of Materials	1					T. Adachi	
	Micromachining Engineering	1		1			T. Shibata	
	Biomechanics of Human Locomotion	1	1				Y. Yasuda	
	Practical Surface Analysis	1					Y. Takeichi	
	Joining and Surfacing of Materials	1			1		M. Fukumoto	
	Science and Technology of Thin Films	1					M. Izaki	
	Deformation and Fracture of Materials	1					H. Toda	
	Phase Transformation in Materials	1					M. Umemoto	
	Engineering Safety	1	1				R. Batres	
	Time-frequency Analysis and Wavelet Transform	1		1			Z. Zhang	
	Modeling and Analysis of Dynamical Control Systems	1			1		K. Terashima	
	Robotics	1					N. Uchiyama	
	Flight Mechanics	1					S. Suzuki	
	Applied Thermal Engineering	1					K. Kitamura	
	Advanced Applied Fluid Engineering	1	1				M. Nakagawa, H. Yanada	
	Applied Fluid Dynamics	1				1	T. Suzuki, N. Sekishita	
	Applied Combustion Engineering	1	1				S. Noda	
	Advanced Aeroacoustics	1					A. Iida	
	Advanced Mechanical Systems Design I	2		1			Supervisor	
	Advanced Mechanical Systems Design II	2			1		Supervisor	
	Advanced Materials and Manufacturing Process I	2		1			Supervisor	
	Advanced Materials and Manufacturing Process II	2			1		Supervisor	
Advanced System, Control and Robotics I	2		1			Supervisor		
Advanced System, Control and Robotics II	2			1		Supervisor		
Advanced Energy and Environmental Engineering I	2		1			Supervisor		
Advanced Energy and Environmental Engineering II	2			1		Supervisor		

Electrical and Electronic Information Engineering (Twinning Program)

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week		Instructor	note
			Fall	Spring		
			2011.10 - 2012. 3	2012. 4 - 2012. 9		
Compulsory	Seminar on Electrical and Electronic Information Engineering	3	3		Supervisor	
	Thesis Research on Electrical and Electronic Information Engineering	6	9		Supervisor	
Elective	Material Science for Electronics	2	1		Y. Nakamura, K. Hattori, T. Hattori, H. Muto	
	Physics for Electronics	2		1	M. Fukuda, M. Inoue, A. Matsuda	
	Electrical Energy Systems	2	1		M. Nagao, H. Takikawa, Y. Sakurai	
	Electrical Technology and Materials	2	1		Y. Murakami, Y. Suda, R. Inada	
	Semiconductor Physics	2	1		A. Wakahara, K. Pak	
	LSI Process	2	1		K. Sawada, T. Kawano, H. Okada	
	Information and Communication Technology	2	1		T. Ohira, H. Uehara	
	Advanced Electronic Information System	2		1	S. Ichikawa,	
	Methodology of R & D	2	1		Supervisor	

Computer Science and Engineering (Twinning Program)

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week		Instructor	note
			Fall	Spring		
			2011.10 - 2012. 3	2012. 4 - 2012. 9		
Compulsory	Seminar on Computer Science and Engineering	6	6		Supervisor	
	Thesis Research on Computer Science and Engineering	6	9		Supervisor	
Elective	Technical English Presentation	2	2		Supervisor	
	System Design Project	2	3		Supervisor	
	Speech and Language Processing	2		1	S. Nakagawa, T. Akiba	
	Networking, Advanced	2	1		K. Umemura, R. Ohmura	
	Advanced Robotics and Informatics	2	1		M. Okada, J. Miura	
	Web Data Engineering	2		1	S. Kuriyama, M. Aono	
	Applied Informatics	2			H. Kato	
	Computers and Education	2		1	K. Kawai	
	Multimodal Information Processing	2			T. Nitta, K. Katsurada	
	Image Processing, Advanced	2		1	Y. Kanazawa, Y. Sugaya	
	High Performance Computing	2		1	H. Goto	
	Software Engineering, Advanced	2				
	Communication Systems, Advanced	2			T. Ohira, H. Uehara	
	Algorithm Engineering, Advanced	2	1		S. Masuyama, T. Fujito	
	Computer Systems, Advanced	2	1		R. Kobayashi	
	Quantum Biology and Materials Science	2		1	H. Sekino, N. Kurita	
	Complex Systems and Intelligent Informatics	2	1		Y. Ishida, K. Murakoshi	
	Advanced Chemoinformatics	2		1	Y. Takahashi	
	Bio-physical Information Systems	2	1		J. Horikawa, N. Fukumura	
Advanced Topics in Brain and Cognitive Sciences	2	1		S. Nakauchi, M. Kitazaki		

Environmental and Life Sciences (Twinning Program)

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week				Instructor	note
			Fall 1	Fall 2	Spring 1	Spring 2		
			2011.10 -2012. 3		2012. 4 -2012. 9			
Compulsory	Seminar on Environmental and Life Science	6	6				Supervisor	
	Thesis Research on Environmental and Life Science	6	9				Supervisor	
Elective	Advanced Separation Chemistry I	1			1		Y. Saito	
	Advanced Separation Chemistry II	1				1	Y. Hirata	
	Special Topics in Inorganic Chemistry	1					N. Kakuta	
	X-ray Spectroscopy for Catalytic Engineering	1					T. Mizushima	
	Applied Physical Chemistry I	1	1				A. Matsumoto	
	Applied Physical Chemistry II	1					T. Ohgushi	
	Advanced Polymer Chemistry	1					S. Itsuno	
	Advanced Polymer Engineering	1					E. Yoshida	
	Advanced Composite Science	1		1			T. Takeichi	
	Special Topics in Applied Organic Chemistry	1					S. Iwasa	
	Developmental Neuroscience	1				1	S. Yoshida	
	Advanced Molecular Life Science	1					Y. Kikuchi, T. Tanaka	
	Advanced Applied Biochemistry and Biotechnology	1	1				A. Hiraishi, T. Eki	
	Advanced Electrical and Electronic Technology for Ecological Engineering	1			1		S. Tanaka, Y. Hatsukade A. Mizuno, K. Takashima	
	Advanced Eco-Materials Engineering	1				1	H. Tsuji	
	Advanced Reaction Engineering	1					T. Oguchi	
	Advanced Sustainable Coordinator	1			1		N. Goto	
	Advanced Supercritical Fluid Engineering	1				1	H. Daimon	
	※ Advanced Life Science and Biotechnology I	2		1			Supervisor	
	※ Advanced Life Science and Biotechnology II	2			1		Supervisor	
※ Advanced Environmental Technology I	2		1			Supervisor		
※ Advanced Environmental Technology II	2			1		Supervisor		
※ Advanced Environmental and Ecological Systems I	2		1			Supervisor		
※ Advanced Environmental and Ecological Systems II	2			1		Supervisor		

※ Please ask your academic adviser about class schedule of this subject

Architrcture and Civil Engineering(Twinning Program)

2011.10

Compulsory / Elective	Subject Name	Credits	Classes/Week		Instructor	note
			Fall	Spring		
			2011.10 - 2012. 3	2012. 4 - 2012. 9		
Compulsory	Seminar on Architecture and Civil Engineering	6	6		Supervisor	
	Thesis Research on Architecture and Civil Engineering	6	6		Supervisor	
Elective	Elasticity and Stability	2	1		S. Yamada	
	Finite Element Method for Continua and Bar Structures	2			S. Nakazawa	
	Seismic Evaluation of Existing Buildings	2	1		Y. Sanada	
	Geologic Hazard and Mitigation Planning	2		1	M. Kawamura	
	Geotechnical Analysis	2			K. Miura	
	Building Science: Indoor Air Quality and Ventilation	2	1		H. Matsumoto	
	Building and Urban Thermal Environment	2			Y. Masuda	
	Wave Forces on Offshore and Coastal Structures	2			S. Aoki	
	Coastal Hydraulics	2		1	S. Kato	
	Water Environment Engineering	2	1		T. Inoue	
	Computer Applications in Urban Planning	2			A. Ohgai	
	Human Settlement: Its History and Theory	2	1		H. Izumida	
	Advanced Study on Housing System and Housing Policy	2			S. Matsushima	
	Advanced District Planning	2		1	J. Asano	
	Advanced Architectural Planning	2			Y. Kakino	
	Advanced Transportation and Traffic Engineering	2		1	Y. Hirobata	
	Modeling Regional Environment	2			Y. Miyata	
	Management of Technology	2			T. Fujiwara	
	Advanced Computational Economics	2		1	H. Shibusawa	
	※ Advanced Structural System Planning and Design I	2	1		Supervisor	
	※ Advanced Structural System Planning and Design II	2		1	Supervisor	
	※ Advanced Environmental System Planning and Design I	2	1		Supervisor	
※ Advanced Environmental System Planning and Design II	2		1	Supervisor		
※ Advanced Regional System Planning and Design I	2	1		Supervisor		
※ Advanced Regional System Planning and Design II	2		1	Supervisor		

※ Please ask your academic adviser about class schedule of this subject

Course Requirement Guide Book

(October December 2011)

Doctoral Program Given in English

TOYOHASHI UNIVERSITY OF TECHNOLOGY

I Requirements for graduation

1. Requirements for graduation

To complete the doctoral course, a student must participate in the graduate courses for three or more years, and must acquire the minimum credits required as follows. A student must carry out a research under a proper guidance by faculty members and must submit a doctoral thesis, and pass the review and final exams.

Note that students showing excellent achievements may finish in a shorter study period.

Class	No. of credits required for graduation	Remarks	
Specialized courses			
Mechanical and Structural System Engineering major	9	4 credits	When considered appropriate by the supervisor, the credits shown on the left can be substituted with "Master's Courses" (except Advanced topics subjects and General Courses) and "Doctoral Courses" in other majors for those in Specialized Courses
Functional Materials Engineering major	9	4 credits	
Electronic and Information Engineering major	9	4 credits	
Environment and Life Engineering major	9	4 credits	

2. Application for degree

Only a student who has acquired the credits required for finishing, or who is expected to acquire the credits can apply for a doctoral degree. Procedure to submit thesis for doctoral degree, etc., shall be posted at a bulletin board.

II Class registration, examination, attendance period

1. Class registration method

Classes shall be registered according to the education schedule of the respective major.

(1) Making a study plan

Read this manual thoroughly, and follow the instructions and advice given during orientation at the beginning of the academic year or that given by the supervisor, and set your class schedule in the course timetable. Provide enough time-allowance to your schedule.

Note that some elective courses may be held in once in three year only.

The course timetable will be provided at the beginning of each academic year. Schedule for special intensive courses will be posted up on a bulletin board as soon as the details are fixed.

(2) Class registration

The student must register the classes by Dream Campus (through TUT website) during the designated date (<https://www.ead.tut.ac.jp/portal/>) or by the sheet of "Application for Subjects". Those courses not registered will not be accredited in any case.

- 1 To complete a class of "Master's Courses"(except Advanced topics subjects and General Courses) or "Doctoral Courses" in other majors, the student must obtain approval from the supervisor and the course instructor with "Application for Registration of Subjects in Other Department ", before registering the class.
- 2 If the student does not attend the class nor take the examinations, credits will not be given even if the registration is made.
- 3 A student cannot re-register the classes for which credits are given.
- 4 Classes held at the same time cannot be registered. Note that this does not apply for classes being taken again by examinations, or intensive courses.

(3) Confirming and amending the registration

To confirm your class registration and to amend it, please access to Dream Campus. Please refer to the manuals of Dream Campus for how to use .

(4) Repeating classes

Basically, a student who has failed in a class with the regular examination, or some other reasons, must take the same class again next academic year.

The student must make registration again even if the class is a compulsory for graduation and for the repeating.

2. Examination

Examination includes regular examination and makeup examination.

(1) Regular examination

As a principle, regular examination shall be held during the set period at the end of each term. Note that examination may be held at any time when found necessary by the course instructor.

The regular examination period and examination timetable, etc., will be posted up on a bulletin board.

(2) Make-up examination

a) Make-up examination shall be held only when the student could not take the regular examination for the concerned course due to the following reasons. The student must gain the approval of the course instructor with the "Request for makeup examination" before taking the examination.

- 1) When the student is sick (doctor's medical certificate must be submitted)
- 2) When considered appropriate due to accidents or disaster (certificate of proof must be submitted), and other special reasons (a letter explaining the reason must be submitted).

b) The "Request for makeup examination" must be submitted to the Academic Affairs Division within one week from the final date of regular examination.

c) If the student fails to take the makeup examination, further examination will not be held.

(3) Approval of credits and evaluation

The course instructor shall approve the credits for the course through the means of exams, etc.

Examinations are basically conducted at the end of each term.

All students are to check the exam schedules on the academic calendar on Dream Campus (through TUT website), bulletin board at A-bldg. or printed calendar at the office of Academic Affairs Section. In addition, your instructor may schedule extra tests. All tests scheduling will be placed on the bulletin boards at lecture hall of A-bldg. 2 weeks before the day of start.

1) Your grades are calculated according to the following basis.

Grading	Scores	Approval
A	Over 80	Units certified
B	65-79	Units certified
C	55-64	Units certified
D	Under 55	Units NOT certified

2) The new grades will be available on Dream Campus after the certain days of the examination.

3. Maximum years of attendance

It is not possible for a student to be in the doctoral course at the university exceeding six years.

4. Leave of absence

If the student cannot attend classes for two or more months successively due to illness or other special reasons, the student may submit "Request for leave of absence" to the Academic Affairs Division after getting the approval from the supervisor and department head. Upon approval from the President, the student may have a leave of absence (within two years in total).

The period that the student is absent will not be counted in the above "3. Maximum years of attendance".

To return to school after the end of the approved period, the student must submit the "Notification of return to school".

To return to school before the approved period due to the elimination of the reason, the student must submit the "Request to return to school" and obtain approval.

5. Withdrawal

If the student wants to withdraw from the university, the student must submit "Request for withdrawal" to the Academic Affairs Division after getting the approval from the supervisor and department head. Upon approval from the President, the student may have withdrawal from the university.


6. Elimination from the university

The student will be eliminated from the university for following reasons.

- 1) When the student exceed the period mentioned in above "3. Maximum years of attendance"
- 2) When the student cannot return to school after the period mentioned in above "4. Leave of absence."
- 3) When the student is died, or disappeared.
- 4) Those who are approved for the admission fee half exemption or postponement and who did not pay for the admission fee before the designated period.
- 5) Those who failed to pay for the tuition and did not pay for it even after the warning.

7. Information about canceled or makeup classes.

All students may need to double-check about your classes at following bulletin boards:

Location		information
Lecture hall at 1 st floor. A-bldg.	Central Bulletin Board (panel board)	Class schedule change (all school term)
	Electronic Bulletin Board (LCD)	Canceled or makeup classes, rescheduled notices
	Glass-covered Bulletin Board	Others
TUT website	http://annai00.gakumu.tut.ac.jp/adlight/adlightwww/conduct_list_a.asp	Canceled or makeup classes
	http://annai00.gakumu.tut.ac.jp/adlight/adlightweb/conduct_list_b.asp	Class schedule or classroom change
TUT website for mobile phones	http://osirabe.net/tut/ *Mobile tagging by camera  phones	Canceled or makeup classes

***TUT's policy for conducting classes/tests in case A STORM WARNING is announced.**

In case a storm warning is announced in the South East Aichi Pref., TUT will conduct classes or examinations as follows:

- 1) In order to prevent any accident, All classes will be CANCELED (tests will be RESCHEDULED) during the storm warning.
- 2) The storm warning is CLEARED BEFORE AM7:00, all classes(tests) are on SCHEDULE.
- 3) The storm warning is CLEARED FROM AM7:00 TO AM11:00, all classes(tests) STARTS from 4TH HOUR(*1,2 and 3 hr. will be CANCELED)
- 4) The storm warning is still ANNOUNCED AFTER AM11:00, ALL classes will be CANCELED (tests will be RESCHEDULED).

***Information about RESCHEDULED CLASSES/TESTS**

TUT will reschedule classes/tests canceled by natural disasters on occasional dates. The dates may also be used for makeup classes, students may check the schedules TWO WEEKS BEFORE THE DATES at lecture hall at A-Bldg. However, rescheduled classes (tests) will COME FIRST on the occasional dates and scheduled makeup classes on the dates will be canceled. Double check information from TUT.

III Curriculum

1. Classes and credits.

(1) Classes

Classes are only specialized courses. Credits are set for each class.

(For classes to be offered, see specialized courses written in the following pages. See the web syllabus for details of the classes.)

(2) Compulsory subjects and elective subjects

- 1) Compulsory subjects are the subjects that must be completed as the requirement of the major.
- 2) Elective subjects can be selected and taken from those subjects being offered for the designated numbers of credits.

(3) Calculating credits

Classes whose teaching type is lectures, exercise, experiments, practical or hands-on training, are offered individually or in combination among them. The class time for one credit is calculated under the following standards.

- 1) For lectures, one credit requires 15 hours of classes.
- 2) For exercise, one credit requires 30 hours of classes.
- 3) For experiments, practical or hands-on training, one credit requires 45 hours of classes.

(4) Course period

The class period is determined according to the academic year calendar, and consists of two terms; Spring term (from April 1 until September 30) and Fall term (from October 1 until March 31)

Compulsory / Elective	Field	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade	Note
					Fall	Spring			
					2011.10 — 2012. 3	2012. 4 — 2012. 9			
Compulsory		Seminar on Mechanical and Structural System Engineering	3	Supervisor	3				
Elective	Mechanical Engineering	Advanced Machine Dynamics	2	S. Kawamura H. Minamoto	1				
Elective		Advanced Tribology	2	Y. Takeichi		1			
Elective		Advanced Transport Phenomena	2	K. Kitamura			1		
Elective		Advanced Combustion Engineering	2	S. Noda	1				
Elective		Advanced Thermodynamics and Fluid Dynamics of Two-phase Flow	2	M. Nakagawa			1		
Elective		Advanced Thermal Engineering	2	T. Suzuki		1			
Elective		Advanced Aeroacoustics	2	A Iida	1				
Elective		Advanced Wind Engineering	2	N. Sekishita		1			
Elective		Advanced Fluid Power Systems	2	H. Yanada	1				
Elective		Advanced Instrument and Control Engineering	2	S. Suzuki N. Uchiyama		1			
Elective		Advanced Mechanics of Solids	2	T. Adachi			1		
Elective		Manufacturing Engineering	Deformation Processes	2	K. Mori Y. Abe			1	
Elective	Micro/Nanomachining Engineering		2	T. Shibata	1				
Elective	Advanced Joining Processes		2	M. Fukumoto T. Yasui		1			
Elective	Structural Systems in Architecture and Civil Engineering	Mechanics and Design of Spatial Structure Systems	2	S. Yamada S. Nakazawa	1				
Elective		Complex Systems Planning	2	M. Kawamura K. Miura			1		
Elective		Structural Design and Cost Performance	2	Y. Sanada		1			

Compulsory / Elective	Field	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade	Note
					Fall	Spring			
					2011.10 — 2012. 3	2012. 4 — 2012. 9	2012.10 — 2013. 9	2013.10 — 2014.9	
Compulsory		Seminar on Functional Materials Engineering	3	Supervisor	3				
Elective	Materials Design	Advanced Production Engineering of Materials	2	M. Izaki S. Yokoyama			1		
Elective		Advanced Synthesis of Molecular Materials	1	S.Iwasa			0.5		
Elective		Computational Materials Science	2	H. Sekino H. Goto		1			
Elective		Molecular and Quantum Biology	2	N. Kurita			1		
Elective	Materials Characterization	Advanced Structural Materials Analysis	2	H. Toda M. Kobayashi			1		
Elective		Advanced Separation Science	1	Y. Saito		1			
Elective		Advanced Analytical Separation Chemistry	1	Y. Hirata			1		
Elective		Advanced Chemical Sensor	1	T. Hattori			1		
Elective		Advanced Inorganic Materials Science and Engineering 1	1	A Matsuda			1		
Elective		Advanced Inorganic Materials Science and Engineering 2	1	H. Muto			1		
Elective		Advanced Kinetic Theory of Gases	1	T. Ohgushi				0.5	
Elective		Advanced Surface Analysis of Materials	1	A. Matsumoto	1				
Elective	Materials Application	Advanced Materials Property Engineering	2	M. Umemoto Y. Todaka			1		
Elective		Advanced Polymeric Materials Chemistry	1	T. Takeichi		1			
Elective		Advanced Functional Polymer Chemistry	1	S. Itsuno				0.5	
Elective		Advanced Polymer Nanomaterials	1	E. Yoshida				0.5	
Elective		Advanced Physiological Property Engineering	1	S. Yoshida			1		
Elective		Advanced Functional Inorganic Chemistry 1	1	N. Kakuta				0.5	
Elective		Advanced Functional Inorganic Chemistry 2	1	T. Mizushima				0.5	
Elective		Advanced Molecular Information Engineering	2	Y. Takahashi H. Kato			1		

Electronic and Information Engineering

2011.10

Compulsory / Elective	Field	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade	Note
					Fall	Spring			
					2011.10 — 2012. 3	2012. 4 — 2012. 9	2012.10 — 2013. 9	2013.10 — 2014.9	
Compulsory		Seminar on Electronic & Information Engineering	3	Supervisor	3				
Compulsory		Seminar on Cultural System	3	Supervisor	3				
Elective	Electrical and Electronic Engineering	Electric Energy Engineering	2	M. Nagao, Y. Sakurai H. Takikawa				1	
Elective		Applied Engineering of Electric Energy	2	Y. Suda, Y. Murakami R. Inada	1				
Elective		Physics of Electronic Materials	2	M. Inoue M. Fukuda	1				
Elective		Electronic Material Engineering	2	Y. Nakamura K. Hattori			1		
Elective		Advanced Semiconductor Device	2	M. Ishida, A. Wakahara		1			
Elective		Advanced LSI Technology	2	K. Sawada, H. Okada T. Kawano	1				
Elective	Systems and Information Engineering	Computer System Engineering	2	S. Ichikawa, R. Kobayashi	1				
Elective		Computers and Education, Advanced	2	K. Kawai		1			
Elective		Theoretical Computer Science, Advanced	2	S. Masuyama T. Fujito	1				
Elective		Speech and Language Processing	2	S. Nakagawa T. Akiba		1			
Elective		3D Vision Theory for Measurement	1	T. Miyake	1				
Elective		Robotics Fundamentals	2	J. Miura, M. Okada Y. Sugaya	1				
Elective		Web Data Engineering	2	M. Aono S. Kuriyama		1			
Elective		Biological Information System Engineering	2	J. Horikawa N. Fukumura	1				
Elective		Brain and Neural System Engineering	2	S. Nakauchi	1				
Elective		Intelligent Control and Its Application to Robotics	1	K. Terashima		1			
Elective		Modern Control System Theory and Application	1	T. Miyoshi		1			
Elective		Optimization for Industrial Engineering Applications	1	Y. Shimizu			1		
Elective		Topics in Engineering Safety	1	R. Batres			1		
Elective		Advanced Complex Systems and Intelligent Informatics	2	Y. Ishida K. Murakoshi	1				
Elective		Computer Network Engineering	2	K. Umemura R. Ohmura	1				
Elective		Signal Processing	2	Z. Zhang	1				
Elective	Communication System Engineering	2	T. Ohira H. Uehara			1			
Elective	Humanity System	Phonetics and Phonological Theory	2	A. Ujihira		1			
Elective		Language Testing and Assessment	2	Y. In'nami	1				
Elective		Western Culture and Civilization	2	M. Tamura	1				
Elective		Technology Management 1	2	T. Fujiwara		1			
Elective		Technology Management 2	2	H. Shibusawa		1			
Elective		European Culture	2	K. Aikyo		1			

Compulsory / Elective	Field	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade	Note
					Fall	Spring			
					2011.10 — 2012. 3	2012. 4 — 2012. 9	2012.10 — 2013. 9	2013.10 — 2014.9	
Compulsory		Seminar on Environment & Life Engineering	3	Supervisor	3				
Elective	Environment Planning	Advanced Building Environmental Engineering and Building	2	H. Matsumoto Y. Masuda			1		
Elective		Sustainable Urban Planning	2	A. Ohgai J. Asano	1			(1)	
Elective		Technology and Management of Architectural and District Environment Planning	2	S. Matsushima				1	
Elective		Advanced Regional Environment Planning	2	Y. Hirobata				1	
Elective		Advanced Seminar on Regional Planning: History and Heritage	2	H. Izumida				1	
		Architectural Planning and Environment Behavior	2	Y. Kakino			1		
Elective		Environmental Economics 1	2	M. Yamaguchi		1	(1)	(1)	
Elective		Environmental Economics 2	2	Y. Miyata		1	(1)	(1)	
Elective		Environmental Economics 3	2	T. Hiramatsu		1	(1)	(1)	
Elective		Environment Protection	Advanced Water Environmental Engineering	2	S. Aoki, T. Inoue S. Kato	1			(1)
Elective	Advanced Water and Wastewater Treatment Technology		2	Y. Kiso		1			
Elective	Ecological Combustion Engineering		2	T. Oguchi		1		(1)	
Elective	Ecological Engineering for Homeostatic Human Activities		2	H. Daimon	1			(1)	
Elective	Environmental Applications of High Electric Field		2	A. Mizuno	1				
Elective	Electrical Engineering for Ecological		2	K. Takashima		1			
Elective	Advanced Industrial Ecology		2	N. Goto	1				
Elective	Applied Environmental Electromagnetism		2	S. Tanaka Y. Hatsukade			1		
Elective	Bioscience and Bioengineering	Advanced Molecular Genetics	2	T. Eki		1		(1)	
Elective		Biobased Polymers Engineering	2	H. Tsuji				1	
Elective		Microbiology and Environmental Biotechnology	2	A. Hiraishi	1				
Elective		Health Science	2	Y. Yasuda K. Sakuma			1		
Elective		Molecular Life Science	2	Y. Kikuchi	1		(1)	(1)	
Elective		Advanced Biochemistry	2	T. Tanaka				1	