

Course Requirement Guide Book

(October 2010)

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

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 semester. 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 Educational 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 semester.

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 Educational 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 Educational 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 semester)
	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 separate booklet or 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 semesters; Spring semester (from April 1 until September 30) and Fall semester (from October 1 until March 31)

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week				Instructor	note	
				1st grade						2nd grade
				Fall 1	Fall 2	Spring 1	Spring 2			
				2010.10 - 2011.3		2011.4 - 2011.9				2011.10 - 2012.9
Compulsory	Seminar on Mechanical Engineering I	4161001	4	4				Supervisor		
	Seminar on Mechanical Engineering II	4161002	2					2	Supervisor	
	Thesis Research on Mechanical Engineering	4161003	6	9					Supervisor	
Elective	Vibration and Impact Mechanics	4163001	1					0.5	S. Kawamura, H. Minamoto	
	Deformation Processing Technology	4163002	1	1					K. Mori	
	Applied Mechanics of Materials	4163003	1			1			T. Adachi	
	Micromachining Engineering	4163004	1					0.5	T. Shibata	
	Biomechanics of Human Locomotion	4163005	1					0.5	Y. Yasuda	
	Practical Surface Analysis	4163006	1			1			Y. Takeichi	
	Joining and Surfacing of Materials	4163007	1					0.5	M. Fukumoto	
	Science and Technology of Thin Films	4163008	1				1		M. Izaki	
	Deformation and Fracture of Materials	4163009	1	1					H. Toda	
	Phase Transformation in Materials	4163010	1		1				M.Umemoto	
	Engineering Safety	4163011	1					0.5	R. Batres	
	Time-frequency Analysis and Wavelet Transform	4163012	1					0.5	Z. Zhang	
	Modeling and Analysis of Dynamical Control Systems	4163013	1					0.5	K. Terashima	
	Robotics	4163014	1				1		N. Uchiyama	
	Flight Mechanics	4163015	1				1		S. Suzuki	
	Applied Thermal Engineering	4163016	1	1					K.Kitamura	
	Advanced Applied Fluid Engineering	4163017	1					0.5	M.Nakagawa, H.Yanada	
	Applied Fluid Dynamics	4163018	1					0.5	A.Iida, N.Sekishita	
	Applied Combustion Engineering	4163019	1					0.5	S.Noda	
	Advanced Environmental Engineering for Metals	4163020	1					0.5	S.Yokoyama	
	Advanced Mechanical Systems Design I	4163021	2	1				(1)	Supervisor	
	Advanced Mechanical Systems Design II	4163022	2			1		(1)	Supervisor	
	Advanced Materials and Manufacturing Process I	4163023	2	1				(1)	Supervisor	
	Advanced Materials and Manufacturing Process II	4163024	2			1		(1)	Supervisor	
	Advanced System, Control and Robotics I	4163025	2	1				(1)	Supervisor	
	Advanced System, Control and Robotics II	4163026	2			1		(1)	Supervisor	
	Advanced Energy and Environmental Engineering I	4163027	2	1				(1)	Supervisor	
	Advanced Energy and Environmental Engineering II	4163028	2			1		(1)	Supervisor	

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

Electrical and Electronic Information Engineering

2010.10

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week			Instructor	note
				1st grade		2nd grade		
				Fall	Spring			
				2010.10 - 2011.3	2011.4 - 2011.9	2011.10 - 2012.9		
Compulsory	Seminar on Electrical and Electronic Information Engineering	4261001	3	3			Supervisor	
	Thesis Research on Electrical and Electronic Information Engineering	4261002	6	9			Supervisor	
	Advanced Mathematics for EEI	4261003	1.5	1		(1)	Supervisor	
Elective	Applied Physics	4262001	1.5	1		(1)	Supervisor	Choose one subject
	Applied Materials Chemistry	4262002	1.5	1		(1)	Supervisor	
	Applied Circuit Theory	4262003	1.5	1		(1)	Supervisor	
	Material Science for Electronics	4263001	2	1			A. Matsuda, Y. Nakamura, T. Hattori, K. Hattori, H. Muto	
	Physics for Electronics	4263002	2			1	A. Oota, M. Fukuda, M. Inoue	
	Electrical Energy Systems	4263003	2		1		M. Nagao, H. Takikawa, Y. Sakurai	
	Electrical Technology and Materials	4263004	2			1	Y. Murakami, Y. Suda	
	Semiconductor Physics	4263005	2	1			A. Wakahara, K. Pak	
	LSI Process	4263006	2			1	K. Sawada, T. Kawano, H. Okada	
	Information and Communication Technology	4263007	2		1		T. Ohira, H. Uehara	
Advanced Electronic Information System	4263008	2			1	S. Ichikawa, K. Wada		
Methodology of R & D	4263009	2	1			(1)	Supervisor	

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Computer Science and Engineering

2010.10

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week			Instructor	note
				1st grade		2nd grade		
				Fall	Spring			
				2010.10 - 2011.3	2011.4 - 2011.9	2011.10 - 2012.9		
Compulsory	Seminar on Computer Science and Engineering I	4361001	4	4			Supervisor	
	Seminar on Computer Science and Engineering II	4361002	2			2	Supervisor	
	Thesis Research on Computer Science and Engineering	4361003	6	9			Supervisor	
Elective	Technical English Presentation	4363001	2	2		(2)	Supervisor	
	System Design Project	4363002	2	3		(3)	Supervisor	
	Speech and Language Processing	4363003	2		1	(1)	S. Nakagawa, T. Akiba	
	Networking, Advanced	4363004	2	1		(1)	K. Umemura, R. Ohmura	
	Advanced Robotics and Informatics	4363005	2	1		(1)	M. Okada, J. Miura	
	Web Data Engineering	4363006	2		1	(1)	S. Kuriyama, M. Aono	
	Applied Informatics	4363007	2		1		H. Kato	
	Computers and Education	4363008	2			1	K. Kawai	
	Multimodal Information Processing	4363009	2		1		T. Nitta, K. Katsurada	
	Image Processing, Advanced	4363010	2		1	(1)	Y. Kanazawa, Y. Sugaya	
	High Performance Computing	4363011	2			1	H. Goto	
	Software Engineering, Advanced	4363012	2			1	S. Isoda	
	Communication Systems, Advanced	4363013	2		1		T. Ohira, H. Uehara	
	Algorithm Engineering, Advanced	4363014	2	1		(1)	S. Masuyama, T. Fujito	
	Computer Systems, Advanced	4363015	2	1		(1)	M. Sugihara, R. Kobayashi	
	Quantum Biology and Materials Science	4363016	2		1	(1)	H. Sekino, N. Kurita	
	Complex Systems and Intelligent Informatics	4363017	2	1		(1)	Y. Ishida, K. Murakoshi	
	Chemometrics	4363018	2			1	Y. Takahashi	
	Bio-physical Information Systems	4363019	2			1	J. Horikawa, N. Fukumura	
	Advanced Topics in Brain and Cognitive Sciences	4363020	2			1	S. Nakauchi, M. Kitazaki	

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Environmental and Life Sciences

2010.10

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week				Instructor	note	
				1st grade						2nd grade
				Fall 1	Fall 2	Spring 1	Spring 2			
				2010.10 - 2011.3		2011.4 - 2011.9				2011.10 - 2012.9
Compulsory	Seminar on Environmental and Life Science I	4461001	3	3				Supervisor		
	Seminar on Environmental and Life Science II	4461002	3					3	Supervisor	
	Thesis Research on Environmental and Life Science	4461003	6	9				Supervisor		
Elective	Advanced Separation Chemistry I	4463001	1					0.5	Y. Saito	
	Advanced Separation Chemistry II	4463002	1					0.5	Y. Hirata	
	Applied Inorganic Chemistry I	4463003	1	1					N. Kakuta	
	Applied Inorganic Chemistry II	4463004	1				1		T. Mizushima	
	Applied Physical Chemistry I	4463005	1					0.5	A. Matsumoto	
	Applied Physical Chemistry II	4463006	1				1		T. Ogushi	
	Advanced Polymer Chemistry	4463007	1	1					S. Itsuno	
	Advanced Polymer Engineering	4463008	1		1				E. Yoshida	
	Advanced Composite Science	4463009	1					0.5	T. Takeichi	
	Special Topics in Applied Organic Chemistry	4463010	1				1		S. Iwasa	
	Developmental Neuroscience	4463011	1					0.5	S. Yoshida	
	Advanced Molecular Life Science	4463012	1		1				Y. Kikuchi, T. Tanaka	
	Advanced Applied Biochemistry and Biotechnology	4463013	1					0.5	A. Hiraishi, T. Eki	
	Advanced Electrical and Electronic Technology for Ecological Engineering	4463014	1					0.5	S. Tanaka, Y. Hatsukade, A. Mizuno, K. Takashima	
	Advanced Environmental Numerical Engineering	4463015	1				1		T. Kitada	
	Advanced Eco-Materials Engineering	4463016	1					0.5	H. Tsuji	
	Advanced Environment Protection Engineering	4463017	1				1		Y. Kiso	
	Advanced Reaction Engineering	4463018	1				1		T. Oguchi	
	Advanced Sustainable Coordinator	4463019	1					0.5	N. Goto	
	Advanced Supercritical Fluid Engineering	4463020	1					0.5	H. Daimon	
	※ Advanced Life Science and Biotechnology I	4463021	2		1			(1)	Supervisor	
	※ Advanced Life Science and Biotechnology II	4463022	2				1	(1)	Supervisor	
	※ Advanced Environmental Technology I	4463023	2		1			(1)	Supervisor	
	※ Advanced Environmental Technology II	4463024	2				1	(1)	Supervisor	
	※ Advanced Environmental and Ecological Systems I	4463025	2		1			(1)	Supervisor	
	※ Advanced Environmental and Ecological Systems II	4463026	2				1	(1)	Supervisor	

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

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Architecture and Civil Engineering

2010.10

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week			Instructor	note
				1st grade		2nd grade		
				Fall	Spring			
				2010.10 - 2011.3	2011.4 - 2011.9	2011.10 - 2012.9		
Compulsory	Seminar on Architecture and Civil Engineering I	4561001	3	3			Supervisor	
	Seminar on Architecture and Civil Engineering II	4561002	3			3	Supervisor	
	Thesis Research on Architecture and Civil Engineering	4561003	6	9			Supervisor	
Elective	Elasticity and Stability	4563001	2			1	S. Yamada	
	Finite Element Method for Continua and Bar Structures	4563002	2		1		S. Nakazawa	*
	Seismic Evaluation of Existing Buildings	4563003	2			1	Y. Sanada	
	Geologic Hazard and Mitigation Planning	4563004	2			1	M. Kawamura	
	Geotechnical Analysis	4563005	2				K. Miura	*
	Building Science: Indoor Air Quality and Ventilation	4563006	2	1			H. Matsumoto	*
	Building Climate	4563007	2		1		Y. Masuda	*
	Wave Forces on Offshore and Coastal Structures	4563008	2		1		S. Aoki	*
	Coastal Hydraulics	4563009	2			1	S. Kato	
	Water Quality Analysis	4563010	2			1	T. Inoue	
	Computer Applications in Urban Planning	4563011	2	1			A. Ohgai	*
	Human Settlement: Its History and Theory	4563012	2			1	H. Izumida	
	Advanced Study on Housing System and Housing Policy	4563013	2		1		S. Matsushima	*
	Advanced District Planning	4563014	2			1	J. Asano	
	Advanced Transportation and Traffic Engineering	4563015	2			1	Y. Hirobata	
	Modeling Regional Environment	4563016	2	1			Y. Miyata	*
	Management of Technology	4563017	2		1		T. Fujiwara	*
	Advanced Computational Economics	4563018	2			1	H. Shibusawa	
	※ Advanced Structural System Planning and Design I	4563019	2	1		(1)	Supervisor	
	※ Advanced Structural System Planning and Design II	4563020	2		1	(1)	Supervisor	
	※ Advanced Environmental System Planning and Design I	4563021	2	1		(1)	Supervisor	
	※ Advanced Environmental System Planning and Design II	4563022	2		1	(1)	Supervisor	
	※ Advanced Regional System Planning and Design I	4563023	2	1		(1)	Supervisor	
	※ Advanced Regional System Planning and Design II	4563024	2		1	(1)	Supervisor	
	※ Advanced Regional System Planning and Design III	4563025	2		1	(1)	Supervisor	

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General courses

2010.10

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week				Instructor	note	
				1st grade						2nd grade
				Fall 1	Fall 2	Spring 1	Spring 2			
				2010.10 - 2011.3		2011.4 - 2011.9				2011.10 - 2012.9
Elective	Management Science	4003001	2			1	(1)	Y. Miyata, T. Fujiwara		
	Industrial Policies	4003002	2			1	(1)	H. Shibusawa		
	Culture and Communication I	4003003	2	1				Y. Innami		
	Culture and Communication II	4003004	2				1			
	Japanese Life Today	4003005	2			1	(1)	T. Hayashi		
	Intercultural Communication	4003006	2			1	(1)	Y. Muramatsu		

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Twinning Program Course Requirement Guide Book

(October 2010)

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	6 credits	
Production Systems Engineering major	24	6 credits	
Electrical and Electronic Engineering major	24	6 credits	
Information and Computer Sciences major	24	6 credits	
Materials Science major	24	6 credits	
Architecture and Civil Engineering major	24	6 credits	
Knowledge-based Information Engineering major	24	6 credits	
Ecological Engineering major	24	6 credits	
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.

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

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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.
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(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 semester. 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 Educational 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 semester.

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 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 Educational 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 Educational 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 semester)
	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 separate booklet or 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 semesters; Spring semester (from April 1 until September 30) and Fall semester (from October 1 until March 31)

Materials Science (Twinning Program)

2010.10

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week				Instructor	note
				Fall 1	Fall 2	Spring 1	Spring 2		
				2010.10 - 2011. 3		2011. 4 - 2011. 9			
Compulsory	Seminar on Materials Science	451005	6	6				Supervisor	
	Thesis Research on Materials Science	451003	6	9				Supervisor	
Elective	Advanced Separation Chemistry I	452015	1					Y.Saito	
	Advanced Separation Chemistry II	452016	1					Y. Hirata	
	Advanced Solution Chemistry	452002	1					T. Hattori	
	Applied Inorganic Chemistry I	452017	1	1				N. Kakuta	
	Applied Inorganic Chemistry II	452018	1				1	T. Mizushima	
	Inorganic Materials Science I	452019	1					A. Matsuda	
	Inorganic Materials Science II	452020	1					H.Muto	
	Applied Physical Chemistry	452034	1				1	T. Ogushi	
	Advanced Polymer Chemistry I	452023	1	1				S. Itsuno	
	Advanced Polymer Chemistry II	452024	1		1			E. Yoshida	
	Composite Materials Science I	452025	1					T. Takeichi	
	Composite Materials Science II	452026	1					A. Matsumoto	
	Special Topics in Applied Organic Chemistry	452035	1				1	S. Iwasa	
	Developmental Neuroscience	452030	1					S. Yoshida	
	Advanced Evaluation and Failure Prevention of Materials	452031	1	1				H. Toda ②	
	Deformation Processing Technology	452036	1					Y. Abe ②	
	Electron Microscopy for Materials Science	452037	1					Y. Todaka ②	
	Advanced Physical Chemistry of Metals	452038	1					S. Yokoyama ②	
	Advanced Molecular Life Science	452039	1		1			Y.Kikuchi, T.Tanaka ⑧	
Advanced Applied Biochemistry and Biotechnology	452040	1					A.Hiraishi, T.Eki ⑧		
Advanced Physical Chemistry I	452041	1				1	Y. Kiso ⑧		

Knowledge-based Information Engineering(Twinning Program)

2010.10

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week		Instructor	note
				Fall	Spring		
				2010.10 - 2011. 3	2011. 4 - 2011. 9		
Compulsory	Seminar on Knowledge-based Information Engineering	471005	6	6		Supervisor	
	Thesis Research on Knowledge-based Information Engineering	471006	6	9		Supervisor	
Elective	Parallel and Distributed Computing	472001	2	1		S. Masuyama	
	Computer Speech Processing	472002	2			T. Nitta	
	Quantum Biology	472003	2			N. Kurita	
	Quantum Materials Science	472004	2		1	H. Sekino N. Kurita	
	Chemometrics	472005	2			Y. Takahashi	
	Complex Systems	472006	2	1		Y. Ishida K. Murakoshi	
	Neuroscience	472007	2		1	J. Horikawa	
	Computers and Education	472008	2			K. Kawai	
	Advanced Logic Design	472009	2	1		S. Ichikawa	

General courses (Twinning Program)

2010.10

Compulsory / Elective	Subject Name	Code No.	Credits	Classes/Week				Instructor	note
				Fall 1	Fall 2	Spring 1	Spring 2		
				2010.10 - 2011.3		2011.4 - 2011.9			
Elective	Management Science I	401004	1			1		T. Fujiwara	
	Management Science II	401005	1				1	Y. Miyata	
	Industrial Policies I	401009	1			1		H. Shibusawa	
	Industrial Policies II	401010	1				1	H. Shibusawa	
	Culture and Communication I -A	402015	1	1				Y. Innami	
	Culture and Communication I -B	402016	1		1			Y. Innami	
	※ Culture and Communication II -A	402017	1						
	※ Culture and Communication II -B	402018	1						
	Japanese Life Today I	407012	1			1		T. Hayashi	
	Japanese Life Today II	407013	1				1	T. Hayashi	
	Intercultural Communication I -A	402013	1			1		Y.Muramatsu	
	Intercultural Communication I -B	402014	1				1	Y.Muramatsu	

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

Course Requirement Guide Book

(October 2010)

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 Course registration, examination, attendance period

1. Course 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) Course registration

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

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

- 1 To complete a course 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 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 for which 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 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 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.

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 semester. 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 Educational 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 semester.

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 Educational 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 Educational 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 on 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

Courses are only specialized courses. Credits are set for each course.

(For the courses to be offered, see specialized courses written in the following pages.
See the separate booklet "SYLLABUS" for details on the classes.)

(2) Compulsory courses and elective courses

- 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) Course period

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

Mechanical and Structural System Engineering

2010.10

Compulsory / Elective	Field	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade
					Fall	Spring		
					2010.10 — 2011. 3	2011. 4 — 2011. 9	2011.10 — 2012. 9	2012.10 — 2013.9
Compulsory		Seminar on Mechanical and Structural System Engineering	3	Supervisor	3			
Elective	Mechanical Engineering	Advanced Machine Dynamics	2	S.Kawamura and H.Minamoto			1	
Elective		Advanced Tribology	2	M.Uemura and 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.lida			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 and N.Uchiyama			1	
Elective		Advanced Mechanics of Solids	2	T.Adachi		1		
Elective	Manufacturing Engineering	Deformation Processes	2	K.Mori and Y.Abe	1			
Elective		Micro/Nanomachining Engineering	2	T.Shibata			1	
Elective		Advanced Joining Processes	2	M.Fukumoto and T.Yasui			1	
Elective	Structural Systems in Architecture and Civil Engineering	Mechanics and Design of Spatial Structure Systems	2	S.Yamada and S.Nakazawa			1	
Elective		Complex Systems Planning	2	M.Kawamura and K.Miura	1			
Elective		Structural Design and Cost Performance	2	Y.Sanada			1	

Functional Materials Engineering

2010.10

Compulsory / Elective	Field	Subject Name	Credits	Instructor	1st grade				2nd grade	3rd grade
					Fall		Spring			
					2010.10 — 2011.3		2011.4 — 2011.9		2011.10 — 2012.9	2012.10 — 2013.9
Compulsory		Seminar on Functional Materials Engineering	3	Supervisor	3					
Elective	Materials Design	Advanced Production Engineering of Materials	2	M.Izaki and S.Yokoyama			1			
Elective		Advanced Synthesis of Molecular Materials	1	S.Iwasa			1			
Elective		Computational Materials Science	2	H.Sekino and H.Goto			1		(1)	
Elective	Materials Characterization	Advanced Structural Materials Analysis	2	H.Toda and M.Kobayashi			1			
Elective		Advanced Separation Science	1	Y.Saito					0.5	
Elective		Advanced Analytical Separation Chemistry	1	Y.Hirata					0.5	
Elective		Advanced Chemical Sensor	1	T.Hattori					0.5	
Elective		Advanced Inorganic Materials Science and Engineering 1	1	H.Muto					0.5	
Elective		Advanced Inorganic Materials Science and Engineering 2	1	A.Matsuda					0.5	
Elective		Advanced Kinetic Theory of Gases	1	T.Ogushi				1		
Elective		Advanced Surface Analysis of Materials	1	A.Matsumoto					0.5	
Elective		Materials Application	Advanced Materials Property Engineering	2	M.Umemoto, Y.Todaka			1		
Elective	Advanced Polymeric Materials Chemistry		1	T.Takeichi					0.5	
Elective	Advanced Functional Polymer Chemistry		1	S.Itsuno	1					
Elective	Advanced Polymer Nanomaterials		1	E.Yoshida		1				
Elective	Advanced Physiological Property Engineering		1	S.Yoshida					0.5	
Elective	Advanced Functional Inorganic Chemistry 1		1	N.Kakuta	1					
Elective	Advanced Functional Inorganic Chemistry 2		1	T.Mizushima				1		
Elective	Advanced Molecular Information Engineering		2	Y.Takahashi and H.Kato			1		(1)	
Elective	Molecular and Quantum Biology		2	N.Kurita			1			

Electronic and Information Engineering

2010.10

Compulsory / Elective	Field	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade	
					Fall	Spring			
					2010.10 — 2011.3	2011.4 — 2011.9	2011.10 — 2012.9	2012.10 — 2013.9	
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 and Y.Suda	1				
Elective		Applied Engineering of Electric Energy	2	H.Takikawa and Y.Murakami			1		
Elective		Physics of Electronic Materials	2	M.Inoue and K.Hattori	1				
Elective		Electronic Material Engineering	2	A.Oota, Y.Nakamura and M.Fukuda		1			
Elective		Advanced Semiconductor Device	2	M.Ishida, A.Wakahara and P.Kangsa			1		
Elective		Advanced LSI Technology	2	K.Sawada, H.Okada and T.Kawano	1				
Elective	Systems and Information Engineering	Computer System Engineering	2	S.Ichikawa, M.Sugihara and R.Kobayashi			1		
Elective		Computers and Education, Advanced	2	K.Kawai			1		
Elective		Theoretical Computer Science, Advanced	2	S.Masuyama and T.Fujito			1		
Elective		Speech and Language Processing	2	S.Nakagawa and T.Akiba		1			
Elective		Spoken Language Interface and Multi-modal Interaction	2	T.Nitta			1		
Elective		3D Vision Theory for Measurement	1	T.Miyake			0.5		
Elective		Robotics Fundamentals	2	J.Miura, M.Okada, N.Fukumura and Y.Sugaya			1		
Elective		Web Data Engineering	2	M.Aono and S.Kuriyama			1		
Elective		Brain and Neural System Engineering 1	2	J.Horikawa		1			
Elective		Brain and Neural System Engineering 2	2	S.Nakauchi			1		
Elective		Intelligent Control and Its Application to Robotics	1	K.Terashima			0.5		
Elective		Modern Control System Theory and Application	1	T.Miyoshi			0.5		
Elective		Optimization for Industrial Engineering Applications	1	Y.Shimizu			1		
Elective		Topics in Engineering Safety	1	R.Batres			0.5		
Elective		Advanced Complex Systems and Intelligent Informatics	2	Y.Ishida and K.Murakoshi	1				
Elective		Computer Network Engineering	2	K.Umemura			1		
Elective		Signal Processing	2	Z.Zhang and K.Wada			1		
Elective		Communication System Engineering	2	T.Ohira and H.Uehara		1			
Elective		Humanity System	Phonetics and Phonological Theory	2	A.Ujihira		1	(1)	(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	(1)	(1)	
Elective	Technology Management 2		2	H.Shibusawa		1	(1)	(1)	
Elective	European Culture		2	K.Aikyo		1	(1)	(1)	

Environment and Life Engineering

2010.10

Compulsory / Elective	Field	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade
					Fall	Spring		
					2010.10 — 2011.3	2011.4 — 2011.9	2011.10 — 2012.9	2012.10 — 2013.9
Compulsory		Seminar on Environment & Life Engineering	3	Supervisor	3			
Elective	Environment Planning	Advanced Building Environmental Engineering and Building Services	2	H.Matsumoto and Y.Masuda				1
Elective		Sustainable Urban Planning	2	A.Ohgai and J.Asano			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		
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 and S.Kato			1	
Elective		Advanced Eco-systems Protection Engineering	2	T.Kitada		1	(1)	
Elective		Advanced Water and Wastewater Treatment Technology	2	Y.Kiso			1	
Elective		Ecological Combustion Engineering	2	T.Oguchi			1	
Elective		Ecological Engineering for Homeostatic Human Activities	2	H.Daimon			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 and Y. Hatsukade		1		(1)
Elective	Bioscience and Bioengineering	Advanced Molecular Genetics	2	T.Eki			1	
Elective		Biobased Polymers Engineering	2	H.Tsuji		1		
Elective		Microbiology and Environmental Biotechnology	2	A.Hiraishi	1		(1)	
Elective		Advanced Health Science	2	Y.Yasuda and K.Sakuma		1		(1)
Elective		Molecular Life Science	2	Y.Kikuchi	1		(1)	(1)
Elective		Advanced Biochemistry	2	T.Tanaka		1		