Course Requirement Guide Book

（October 2015）

International Master's Degree Program

TOYOHASHI
UNIVERSITY OF TECHNOLOGY

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I Requirements for completion

1. Requirements for completion

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

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

Classification	Required credits for completion	Remarks
General subjects	6	
Specialized subjects		6 credits in total can be substituted with a combination of the following options, with permission from the student's supervisor. 1. Specialized master's subjects from a different department 2. Specialized master's subjects held in Japanese (The same subject cannot be taken in both Japanese and English)
Mechanical Engineering	24	
Electrical and Electronic Information Engineering	24	
Computer Science and Engineering	24	
Environmental and Life Science	24	
Architecture and Civil Engineering	24	
Grand total	30	

2. Application for degree

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

II Class registration, examination, and attendance period

1. Class registration method

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

(1) Making study plans

To make study plans, the student should read this Guide Book thoroughly, and follow the instructions and advice given during the orientation and by the supervisors.

The Course Schedule is provided at the beginning of each academic year.
Schedules for intensive classes will be posted on a bulletin board when the details are fixed.

(2) Class Registration

Students must register for classes using Dream Campus at the TUT website
https://www.ead.tut.ac.jp/portal/
or by the form "Application for Subjects" during the designated period.

*Classes cannot be registered for nor withdrawn from after the designated registration period. Classes with no registration will not be accredited in any case.

NOTES

1) To take specialized subjects given in other departments, or given in Japanese, students must obtain approval from their supervisor and the subject instructor with the form "Application for Registration in Subjects in Other Department," before registering.

2) If the student does not attend the classes nor take the examinations, credits will not be given even if the registration is made.

3) A student cannot re-register for a subject once credits are given.

4) Only one subject can be registered for in a given time schedule. Note that this does not apply to subjects being repeated for examinations only, or intensive subjects.

(3) Confirming and amending the registration

To confirm or amend class registration, students should access Dream Campus, and follow the manuals instructions.

(4) Repeating classes

In principal, a student who has failed a subject with regular examinations or has not gained credits for some other reasons can take the same subject again in the next academic year. To repeat a subject, the student must register again.

(5) Repeating classes by examination

When a subject instructor approves a student's credits by allowing examination without re-attending the classes, the student can register for the subject using the form "Application for Registration for Repeating Subjects (by Examination)".

*Only the subjects failed with "D" grade are eligible for this.

2. Examination

Examinations include regular examinations and make-up examinations.

(1) Regular examination

In principle regular examinations shall be held during the set period at the end of each term.

All students are to check the examination schedule in the academic calendar at Dream Campus or on the bulletin boards. Note that examinations may be held at any time found necessary by the subject instructor.

(2) Make-up examination

1) Make-up examinations shall be held only when a student cannot take the regular examination for one of the following reasons. The student must gain the approval of the subject instructor using the form "Request for a make-up examination".

 a) Illness (doctor's medical certificate must be submitted)
 b) Accidents, disaster (certificate must be submitted), or other special reason (a letter explaining the reason must be submitted)

2) "Request for a make-up examination" must be submitted to the Educational Affairs Division within one week from the final date of the regular examination.

3) If a student fails to take the make-up examination, further examinations will not be allowed.

(3) Approval of credits and evaluation

Credits are approved by the subject instructor.

1) Grades are calculated according to the following criteria.

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) Results will be available on Dream Campus at a fixed time after the examination.

(4) System for appealing grades

Students who have concerns about their grades for a particular semester should inquire from the class instructor. If students have complaints regarding the instructor's response, they can submit an appeal. Students, however, cannot appeal the reason or basis for the grade.

Students should contact the Educational Affairs Division for details.

3. Maximum years of attendance and related matters

(1) Maximum years of attendance

A student may not be in the master's course at the university for more than four years.

(2) Leave of absence

If a student cannot attend classes for two or more months consecutively due to illness or other special reasons, the student may submit the form "Request for leave of absence" to the Educational Affairs Division after getting approval from the supervisor, a member of the academic affairs committee, and their department head. Upon approval by the President, the student can take a leave of absence (maximum two years in total).

The period of this absence will not be counted in the "Maximum years of attendance" mentioned in paragraph (1) above.
To return to school after the approved period ends, the student must submit the form "Notice of return to university".
To return to school before the approved period following the removal of cause of absence, the student must submit the form "Application for return to university" and obtain approval.

(3) Withdrawal

If a student wants to withdraw from the university, the student must submit the form "Application for withdrawal from university" to the Educational Affairs Division after getting the approval from the supervisor, a member of the academic affairs committee, and their department head. Upon approval by the President, the student can withdraw from the university.
Note that the tuition fee has to be paid in full even if the student withdraws in the middle of a term.

(4) Removal from the University

A student will be removed from the university for the following reason.
1) A student exceed the period mentioned above in paragraph (1) "Maximum years of attendance".
2) A student cannot return to school after the period of absence mentioned above in paragraph (2) "Leave of absence".
3) A student dies, or disappears.
4) A student who has been approved for half exemption or postponement of admission fee payment and does not pay the admission fee by the designated date.
5) A student fails to pay the tuition and does not pay even after a warning.

4. Other matters

(1) Information about canceled or make-up classes

All students are requested to double-check their class schedules and other information using the following means:

Location		information
Lecture hall at 1st floor, A-bldg.	Central Bulletin Board (panel board)	Class schedule changes
	Electronic Bulletin Board (LCD)	Canceled or make-up classes, rescheduled notices
	Glass-covered Bulletin Board	Others
TUT website	https://www.ead.tut.ac.jp/board/main.aspx	Canceled or make-up classes
TUT website for mobile phones	https://www.ead.tut.ac.jp/ Mobileboard/main.aspx *Mobile tagging by camera phones	Canceled or make-up classes

(2) Classes/exams when a STORM WARNING is announced.

If a Storm Warning (*Bo-fu Keiho*) is announced for Toyohashi city or the South-east area of the Mikawa region, TUT will deal with classes or examinations as follows:

1) To prevent any accident, all classes will be canceled during the Storm Warning.

2) If the Storm Warning is cleared before 7:00 am, all classes will be on schedule.

3) If the Storm Warning is cleared between 7:00 am and 11:00 am, all classes will start from the 3rd period (*Classes in the 1st and 2nd period will be canceled).

4) If the Storm Warning continues after 11:00 am, all classes will be canceled.

*All cancelled classes and examinations will be rescheduled.

5) Whether or not a storm warning is announced, classes may be canceled because of suspension of public transportation service or some similar occurrence, at the discretion of the Vice President for Educational Affairs.

6) If cancelled classes cannot be held on YOBIBI (optional extra day), and final exams, on the alternate exam day, a Saturday may be used as an alternate day for classes or exams.

(3) Information about RESCHEDULED CLASSES/EXAMS

Classes/exams canceled because of natural disasters will be rescheduled on "YOBIBI" (an optional extra day). YOBIBI may also be used for makeup classes. Students may check the YOBIBI schedules two weeks before the dates, on the bulletin board at lecture hall, A-Bldg.

*YOBIBI will be used for rescheduling classes/exams cancelled by storm warnings and the like as a priority.
Students must double check the information from TUT especially for unexpected events.

(4) University's e-mail account

TUT strongly recommends all students to set up the e-mail forwarding service in order to receive important information of class-scheduling, grading and other communications from the university.

(5) Absence from classes

When you have to be absent from classes due to illness, bereavement or other reasons, you need to inform these reasons to your subject instructor yourself.
Absences will be dealt with at the discreation of subject instructors.

Reasons for Absence	Documents you should submit	Procedure
Illness/Injury	Medical certificate or medical expense receipts	Students inform lecturers directly
Bereavement leave	Letter or notice of funeral	Students inform lecturers directly
Infectious diseases*	Medical certificate or Medical expense receipts	Students inform Student Affairs Division (0532-44-6553), TUT office staff will report to lecturers.

*TUT may require suspension in order to prevent the spread of infection. Suspension orders will be posted on the bulletin board at A-building.

III Curriculum

1. Classes and credits

(1) Classes

Classes are divided into General Subjects and Specialized Subjects. Numbers of credits are set for each subject.

For the subjects to be offered, see the following pages.
See the web syllabus for the details of each subject.

(2) Compulsory subjects and elective subjects

1) Compulsory subjects are the subjects that must be completed as a 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

Teaching types of classes are lectures, exercises, experiments, practical or hands-on training, and they are offered individually or in combinations. The class time for one credit is calculated according to the following standards.
*A typical class in university is counted as 2 hours.
   1) For lectures, one credit requires 15 hours of classes.
   2) For exercises, one credit requires 30 hours of classes.
   3) For experiments, practical or hands-on training, one credit requires 45 hours of classes.

(4) School term

A school term 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 subjects

Compulsory / Elective	Subject Name	Credits	Classes/Week 1st grade Fall 2015.10 - 2016.3	Classes/Week 1st grade Spring 2016.4 - 2016.9	2nd grade 2016.10 - 2017.9	Instructor	note
Elective	Management Science	2		1	(1)	T. Fujiwara	
	Industrial Policies	2		1		H. Shibusawa	
	Culture and Communication I	2			1	M. Kato	
	Culture and Communication II	2	1			M. Ikematsu	
	Japanese Life Today	2		1	(1)		
	Intercultural Communication	2		1	(1)	Y. Muramatsu	

◆ Those subjects whose numbers marked with "( )" will be held every year.

Mechanical Engineering

2015.10

Compulsory / Elective	Subject Name	Credits	Classes/Week					Instructor	note
			1st grade				2nd grade		
			Fall 1	Fall 2	Spring 1	Spring 2			
			2015.10 - 2016.3		2016.4 - 2016.9		2016.10 - 2017.9		
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 Engineering	1			1			S. Kawamura	
	Deformation Processing Technology	1					0.5	K. Mori	
	Applied Mechanics of Materials	1					0.5	T. Adachi	
	Micromachining Engineering	1		1				T. Shibata	
	Joining and Surfacing of Materials	1			1			M. Fukumoto	
	Science and Technology of Thin Films	1					0.5	M. Izaki	
	Properties and Applications of Engineering Materials	1		1				H. Miura	
	Time-frequency Analysis and Wavelet Transform	1		1				Z. Zhang	
	Modeling and Analysis of Dynamical Control Systems	1			1			K. Terashima	
	High-Speed Mechanics and Optical Measurement	1					0.5	S. Suzuki	
	Robot Kinematics	1	1					N. Uchiyama	
	Applied Thermal Engineering	1					0.5	K. Kitamura	
	Advanced Applied Fluid Engineering	1	1					H. Yanada	
	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	

◆ Those subjects whose numbers marked with "( )" will be held every year.

◆ "0.5" signifies that this subject will be held in any one of a quarter term (Spring 1, Spring 2, Fall 1 or Fall 2).

Electrical and Electronic Information Engineering

Compulsory / Elective	Subject Name	Credits	Classes/Week			Instructor	note
			1st grade		2nd grade		
			Fall	Spring			
			2015.10 - 2016.3	2016.4 - 2016.9	2016.10 - 2017.9		
Compulsory	Seminar on Electrical and Electronic Information Engineering 1A	4	4			Supervisor	
	Seminar on Electrical and Electronic Information Engineering 1B	2			2	Supervisor	
	Thesis Research on Electrical and Electronic Information Engineering	6	9			Supervisor	
Elective	Material Science for Electronics 1	2			1	M. Fukuda Y. Nakamura H. Muto Undecided	
	Material Science for Electronics 2	2	1			M. Fukuda Y. Nakamura H. Muto Undecided	
	Physics for Electronics 1	2			1	A. Matsuda T. Hattori T. Ishiyama H. Takagi	
	Physics for Electronics 2	2		1		A. Matsuda T. Hattori T. Ishiyama H. Takagi	
	Electrical Energy Systems 1	2			1	H. Takikawa Y. Sakurai N. Hozumi	
	Electrical Energy Systems 2	2	1			H. Takikawa Y. Sakurai N. Hozumi	
	Electrical Technology and Materials 1	2			1	Y. Suda R. Inada Yo. Murakami	
	Electrical Technology and Materials 2	2		1		Y. Suda R. Inada Yo. Murakami	
	Semiconductor Physics 1	2			1	A. Wakahara H. Okada T. Kawano	
	Semiconductor Physics 2	2	1			A. Wakahara H.Okada T. Kawano	
	LSI Process 1	2			1	K. Sawada Yu. Murakami H. Sekiguchi K. Takahashi	
	LSI Process 2	2		1		K. Sawada Yu. Murakami H. Sekiguchi K. Takahashi	
	Information and Communication Technology 1	2			1	T. Ohira H. Uehara Undecided	
	Information and Communication Technology 2	2		1		T. Ohira H. Uehara Undecided	
	Advanced Electronic Information System 1	2			1	S. Ichikawa M. Tamura	
	Advanced Electronic Information System 2	2	1			S. Ichikawa M. Tamura	
	Methodology of R & D 1	2	1		(1)	Supervisor	
	Methodology of R & D 2	2		1	(1)	Supervisor	

◆ Those subjects whose numbers marked with "( )" will be held every year.

Computer Science and Engineering

Compulsory / Elective	Subject Name	Credits	Classes/Week					Instructor	note
			1st grade				2nd grade		
			Fall 1	Fall 2	Spring 1	Spring 2			
			2015.10 - 2016.3		2016.4 - 2016.9		2016.10 - 2017.9		
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	System Design Project	2				3	(3)	Supervisor	
	Speech and Language Processing, Advanced	2				1	(1)	T. Akiba K. Yamamoto	
	Networking, Advanced 1	1	1					K. Umemura	
	Networking, Advanced 2	1		1				R. Ohmura	
	Advanced Robotics and Informatics 1	1	1				(0.5)	J. Miura	
	Advanced Robotics and Informatics 2	1		1				M. Okada	
	Web Data Engineering 1	1			1		(0.5)	M. Aono	
	Web Data Engineering 2	1					0.5	S. Kuriyama	
	Computers and Education	2			1			K. Kawai	
	Image Processing, Advanced	2	1				(1)	Y. Kanazawa Y. Sugaya	
	Algorithm Engineering, Advanced	2					1	S. Masuyama	
	Computer Systems, Advanced	2	1					R. Kobayashi	
	Quantum Biology and Materials Science	2			1		(1)	N. Kurita H. Goto	
	Complex Systems and Intelligent Informatics 1	1	1				(0.5)	K. Murakoshi	
	Complex Systems and Intelligent Informatics 2	1		1			(0.5)	Y. Ishida	
	Advanced Chemoinformatics	2					1	Y. Takahashi H. Kato	
	Bio-physical Information Systems 1	1			1			N. Fukumura	
	Bio-physical Information Systems 2	1				1		J. Horikawa	
	Advanced Topics in Brain and Cognitive Sciences	2					1	S. Nakauchi M. Kitazaki	

◆ Those subjects whose numbers marked with "( )" will be held every year.

Environmental and Life Sciences

Compulsory / Elective	Subject Name	Credits	Fall 1 (2015.10 - 2016.3)	Fall 2 (2015.10 - 2016.3)	Spring 1 (2016.4 - 2016.9)	Spring 2 (2016.4 - 2016.9)	2nd grade (2016.10 - 2017.9)	Instructor	note
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				(0.5)	Y. Saito	
	Advanced Separation Chemistry II	1		1				Y. Hirata	No class will be held on and after April, 2016
	Special Topics in Inorganic Chemistry	1		1				N. Kakuta	
	X-ray Spectroscopy for Catalytic Engineering	1				1		T. Mizushima	
	Applied Physical Chemistry I	1			1		(0.5)	A. Matsumoto	
	Advanced Polymer Chemistry	1	1				(0.5)	S. Itsuno N. Haraguchi	
	Advanced Polymer Engineering	1		1				E. Yoshida	
	Special Topics in Applied Organic Chemistry	1			1		(0.5)	S. Iwasa K. Shibatomi	
	Developmental Neuroscience	1				1	(0.5)	S. Yoshida R. Numano	
	Advanced Molecular Life Science	1	1				(0.5)	T. Tanaka S. Umekage	
	Advanced Applied Biochemistry and Biotechnology	1		1			(0.5)	A. Hiraishi T. Eki	
	Advanced Electrical and Electronic Technology for Ecological Engineering	1			1		(0.5)	S. Tanaka K. Takashima S. Ariyoshi	
	Advanced Biomaterials Engineering	1				1	(0.5)	H. Tsuji R. Tero	
	Advanced Reaction Engineering	1			1			T. Oguchi	
	Advanced Sustainable Coordinator	1				1	(0.5)	N. Goto T. Tokairin	
	Advanced Supercritical Fluid Engineering	1				1	(0.5)	H. Daimon	
	Applied Environmental Biology	1	1					A. Nakabachi	
	※ 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 supervisor about class schedule of this subject

◆ Those subjects whose numbers marked with "( )" will be held every year.

◆ "0.5" signifies that this subject will be held in any one of a quarter term (Spring 1, Spring 2, Fall 1 or Fall 2).

Architecture and Civil Engineering

Compulsory / Elective	Subject Name	Credits	Classes/Week 1st grade Fall 2015.10 - 2016.3	Classes/Week 1st grade Spring 2016.4 - 2016.9	2nd grade 2016.10 - 2017.9	Instructor	note
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			Y. Matsumoto	
	Finite Element Method for Continua and Bar Structures	2			1	S. Nakazawa	
	Seismic Evaluation of Existing Buildings	2		1		T. Matsui	
	Seismic Design of Structures	2	1			T. Saito	
	Geotechnical Analysis	2			1	K. Miura	
	Building Science: Indoor Air Quality and Ventilation	2		1		H. Matsumoto	
	Building and Urban Thermal Environment	2			1	unknown	
	Coastal Hydraulics	2	1			S. Kato	
	Water Environment Engineering I	2		1		K. Yokota	
	Water Environment Engineering II	2			1	T. Inoue	
	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	
	Adavnced Architectual Planning	2			1	Y. Kakino	
	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	

※ Please ask your supervisor about class schedule of this subject

◆ Those subjects whose numbers marked with "( )" will be held every year.

Twinning Program

Double Degree Program

Course Requirement Guide Book

（October 2015）

International Master's Degree Program

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Ⅰ Requirements for completion

1. Requirements for completion

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

Classification	Required credits for completion	Remarks
General subjects	6	
Specialized subjects		
Mechanical Engineering	24	
Electrical and Electronic Information Engineering	24	
Computer Science and Engineering	24	
Environmental and Life Science	24	
Architecture and Civil Engineering	24	
Grand total	30	

For students in the Twinning Program, up to 10 credits that the students had acquired at their home university before coming to TUT can be transferred to TUT Master's Program only if TUT admits after being examined. Those 10 credits shall be determined by TUT's criteria.

2. Application for degree

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

II Class registration, examination, and attendance period

1. Class registration method

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

(1) Making study plans

To make study plans, the student should read this Guide Book thoroughly, and follow the instructions and advice given during the orientation and by the supervisors.

> The Course Schedule is provided at the beginning of each academic year.
> Schedules for intensive classes will be posted on a bulletin board when the details are fixed.

(2) Class registration

Students must register for classes using Dream Campus at the TUT website
https://www.ead.tut.ac.jp/portal/
or by the form "Application for Subjects" during the designated period.

*Classes cannot be registered for nor withdrawn from after the designated registration period. Classes with no registration will not be accredited in any case.

NOTES

1) If the student does not attend the classes nor take the examinations, credits will not be given even if the registration is made.
2) A student cannot re-register for a subject once credits are given.

3) Only one subject can be registered for in a given time schedule. Note that this does not apply to subjects being repeated for examinations only, or intensive subjects.

(3) Confirming and amending the registration

To confirm or amend class registration, students should access Dream Campus, and follow the manuals instructions.

(4) Repeating classes

In principal, a student who has failed a subject with regular examinations or has not gained credits for some other reasons can take the same subject again in the next academic year. To repeat a subject, the student must register again.

(5) Repeating classes by examination

When a subject instructor approves a student's credits by allowing examination without re-attending the classes, the student can register for the subject using the form "Application for Registration for Repeating Subjects (by Examination)".
*Only the subjects failed with "D" grade are eligible for this.

2. Examination

Examinations include regular examinations and make-up examinations.

(1) Regular examination

In principle regular examinations shall be held during the set period at the end of each term.

All students are to check the examination schedule in the academic calendar at Dream Campus or on the bulletin boards. Note that examinations may be held at any time found necessary by the subject instructor.

(2) Make-up examination

1) Make-up examinations shall be held only when a student cannot take the regular examination for one of the following reasons. The student must gain the approval of the subject instructor using the form "Request for a make-up examination".

a) Illness (doctor's medical certificate must be submitted)
b) Accidents, disaster (certificate must be submitted), or other special reason (a letter explaining the reason must be submitted)

2) "Request for a make-up examination" must be submitted to the Educational Affairs Division within one week from the final date of the regular examination.

3) If a student fails to take the make-up examination, further examinations will not be allowed.

(3) Approval of credits and evaluation

Credits are approved from the subject instructor.

1) Grades are calculated according to the following criteria.

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) Results will be available on Dream Campus at a fixed time after the examination.

(4) System for appealing grades

Students who have concerns about their grades for a particular semester should inquire from the class instructor. If students have complaints regarding the instructor's response, they can submit an appeal. Students, however, cannot appeal the reason or basis for the grade.

Students should contact the Educational Affairs Division for details.

3. Maximum years of attendance and related matters

(1) Maximum years of attendance

A student may not be in the master's twinning course at the university for more than two years.

(2) Leave of absence

If a student cannot attend classes for two or more months consecutively due to illness or other special reasons, the student may submit the form "Request for leave of absence" to the Educational Affairs Division after getting approval from the supervisor, a member of the academic affairs committee, and their department head. Upon approval by the President, the student can take a leave of absence (maximum two years in total).

The period of this absence will not be counted in the "Maximum years of attendance" mentioned in paragraph (1) above.
To return to school after the approved period ends, the student must submit the form "Notice of return to university".
To return to school before the approved period following the removal of cause of absence, the student must submit the form "Application for return to university" and obtain approval.

(3) Withdrawal

If a student wants to withdraw from the university, the student must submit the form "Application for withdrawal from university" to the Educational Affairs Division after getting the approval from the supervisor, a member of the academic affairs committee, and their department head. Upon approval by the President, the student can withdraw from the university.
Note that the tuition fee has to be paid in full even if the student withdraws in the middle of a term.

(4) Removal from the University

A student will be removed from the university for the following reason.
1) A student exceeds the period mentioned above in paragraph (1) "Maximum years of attendance".
2) A student cannot return to school after the period of absence mentioned above in paragraph (2) "Leave of absence".
3) A student dies, or disappears.
4) A student who has been approved for half exemption or postponement of admission fee payment and does not pay the admission fee by the designated date.
5) A student fails to pay the tuition and does not pay even after a warning.

4. Other matters

(1) Information about canceled or make-up classes

All students are requested to double-check their class schedules and other information using the following means:

Location		information
Lecture hall at 1st floor, A-bldg.	Central Bulletin Board (panel board)	Class schedule changes
	Electronic Bulletin Board (LCD)	Canceled or make-up classes, rescheduled notices
	Glass-covered Bulletin Board	Others
TUT website	https://www.ead.tut.ac.jp/board/main.aspx	Canceled or make-up classes
TUT website for mobile phones	https://www.ead.tut.ac.jp/Mobileboard/main.aspx *Mobile tagging by camera phones	Canceled or make-up classes

(2) Classes/exams when a STORM WARNING is announced.

If a Storm Warning (*Bo-fu Keiho*) is announced for Toyohashi city or the South-east area of the Mikawa region, TUT will deal with classes or examinations as follows:

1) To prevent any accident, all classes will be canceled during the Storm Warning.

2) If the Storm Warning is cleared before 7:00 am, all classes will be on schedule.

3) If the Storm Warning is cleared between 7:00 am and 11:00 am, all classes will start from the 3rd period (*Classes in the 1st and 2nd period will be canceled).

4) If the Storm Warning continues after 11:00 am, all classes will be canceled.

*All cancelled classes and examinations will be rescheduled.

5) Whether or not a storm warning is announced, classes may be canceled because of suspension of public transportation service or some similar occurrence, at the discretion of the Vice President for Educational Affairs.

6) If cancelled classes cannot be held on YOBIBI (optional extra day), and final exams, on the alternate exam day, a Saturday may be used as an alternate day for classes or exams.

(3) Information about RESCHEDULED CLASSES/EXAMS

Classes/exams canceled because of natural disasters will be rescheduled on "YOBIBI" (an optional extra day). YOBIBI may also be used for makeup classes. Students may check the YOBIBI schedules two weeks before the dates, on the bulletin board at lecture hall, A-Bldg.

*YOBIBI will be used for rescheduling classes/exams cancelled by storm warnings and the like as a priority.
Students must double check the information from TUT especially for unexpected events.

(4) University's e-mail account

TUT strongly recommends all students to set up the e-mail forwarding service in order to receive important information of class-scheduling, grading and other communications from the university.

(5)Absence from classes

When you have to be absent from classes due to illness, bereavement or other reasons, you need to inform these reasons to your subject instructor yourself.
Absences will be dealt with at the discreation of subject instructors.

Reasons for Absence	Documents you should submit	Procedure
Illness/Injury	Medical certificate or Medical expense receipts	Students inform lecturers directly
Bereavement leave	Letter or notice of funeral	Students inform lecturers directly
Infectious diseases*	Medical certificate or Medical expense receipts	Students inform Student Affairs Division (0532-44-6553), TUT office staff will report to lecturers.

*TUT may require suspension in order to prevent the spread of infection. Suspension orders will be posted on the bulletin board at A-building.

III Curriculum

1. Classes and credits

(1) Classes

Classes are divided into General Subjects and Specialized Subjects. Numbers of credits are set for each subject.

For the subjects to be offered, see the following pages.
See the web syllabus for the details of each subject.

(2) Compulsory subjects and elective subjects

1) Compulsory subjects are the subjects that must be completed as a 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

Teaching types of classes are lectures, exercises, experiments, practical or hands-on training, and they are offered individually or in combinations. The class time for one credit is calculated according to the following standards.

*A typical class in university is counted as 2 hours.

  1) For lectures, one credit requires 15 hours of classes.

  2) For exercises, one credit requires 30 hours of classes.

  3) For experiments, practical or hands-on training, one credit requires 45 hours of classes.

(4) School term

A school term 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 subjects (Twinning Program・Double Degree Program)

Compulsory / Elective	Subject Name	Credits	Classes/Week		Instructor	note
			Fall 2015.10 - 2016.3	Spring 2016.4 - 2016.9		
Elective	Management Science	2		1	T. Fujiwara	
	Industrial Policies	2		1	H. Shibusawa	
	Culture and Communication I	2			M. Kato	
	Culture and Communication II	2	1		M. Ikematsu	
	Japanese Life Today	2		1		
	Intercultural Communication	2		1	Y. Muramatsu	

Mechanical Engineering (Twinning Program)

2015.10

Compulsory / Elective	Subject Name	Credits	Classes/Week				Instructor	note
			Fall 1	Fall 2	Spring 1	Spring 2		
			2015.10 - 2016.3		2016.4 - 2016.9			
Compulsory	Seminar on Mechanical Engineering	6	6				Supervisor	
	Thesis Research on Mechanical Engineering	6	9				Supervisor	
Elective	Vibration Engineering	1			1		S. Kawamura	
	Deformation Processing Technology	1					K. Mori	
	Applied Mechanics of Materials	1					T. Adachi	
	Micromachining Engineering	1		1			T. Shibata	
	Joining and Surfacing of Materials	1			1		M. Fukumoto	
	Science and Technology of Thin Films	1					M. Izaki	
	Properties and Applications of Engineering Materials	1		1			H. Miura	
	Time-frequency Analysis and Wavelet Transform	1		1			Z. Zhang	
	Modeling and Analysis of Dynamical Control Systems	1			1		K. Terashima	
	High-Speed Mechanics and Optical Measurement	1					S. Suzuki	
	Robot Kinematics	1	1				N. Uchiyama	
	Applied Thermal Engineering	1					K. Kitamura	
	Advanced Applied Fluid Engineering	1	1				H. Yanada	
	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）

Compulsory / Elective	Subject Name	Credits	Classes/Week		Instructor	note
			Fall 2015.10 - 2016.3	Spring 2016.4 - 2016.9		
Compulsory	Seminar on Electrical and Electronic Information Engineering	6	6		Supervisor	
	Thesis Research on Electrical and Electronic Information Engineering	6	9		Supervisor	
Elective	Material Science for Electronics 1	2			M. Fukuda Y. Nakamura H. Muto Undecided	
	Material Science for Electronics 2	2	1		M. Fukuda Y. Nakamura H. Muto Undecided	
	Physics for Electronics 1	2			A. Matsuda T. Hattori T. Ishiyama H. Takagi	
	Physics for Electronics 2	2		1	A. Matsuda T. Hattori T. Ishiyama H. Takagi	
	Electrical Energy Systems 1	2			H. Takikawa Y. Sakurai N. Hozumi	
	Electrical Energy Systems 2	2	1		H. Takikawa Y. Sakurai N. Hozumi	
	Electrical Technology and Materials 1	2			Y. Suda R. Inada Yo. Murakami	
	Electrical Technology and Materials 2	2		1	Y. Suda R. Inada Yo. Murakami	
	Semiconductor Physics 1	2			A. Wakahara H. Okada T. Kawano	
	Semiconductor Physics 2	2	1		A. Wakahara H.Okada T. Kawano	
	LSI Process 1	2			K. Sawada Yu. Murakami H. Sekiguchi K. Takahashi	
	LSI Process 2	2		1	K. Sawada Yu. Murakami H. Sekiguchi K. Takahashi	
	Information and Communication Technology 1	2			T. Ohira H. Uehara Undecided	
	Information and Communication Technology 2	2		1	T. Ohira H. Uehara Undecided	
	Advanced Electronic Information System 1	2			S. Ichikawa M. Tamura	
	Advanced Electronic Information System 2	2	1		S. Ichikawa M. Tamura	
	Methodology of R & D 1	2	1		Supervisor	
	Methodology of R & D 2	2		1	Supervisor	

Computer Science and Engineering（Twinning Program）

2015.10

Compulsory / Elective	Subject Name	Credits	Fall 1	Fall 2	Spring 1	Spring 2	Instructor	note
			2015.10 - 2016.3		2016.4 - 2016.9			
Compulsory	Seminar on Computer Science and Engineering	6	6				Supervisor	
	Thesis Research on Computer Science and Engineering	6	9				Supervisor	
Elective	Speech and Language Processing, Advanced	2				1	T. Akiba K. Yamamoto	
	Networking, Advanced 1	1	1				K. Umemura	
	Networking, Advanced 2	1		1			R. Ohmura	
	Advanced Robotics and Informatics 1	1	1				J. Miura	
	Advanced Robotics and Informatics 2	1		1			M. Okada	
	Web Data Engineering 1	1			1		M. Aono	
	Web Data Engineering 2	1					S. Kuriyama	
	Computers and Education	2				1	K. Kawai	
	Image Processing, Advanced	2	1				Y. Kanazawa Y. Sugaya	
	Algorithm Engineering, Advanced	2					S. Masuyama	
	Computer Systems, Advanced	2	1				R. Kobayashi	
	Quantum Biology and Materials Science	2				1	N. Kurita H.Goto	
	Complex Systems and Intelligent Informatics 1	1	1				K. Murakoshi	
	Complex Systems and Intelligent Informatics 2	1		1			Y. Ishida	
	Advanced Chemoinformatics	2					Y. Takahashi H. Kato	
	Bio-physical Information Systems 1	1			1		N. Fukumura	
	Bio-physical Information Systems 2	1				1	J. Horikawa	
	Advanced Topics in Brain and Cognitive Sciences	2					S. Nakauchi M. Kitazaki	

Environmental and Life Sciences（Twinning Program）

Compulsory / Elective	Subject Name	Credits	Classes/Week				Instructor	note
			Fall 1	Fall 2	Spring 1	Spring 2		
			2015.10 - 2016.3		2016.4 - 2016.9			
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		1			N. Kakuta	
	X-ray Spectroscopy for Catalytic Engineering	1				1	T. Mizushima	
	Applied Physical Chemistry I	1			1		A. Matsumoto	
	Advanced Polymer Chemistry	1	1				S. Itsuno N. Haraguchi	
	Advanced Polymer Engineering	1		1			E. Yoshida	
	Special Topics in Applied Organic Chemistry	1			1		S. Iwasa K. Shibatomi	
	Developmental Neuroscience	1				1	S. Yoshida R. Numano	
	Advanced Molecular Life Science	1	1				T. Tanaka S. Umekage	
	Advanced Applied Biochemistry and Biotechnology	1		1			A. Hiraishi T. Eki	
	Advanced Electrical and Electronic Technology for Ecological Engineering	1			1		S. Tanaka K. Takashima S. Ariyoshi	
	Advanced Biomaterials Engineering	1				1	H. Tsuji R. Tero	
	Advanced Reaction Engineering	1			1		T. Oguchi	
	Advanced Sustainable Coordinator	1				1	N. Goto T. Tokairin	
	Advanced Supercritical Fluid Engineering	1				1	H. Daimon	
	Applied Environmental Biology	1	1				A. Nakabachi	
	※ 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 supervisor about class schedule of this subject

Architrcture and Civil Engineering (Twinning Program)

2015.10

Compulsory / Elective	Subject Name	Credits	Classes/Week Fall 2015.10 - 2016.3	Classes/Week Spring 2016.4 - 2016.9	Instructor	note
Compulsory	Seminar on Architecture and Civil Engineering	6	6		Supervisor	
	Thesis Research on Architecture and Civil Engineering	6	9		Supervisor	
Elective	Elasticity and Stability	2	1		Y. Matsumoto	
	Finite Element Method for Continua and Bar Structures	2			S. Nakazawa	
	Seismic Evaluation of Existing Buildings	2		1	T. Matsui	
	Seismic Design of Structures	2	1		T. Saito	
	Geotechnical Analysis	2			K. Miura	
	Building Science: Indoor Air Quality and Ventilation	2		1	H. Matsumoto	
	Building and Urban Thermal Environment	2			unknown	
	Coastal Hydraulics	2	1		S. Kato	
	Water Environment Engineering I	2		1	K. Yokota	
	Water Environment Engineering II	2			T. Inoue	
	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	
	Adavnced Architectual Planning	2			Y. Kakino	
	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 supervisor about class schedule of this subject

Mechanical Engineering (Double Degree Program)

Compulsory / Elective	Subject Name	Credits	Classes/Week				Instructor	note
			Fall 1	Fall 2	Spring 1	Spring 2		
			2015.10 - 2016.3		2016.4 - 2016.9			
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	
	Internship	—	12				Supervisor	
Elective	Advances in Mechanical Design	2		1			S. Kawamura T. Shibata	
	Advances in Material Science and Manufacturing	2		1			M. Fukumoto H. Miura	
	Advances in Thermal and Fluid Mechanics	2	2				S. Noda H. Yanada	
	Modeling and Analysis of Dynamical Control Systems	2				1	K. Terashima	
	Engineering Safety	2						
	Robotics	2	1				N.Uchiyama	
	Information Processing in Robotics	2						
	Time-frequency Analysis and Wavelet Transform	1		1			Z. Zhang	
	High-speed Mechanics and Optical Measurement	1					S. Suzuki	

Course Requirement Guide Book

（**October 2015**）

International Doctoral Degree Program

TOYOHASHI
UNIVERSITY OF TECHNOLOGY

1-1 Hibarigaoka Tenpaku-cho Toyohashi-shi Aichi 441-8580,JAPAN
Tel : +81-0532-44-6506　Fax : +81-0532-44-6509

I Requirements for completion

1. Requirements for completion

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

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

Classification	Required credits for completion	Remarks
Mechanical Engineering	12	4 credits in total can be substituted with a combination of the following options , with permission from the student's supervisor.
Electrical and Electronic Information Engineering	12	1. Specialized subjects from International Master's Degree Program (except for Advanced subjects)
Computer Science and Engineering	12	2. Subjects of a different department from International Doctoral Degree Program
Environmental and Life Sciences	12	3. Subjects from doctoral program of student's own department held in Japanese
Architecture and Civil Engineering	12	(The same subject cannot be taken in both Japanese and English)

2. Application for degree

Only a student who has gained the credits required for completion, or who is expected to gain the required credits can apply for the doctoral degree. Degree application and procedures for submission of a thesis for a doctoral degree shall be posted on a bulletin board.

II Class registration, examination, and attendance period

1. Class registration method

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

(1) Making study plans

To make study plans, the student should read this Guide Book thoroughly, and follow the instructions and advice given during the orientation and by the supervisor.

The Course Schedule is provided at the beginning of each academic year.
Schedules for intensive classes will be posted on a bulletin board when the details are fixed.

(2) Class registration

Students must register for classes using Dream Campus at the TUT website
https://www.ead.tut.ac.jp/portal/
or by the form "Application for Subjects" during the designated period.
*Classes cannot be registered for nor withdrawn from after the designated registration period. Classes with no registration will not be accredited in any case.

NOTES

1) To take Specialized subjects from International Master's Degree Program (except Advanced topics subjects), subjects from your own department held in Japanese, or other department's subjects from International Doctoral Degree Program, Students must obtain approval from their supervisor and the subject instructor with the form "Application for Registration in Subjects in Other Department".

2) If the student does not attend the classes nor take the examinations, credits will not be given even if the registration is made.

3) A student cannot re-register for a subject for which credits are given.

4) Only one subject can be registered for in a given time schedule. Note that this does not apply to subjects being repeated for intensive subjects.

(3) Confirming and amending the registration

To confirm or amend class registration, students should access Dream Campus, and follow the manuals instructions.

(4) Repeating classes

In principal, a student who has failed a subject with regular examinations or has not gained credits for some other reason can take the same subject again in the next academic year. To repeat a subject, the student must register again.

2. Examination

Examination includes regular examinations and make-up examinations.

(1) Regular examination

In principle regular examinations shall be held during the set period at the end of each term.

All students are to check the examination schedule in the academic calendar at Dream Campus or on the bulletin boards. Note that examinations may be held at any time found necessary by the subject instructor.

(2) Make-up examination

1) Make-up examinations shall be held only when a student cannot take the regular examination for one of the following reasons. The student must gain the approval of the subject instructor using the form "Request for a make-up examination".

 a) Illness (doctor's medical certificate must be submitted)
 b) Accidents, disaster (certificate must be submitted), or other special reason (a letter explaining the reason must be submitted)

2) "Request for a make-up examination" must be submitted to the Academic Affairs Division within one week from the final date of the regular examination.

3) If a student fails to take the make-up examination, further examinations will not be allowed.

(3) Approval of credits and evaluation

Credits are approved by the subject instructor.
1) Grades are calculated according to the following criteria.

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) Results will be available on Dream Campus at a fixed time after the examination.

(4) System for appealing grades

Students who have concerns about their grades for a particular semester should inquire from the class instructor. If students have complaints regarding the instructor's response, they can submit an appeal. Students, however, cannot appeal the reason or basis for the grade.
Students should contact the Educational Affairs Division for details.

3. Maximum years of attendance and related matters

(1) Maximum years of attendance

A student may not be in the doctoral course at the university for more than six years.

(2) Leave of absence

If a student cannot attend classes for two or more months consecutively due to illness or other special reasons, the student may submit the form "Request for leave of absence" to the Academic Affairs Division after getting approval from the supervisor, a member of the academic affairs committee, and their department head. Upon approval by the President, the student can take a leave of absence (maximum two years in total).

The period of this absence will not be counted in the "Maximum years of attendance" mentioned in paragraph (1) above.
To return to school after the approved period ends, the student must submit the form "Notice of return to university".
To return to school before the approved period following the removal of the cause of absence, the student must submit the form "Application for return to university" and obtain approval.

(3) Withdrawal

If a student wants to withdraw from the university, the student must submit the form "Application for withdrawal from university" to the Academic Affairs Division after getting approval from the supervisor, a member of the academic affairs committee, and the department head. Upon approval by the President, the student can withdraw from the university.
Note that the tuition fee has to be paid in full even if the student withdraws in the middle of a term.

(4) Removal from the University

A student will be removed from the university for the following reason.
1) A student exceeds the period mentioned above in paragraph (1) "Maximum years of attendance".
2) A student cannot return to school after the period of absence mentioned above in paragraph (2) "Leave of absence".
3) A student dies, or disappears.
4) A student who has been approved for half exemption or postponement of admission fee payment and does not pay the admission fee by the designated date.
5) A student fails to pay the tuition and does not pay even after a warning.

4. Other matters

(1) Information about canceled or make-up classes

All students are requested to double-check their class schedules and other information using the following means:

Location		information
Lecture hall at 1st floor. A-bldg.	Central Bulletin Board (panel board)	Class schedule changes
	Electronic Bulletin Board (LCD)	Canceled or make-up classes, rescheduled notices
	Glass-covered Bulletin Board	Others
TUT website	https://www.ead.tut.ac.jp/board/main.aspx	Canceled or make-up classes
TUT website for mobile phones	https://www.ead.tut.ac.jp/Mobileboard/main.aspx *Mobile tagging by camera phones	Canceled or make-up classes

(2) Classes/exams when a STORM WARNING is announced.

If a Storm Warning (*Bo-fu Keiho*) is announced for Toyohashi city or the South-east area of the Mikawa region, TUT will deal with classes or examinations as follows:

1) To prevent any accident, all classes will be canceled during the Storm Warning.

2) If the Storm Warning is cleared before 7:00 am, all classes will be on schedule.

3) If the Storm Warning is cleared between 7:00 am and 11:00 am, all classes will start from the 3rd period (*Classes in the 1st and 2nd period will be canceled).

4) If the Storm Warning continues after 11:00 am, all classes will be canceled.

*All cancelled classes and examinations will be rescheduled.

5) Whether or not a storm warning is announced, classes may be canceled because of suspension of public transportation service or some similar occurrence, at the discretion of the Vice President for Educational Affairs.

6) If cancelled classes cannot be held on YOBIBI (optional extra day), and final exams, on the alternate exam day, a Saturday may be used as an alternate day for classes or exams.

(3) Information about RESCHEDULED CLASSES/EXAMS

Classes/exams canceled because of natural disasters will be rescheduled on "YOBIBI" (an optional extra day). YOBIBI may also be used for makeup classes. Students may check the YOBIBI schedules two weeks before the dates, on the bulletin board at lecture hall, A-Bldg.

*YOBIBI will be used for rescheduling classes/exams cancelled by storm warnings and the like as a priority.
Students must double check the information from TUT especially for unexpected events.

(4) University's e-mail account

TUT strongly recommends all students to set up the e-mail forwarding service in order to receive important information of class-scheduling, grading and other communications from the university.

(5) Absence from classes

When you have to be absent from classes due to illness, bereavement or other reasons, you need to inform these reasons to your subject instructor yourself.
Absences will be dealt with at the discretion of subject instructors.

Reasons for Absence	Documents you should submit	Procedure
Illness/Injury	Medical certificate or Medical expense receipts	Students inform lecturers directly
Bereavement leave	Letter or notice of funeral	Students inform lecturers directly
Infectious diseases*	Medical certificate or Medical expense receipts	Students inform Student Affairs Division (0532-44-6553), TUT office staff will report to lecturers.

*TUT may require suspension in order to prevent the spread of infection.
Suspension orders will be posted on the bulletin board at A-building.

III Curriculum

1. Classes and credits

(1) Classes

Classes in Doctoral program are only Specialized Subjects. Numbers of credits are set for each subject.

For the subjects to be offered, see the following pages.
See the   web syllabus for the details of each subject.

(2) Compulsory subjects and elective subjects

1) Compulsory subjects are the subjects that must be completed as a requirement for the major.

2) Elective subjects can be selected and taken from those subjects being offered for the designated numbers of credits.

(3) Calculating credits

Teaching types of classes are lectures, exercises, experiments, practical or hands-on training, and they are offered individually or in combinations. The class time for one credit is calculated according to the following standards.

*A typical class in university is counted as 2 hours.

  1) For lectures, one credit requires 15 hours of classes.

  2) For exercises, one credit requires 30 hours of classes.

  3) For experiments, practical or hands-on training, one credit requires 45 hours of classes.

(4) School term

A School term 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)

Mechanical Engineering
(Doctoral Degree Program)

2015.10

Compulsory / Elective	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade	Note
				Fall	Spring	2016.10 - 2017.9	2017.10 - 2018.9	
				2015.10 - 2016.3	2016.4 - 2016.9			
Compulsory	Advanced Seminar on Mechanical Engineering 1	4	Supervisor	4				
	Advanced Seminar on Mechanical Engineering 2	1	Supervisor			1		
	Seminar on Interdisciplinary Research	1				1		
Elective	Advanced Mechanical Systems	2	S. Kawamura T. Adachi Y. Takeichi T. Ise		1			
	Advanced Production Processes	2	K. Mori T. Shibata Y. Abe	1				
	Advanced Manufacturing Processes	2	M. Fukumoto T. Yasui M. Izaki S. Yokoyama		1			
	Advanced Materials Science	2	H. Miura Y. Todaka M. Kobayashi	1				
	Engineering of Intelligent Robotics	2	K. Terashima S. Suzuki T. Miyoshi		1			
	Advanced Production and Instrumentation Systems	2	Z. Zhang N. Uchiyama T. Miyake	1				
	Advanced Energy Engineering	2	K. Kitamura T. Suzuki Y. Nakamura		1			
	Advanced Environmental Engineering	2	A. Iida N. Sekishita H. Yanada	1				

Electrical and Electronic Information Engineering
（Doctoral Degree Program）　　　　　　　　　　　　　　　　　　　　　　**2015.10**

Compulsory / Elective	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade	Note
				Fall	Spring			
				2015.10 - 2016.3	2016.4 - 2016.9	2016.10 - 2017.9	2017.10 - 2018.9	
Compulsory	Seminar on Electrical and Electronic Information Engineering 2	4	Supervisor	4				
	Seminar on Electrical and Electronic Information Engineering 3	1	Supervisor			1		
	Seminar on Interdisciplinary Research	1				1		
Elective	Advanced Electronic Materials 1	2	M. Fukuda Y. Nakamura Undecided		1			
	Advanced Electronic Materials 2	2	A. Matsuda T. Hattori T. Ishiyama H. Takagi	1				
	Advanced Electrical Systems 1	2	H. Takikawa Y. Sakurai N. Hozumi	1				
	Advanced Electrical Systems 2	2	Y. Suda R. Inada Yo. Murakami		1			
	Advanced Microelectronics 1	2	K. Sawada Yu. Murakami H. Sekiguchi K. Takahashi		1			
	Advanced Microelectronics 2	2	A. Wakahara H. Okada T. Kawano	1				
	Advanced Information and Communication Systems 1	2	T. Ohira H. Uehara Undecided		1			
	Advanced Information and Communication Systems 2	2	S. Ichikawa M. Tamura	1				
	Methodology of R & D	2	Supervisor	1				

Computer Science and Engineering
(Doctoral Degree Program)   **2015.10**

Compulsory / Elective	Subject Name	Credits	Instructor	1st grade				2nd grade	3rd grade	note
				Fall 1	Fall 2	Spring1	Spring2			
				2015.10 - 2016.3		2016.4 - 2016.9		2016.10 - 2017.9	2017.10 - 2018.9	
Compulsory	Seminar on Computer Science and Engineering 1	4	Supervisor	4						
	Seminar on Computer Science and Engineering 2	1	Supervisor					1		
	Seminar on Interdisciplinary Research	1						1		
Elective	Speech and Language Processing	2	T. Akiba K. Yamamoto			1				
	Computer Network Engineering 1	1	K. Umemura	1						
	Computer Network Engineering 2	1	R. Ohmura		1					
	Robotics Intelligence 1	1	J. Miura	1						
	Robotics Intelligence 2	1	M. Okada		1					
	Web Data Engineering, Advanced 1	1	M. Aono			1				
	Web Data Engineering, Advanced 2	1	S. Kuriyama					0.5		
	Pattern Information Processing	2	Y. Kanazawa Y. Sugaya	1						
	Theoretical Computer Science, Advanced	2	S. Masuyama					1		
	Computer System Engineering	2	R. Kobayashi	1						
	Molecular Simulation	2	N. Kurita H. Goto			1				
	Advanced Complex Systems and Intelligent Informatics 1	1	K. Murakoshi	1						
	Advanced Complex Systems and Intelligent Informatics 2	1	Y. Ishida		1					
	Advanced Molecular Information Engineering	2	Y. Takahashi H. Kato					1		
	Biological Information System Engineering 1	1	N. Fukumura			1				
	Biological Information System Engineering 2	1	J. Horikawa				1			
	Brain and Neural System Engineering	2	S. Nakauchi M. Kitazaki					1		

◆ "0.5" signifies that this subject will be held in any one of a quarter term (Spring 1, Spring 2, Fall 1 or Fall 2).

Environmental and Life Sciences
(Doctoral Degree Program)

Compulsory / Elective	Subject Name	Credits	Instructor	1st grade Fall 2015.10 - 2016.3	1st grade Spring 2016.4 - 2016.9	2nd grade 2016.10 - 2017.9	3rd grade 2017.10 - 2018.9	Note
Compulsory	Seminar on Environmental & Life Sciences 1	4	Supervisor	4				
	Seminar on Environmental & Life Sciences 2	1	Supervisor			1		
	Seminar on Interdisciplinary Research	1				1		
Elective	Advanced Environmental Technology 1	2	S. Tanaka K. Takashima S. Ariyoshi		1			
	Advanced Environmental Technology 2	2	A. Matsumoto T. Oguchi T. Mizushima	1				
	Advanced Ecological Engineering	2	N. Kakuta H. Nakano N. Goto H. Daimon T. Tokairin		1			
	Advanced Biotechnology 1	2	T. Eki A. Hiraishi T. Tanaka A. Nakabachi K. Sakuma		1			
	Advanced Biotechnology 2	2	E. Yoshida S. Yoshida S. Umekage R. Numano	1				
	Advanced Molecular Function Chemistry 1	2	S. Itsuno S. Iwasa K. Shibatomi N. Haraguchi		1			
	Advanced Molecular Function Chemistry 2	2	H. Tsuji Y. Saito Y. Hirata R. Tero	1				

Architecture and Civil Engineering
(Doctoral Degree Program) **2015.10**

Compulsory / Elective	Subject Name	Credits	Instructor	1st grade		2nd grade	3rd grade	Note
				Fall	Spring			
				2015.10 - 2016.3	2016.4 - 2016.9	2016.10 - 2017.9	2017.10 - 2018.9	
Compulsory	Seminar on Architecture and Civil Enigneering 1	4	Supervisor	4				
	Seminar on Architecture and Civil Enigneering 2	1	Supervisor			1		
	Seminar on Interdisciplinary Research	1				1		
Elective	Advanced Mechanics and Design of Spatial Structure Systems	2	S. Nakazawa	1				
	Advanced Structural Design	2	T. Saito T. Matsui	1				
	Advanced Building Environmental Engineering and Building Services	2	H. Matsumoto		1			
	Advanced Theory in Architectural Design	2	S. Matsushima Y. Kakino	1				
	Advanced History of Archircture	2	H. Izumida	1				
	Sustainable Urban Planning	2	J. Asano	1				
	Advanced Geologic Hazard Mitigation Planning	2	K. Miura	1				
	Advanced Water Environmental Engineering	2	T. Inoue S. Kato K. Yokota	1				
	Advanced Transportation Systems and Economics	2	Y. Miyata H. Shibusawa		1			
	Advanced Environmental Economics and Planning	2	Y. Miyata	1				
	Advanced Management of Technology	2	T. Fujiwara H. Shibusawa		1			
	Advanced Western Culture	2	K. Aikyo		1			