Student Handbook of the Graduate School of Science and Engineering

[Engineering]

For Students Admitted in the 2017 Academic Year

Streamlined Five-Year Doctoral Program

(English)

Yamagata University

Graduate School of Science and Engineering

(Reference)

(Excerpt from the 2017 Academic Year Student Handbook of the Graduate School of Science and Engineering [Engineering])

I. Master's Program

1. Course Requirements

1-1 Supervisor

When students enroll at the university, they will be assigned a supervisor from among the faculty of the Master's program who will guide students with their coursework, the writing of their thesis, and more.

Students will submit a "Research Plan" at the beginning of each academic year based on the one-year research guidance plan presented by their supervisor. (Forms are shown on pages 11 and 12 and may be downloaded from the Faculty of Engineering website.)

● Download method

1. Click on the [Faculty of Engineering's Faculty of Engineering website] tab under the [Faculties, Graduate Schools, and Institute of Arts and Sciences website] tab on the Yamagata University website.
2. Click on "在学生の方" [Enrolled Students] and scroll down to "研究計画書(博士前期課程)" [Research Plan (Master's Program)].

1-2 Courses

Courses consist of seminars, special exercises A, and special experiments A ("research thesis special exercises" for the Management of Technology for Manufacturing (MOT) major).

(1) Seminar

Students deepen their expertise and skills by taking courses offered by their majors. In addition, students may take seminars in the Graduate School of Science and Engineering (Engineering related) to build a broad engineering foundation.

(2) Special Exercise A

Students develop foreign language proficiencies through exercises in which students take turns presenting on basic literature in their fields of specialty. At the same time, students receive training on collecting necessary information from a vast pool of information.

(3) Special Experiment A

Students acquire knowledge and skills systematically regarding fundamental and advanced tools of research in their fields of specialty, namely, experiment equipment, measurement devices, and information processing. Students develop abilities to conduct research in a planned manner by performing experiments on research themes.

The courses offered by each major and their number of credits are shown in the prescribed table.
Students may take seminars offered by majors other than their own.

1-3 Study Reports

(1) At the beginning of the semester, students will choose the courses they would like to take in consultation with their supervisor and register for courses.

(2) For "Special Exercise A" and "Special Experiment A," **course registration is conducted only during the fourth semester**.

(3) To take seminars of other majors or seminars co-listed under multiple majors, students shall get permission from faculty in charge of the courses as well as the approval of their supervisor before registering for the seminars.

(4) Please be warned that students may not be able to take courses other than the ones they registered for.

1-4 Grading

(1) Grades are assigned based on a variety of factors, including exams, research reports, and grades of routine assignments.

(2) Grades are indicated by letters: S (Superior); A (Excellent); B (Good); C (Fair); and F (Failure). S, A, B, and C are passing grades, whiles F is a non-passing grade. The point allocations are as follows:

S (Superior) 90-100 points A (Excellent) 80-89 points B (Good) 70-79 points
C (Fair) 60-69 points F (Failure) 59 points or below

1-5 Credit Criteria

As a standard, a one-credit course shall require 45 hours of learning. Credits are calculated based on the following criteria based on the method of instruction and taking into consideration such factors as academic impact and studies required outside of the classroom:

(1) For seminars and exercises, 1 credit equals 15 classroom hours.
(2) For experiments and practical work, 1 credit equals 30 classroom hours.

Credits are given for courses that students took based on the above criteria and for which they received passing grades.

1-6 Study Criteria

(1) A minimum of 30 credits is needed to graduate. However, the Management of Technology for Manufacturing's Tohoku MITRAI Course requires 40 credits.
(2) As Elective Seminars, students may count seminars in their own majors, seminars of other majors (including Organic Materials Science), courses co-listed under various majors, and courses taken at other graduate schools.

Master's Program Study Criteria Table
(Chemistry and Chemical Engineering, Biochemical Engineering, Bio-System Engineering, Electrical Engineering)

Course Category	No. of Credits	Notes
Seminars in Own Major	10 credits	
Elective Seminars	10 credits or more	
Special Exercise A	4 credits	Compulsory
Special Experiment A	6 credits	Compulsory
Total	30 credits or more	

Master's Program Study Criteria Table (Informatics)

Course Category	No. of Credits	Notes
Seminars in Own Major	10 credits	
Elective Seminars	8 credits or more	
Literature Study	2 credits	Compulsory
Special Exercise A	4 credits	Compulsory
Special Experiment A	6 credits	Compulsory
Total	30 credits or more	

Master's Program Study Criteria Table (Mechanical Systems Engineering)

Course Category	No. of Credits	Notes
Seminars in Own Major	10 credits	Includes at least 6 credits of specialized basic courses
Elective Seminars	10 credits or more	Includes at least 4 credits of seminars of other majors
Special Exercise A	4 credits	Compulsory
Special Experiment A	6 credits	Compulsory
Total	30 credits or more	

Master's Program Study Criteria Table
(Management of Technology for Manufacturing: Value Creation Course)

Course Category	No. of Credits	Notes
Seminars in Own Major	14 credits	However, **"Introduction to Management of Technology A"** and **"Introduction to Management of Technology B"** are compulsory
Elective Seminars	10 credits or more	
Research Thesis Special Exercise	6 credits	Compulsory
Total	30 credits or more	

Master's Program Study Criteria Table
(Management of Technology for Manufacturing: Tohoku MITRAI Course)

Course Category	No. of Credits	Notes
Compulsory Courses	12 credits	Take **all courses with ◎mark**
Elective Seminars	22 credits or more	Includes Business Japanese I or IV
Research Thesis Special Exercise	6 credits	Compulsory
Total	40 credits or more	

1-7 Courses Taken at Other Graduate Schools

(1) Credits obtained from courses taken at other graduate schools (including overseas graduate schools) in accordance with the agreement set forth in Article 14 of the Yamagata University Graduate School Rules (Coursework at Other Graduate Schools) may be accredited as credits obtained through coursework at the Graduate School of Science and Engineering, indicated as courses taken at other graduate schools.

(2) Up to 10 credits, including special topics in science co-listed under all majors, may be accredited by the procedure in (1) above.

1-8 Review of Master's Thesis and Final Examination

If students show sufficient promise to master the courses specified in the study criteria and have received

research guidance, they will be eligible to write a Master's thesis and apply for review.

Submitted theses will be reviewed by a Thesis Review Panel selected by the Yonezawa District Committee.

The final examination will be implemented as oral or written response to questions by the Thesis Review Panel at thesis presentations conducted as public hearings organized for each major.

1-9 Graduation Requirements

(1) To graduate from the Master's program, students must be enrolled in the graduate school for at least two years, acquire the credits indicated in the study criteria table, and pass the review of Master's thesis and final examination upon receiving the necessary research guidance.

In the case of the Management of Technology for Manufacturing (MOT) major, the review of a specified research deliverable sometimes replaces the review of Master's thesis.

(2) For those who have demonstrated particularly outstanding research achievements, enrollment in the university for one year or more shall be sufficient for graduation.

1-10 Conferral of Degree

A Master's degree (in science or engineering) is conferred to those who completed the Master's program of the Graduate School of Science and Engineering (see Appendix Table of "Yamagata University Regulations on Degrees" later in this handbook).

1-11 Special Measures for the Education of Working Professionals

The Graduate School [Engineering] applies the special measures for education set forth in Article 14 of the Standards for the Establishment of the Graduate Schools, if it is deemed that such measures are especially needed for the education of working professionals. Working professionals shall be able to take courses as follows:

(1) Aside from normal class hours (8:50 a.m. to 3:55 p.m.), class hours pursuant to the special measures (4 p.m. to 9:10 p.m.) shall be established.

(2) Working professionals shall be able to take courses during their summer and winter breaks as needed.

(3) At the start of the relevant academic year, those wishing to take courses during the hours pursuant to the special measures shall obtain the approval of their supervisor, apply by submitting information such as the name of the applicable course, hours, and timeframe, and obtain the permission of the faculty in charge of the courses.

1-12 Course Requirements for the Program for Leading Graduate Schools

Students enrolled in iFront of the Program for Leading Graduate Schools pursuant to the provisions of Article 13-2 of the Yamagata University Graduate School Rules shall design their curriculum by the following method:

(1) The course requirements shall be in line with the requirements set forth in III. Program for Leading Graduate Schools, "Innovative Flex Course for Frontier Organic Material Systems" (Streamlined Five-Year Doctoral Program) (see p. 137 of this handbook).

(2) Students enrolled in this program shall be permitted to advance onto the doctoral program by passing the QE (Qualifying Examination: Doctoral Course Research Basic Skills Exam), without undergoing the review of Master's thesis and final examination.

(3) Students who passed the QE shall advance onto the doctoral program without completing the Master's program, and move up to the third-year of this program.

【Doctoral Prerequisite Master's Program for the Graduate School of Organic Materials Science for the Graduate School of Science and Engineering (Engineering)】

Fiscal Year　Research Plan (First Year)

Submission date:

Major		Student number	
Name			
Research title			
Research period	Entry date　　Planned completion date		
Research background			
Purpose			
Research action plan	【First year】 Apr-Jun ○○○○○○○○○○○○○○○○○○○○○○○○ Jul-Sep ○○○○○○○○○○○○○○○○○○○○○○○○ Oct-Dec ○○○○○○○○○○○○○○○○○○○○○○○○ Jan-Mar ○○○○○○○○○○○○○○○○○○○○○○○○ 【Second year】 Apr-Jun ○○○○○○○○○○○○○○○○○○○○○○○○ Jul-Sep ○○○○○○○○○○○○○○○○○○○○○○○○ Oct-Dec ○○○○○○○○○○○○○○○○○○○○○○○○ Jan-Mar ○○○○○○○○○○○○○○○○○○○○○○○○ ＊Students may present their plans in a manner that differs from the example given above.		
Research ethical education (confirmation)	Read the "For the Sound Development of Science -The Attitude of a Conscientious Scientist" pamphlet (Japan Society for Promotion of Science's editorial committee for "sound development of science"). Date　　（Signature）		

Supervisor＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

（Department name, and name/seal）

＊Prepare a research action plan for the first year, obtain your supervisor's approval, and submit.
＊Update and make additions to the plan based on research results from the first year for second and following years and submit.
＊Long-term students and past-year students should present the research action plan during the period of study.

【Doctoral Prerequisite Master's Program for the Graduate School of Science and Engineering (Engineering)】

Fiscal Year　Research Plan (Second Year)

Submission date:

Major		Student number	
Name			
Research title			
Research period	Entry date　　Planned completion date		
Research background			
Purpose			
Research action plan	【First year】 Apr-Jun ○○○○○○○○○○○○○○○○○○○○○○○○ Jul-Sep ○○○○○○○○○○○○○○○○○○○○○○○○ Oct-Dec ○○○○○○○○○○○○○○○○○○○○○○○○ Jan-Mar ○○○○○○○○○○○○○○○○○○○○○○○○ 【Second year】 Apr-Jun ○○○○○○○○○○○○○○○○○○○○○○○○ Jul-Sep ○○○○○○○○○○○○○○○○○○○○○○○○ Oct-Dec ○○○○○○○○○○○○○○○○○○○○○○○○ Jan-Mar ○○○○○○○○○○○○○○○○○○○○○○○○ ＊Students may present their plans in a manner that differs from the example given above.		
Research ethical education (confirmation)	Read the "For the Sound Development of Science -The Attitude of a Conscientious Scientist" pamphlet (Japan Society for Promotion of Science's editorial committee for "sound development of science"). Date　　(Signature)		

Supervisor＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

(Department name, and name/seal)

＊Update and make additions to the plan based on research results from the first year for second and following years and submit.

＊Long-term students and past-year students should suitably revise the content.

１－１３　Teacher's license

(1) License acquired

The Doctoral Prerequisite Master's Course for the Graduate School of Science and Engineering (Engineering) is an approved course for acquiring the credentials to receive a license as specified by the Education Personnel Certification Act and Rules for Enforcement of the Education Personnel Certification Act. Participants may obtain licenses as shown in the following table if they acquire required credits in courses for receiving a high school teacher Type 1 license (science, information, and engineering).

Acquired License Types and Subjects

Major	License type	License subjects
Bio-systems Engineering Electrical Engineering Mechanical Systems Engineering	High School Teacher Specialized License	Engineering
Chemistry and Chemical Engineering	High School Teacher Specialized License	Science, Engineering
Biochemical Engineering	High School Teacher Specialized License	Science
Informatics	High School Teacher Specialized License	Information, Engineering

(2) Basic requirements and minimum credits

Requirements / License type	Basic requirements	Minimum credits		
		Subject courses	Teaching courses	Subject or teaching courses
High School Teacher Specialized License	Master's Degree	２０	２３	１６ □２４

（Note） It is necessary to obtain at least 24 credits in "subject or teaching courses"(□) in order to acquire credentials for a high school teaching specialized license through the subject prerequisite course.

Subject courses, teaching courses, and subject or teaching courses in the minimum credits column (without the (□) mark) show minimum credits required for the various Type 1 licenses.

(3) Application procedure for receiving a teacher's license

Prefectural Boards of Education issue teacher's licenses. A person applying for a teacher's license hence must prepare required application forms and conduct application procedures for the subject Board of Education.

For applications submitted at the time of completing the subject prerequisite course, the educational affairs assistance section will handle interaction with the Yamagata Prefecture Board of Education. Please refer carefully to the bulletin board (central bulletin board) for details of the application procedure.

(4) Credit acquisition method

Students may obtain credentials for a license by competing requirements for the subject prerequisite course and the following credits.

Major	Credit acquisition method
Bio-systems Engineering Electrical Engineering Mechanical Systems Engineering	For an “engineering” license, it is necessary to obtain at least 24 credits from course items listed under “engineering” in the teaching course column of the “courses and credits table” for the subject major and common to the various majors.
Chemistry and Chemical Engineering	For a “science” license, it is necessary to obtain at least 24 credits from course items listed under “science” in the teaching course column of the “courses and credits table” for the subject major. For an “engineering” license, it is necessary to obtain at least 24 credits from course items listed under “engineering” in the teaching course column of the “courses and credits table” for the subject major.
Biochemical Engineering	For a “science” license, it is necessary to obtain at least 24 credits from course items listed under “science” in the teaching course column of the “courses and credits table” for the subject major.
Informatics	For an “information” license, it is necessary to obtain at least 24 credits from course items listed under “information” in the teaching course column of the “courses and credits table” for the subject major. For an “engineering” license, it is necessary to obtain at least 24 credits from course items listed under “engineering” in the teaching course column of the “courses and credits table” for the subject major and common to the various majors.

２．Guidelines for the Master's Thesis Review

Students who are expected to complete required classes and received necessary research supervision may prepare their Master's thesis and submit it for review after fulfilling various procedures. The submitted thesis shall be reviewed in accordance with detailed guidelines for the Graduate School of Science and Engineering. Thesis reviews follow the process presented in Figures 2-4.

Please submit documents with some extra time because thesis documents will not be accepted after the designated deadline.

２－１　Submission of the thesis topic

Submission deadline (day (or two days) prior in the case of holidays)

① Second term submission (March finish): December 10

② First term submission (September finish): June 10

２－２　Submission of the Master's thesis and other materials

Students shall submit the Master's thesis and other materials as specified below.

(1) Submission deadline (day (or two days) prior in the case of holidays)

① Second term submission (March finish): February 10（noon）

② First term submission (September finish): August 10

(2) Submitted items

① Master's thesis review application (prescribed form) 1 copy

② Master's thesis 3 copies

③ Thesis content summary (prescribed form) 3 copies

２－３　Rules for preparation of the Master's thesis

１　Master's thesis

(1) The Master's thesis shall be written in Japanese or English.

(2) It shall be written on A4 white paper used in an upright position with text presented in horizontal fashion.

(3) The front page of the Master's thesis shall specify the thesis title, the student's major, and the student's name. When the thesis is written in English, a Japanese translation of shall be shown underneath the title in parentheses.

(4) The Master's thesis shall be prepared on a PC or word processor or written clearly by hand using a black pen for Japanese. It shall be typed or prepared on a word processor for English.

(5) The Master's thesis format is not designated, but the document should use a suitable format that can be readily understood based on past examples (including figures, tables, and photographs).

(6) Reference documents shall be footnoted with the author's name (all authors), the name of the scientific magazine (book name), publisher, volume, page (starting-ending page), and year of issuance (Western dating).

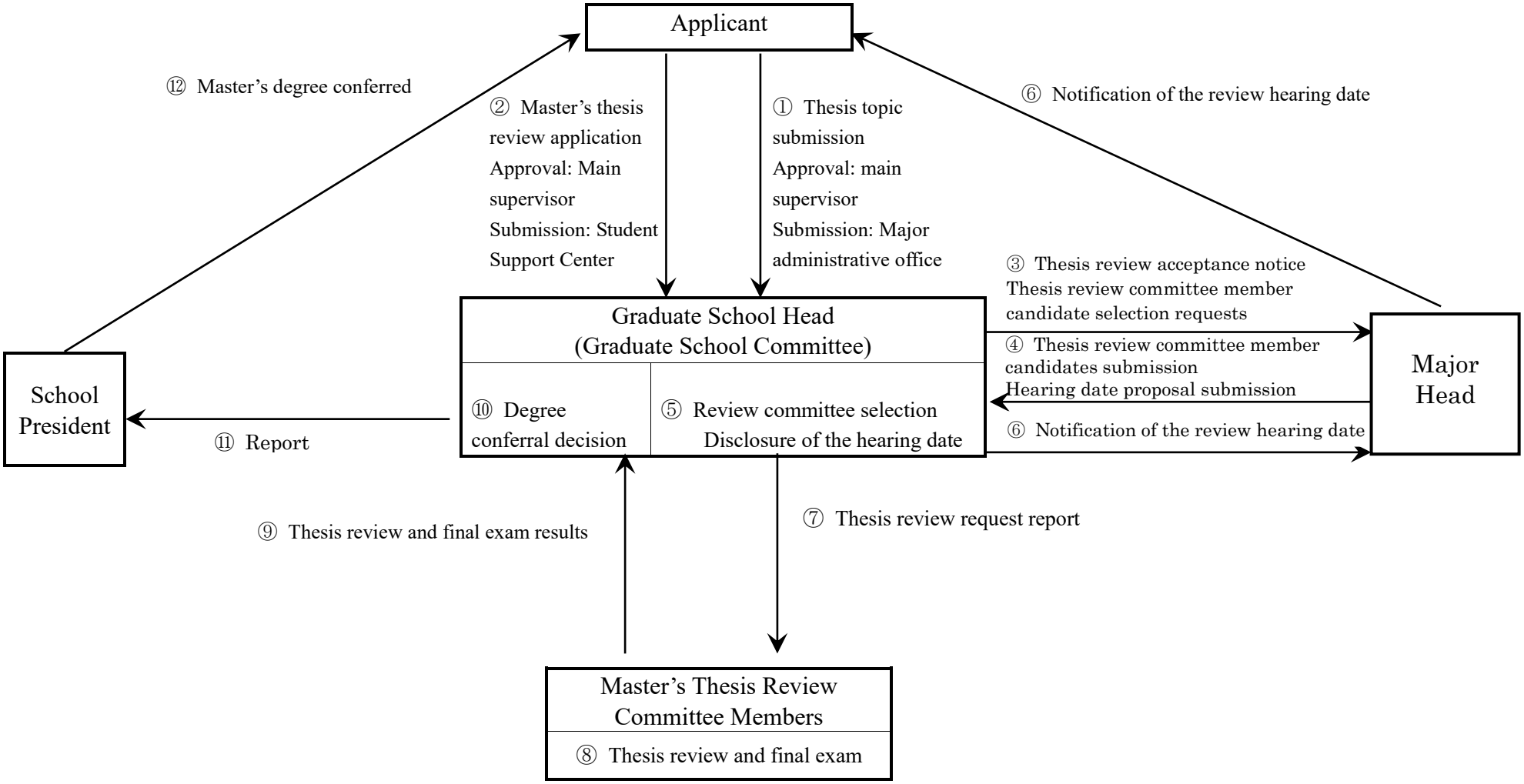
２　Rules for the Master's thesis summary

(1) A4 white paper shall be used in an upright position with text presented in horizontal fashion.

(2) The Master's thesis summary shall utilize the prescribed form and specify the thesis topic, the student's major, and the student's name.

(3) The Doctoral prerequisite Master's thesis summary shall be about 1,200 Japanese characters in length.

2－4　Flow of the Master's thesis review process



(Reference)

(Excerpt from the 2017 Academic Year Student Handbook of the Graduate School of Science and Engineering [Engineering])

II. Doctoral Program

1. Course Requirements

1-1 Supervisory Group

Upon entering the university, students will be assigned a main supervisor from among the faculty of the doctoral program in order to guide students through the processes, including the course curriculum and the writing of the thesis. Based on the student's research plan, the main supervisor will form a group of three or more supervisors, giving consideration to ensure that the supervisors' areas of expertise do not become one-sided.

1-2 Courses

The courses consist of seminars, special exercises B, research plan, special plan research, special educational training, and special experiments B ("regional technology vision exercises B" for Management of Technology for Manufacturing (MOT) major).

(1) Seminar

Students will take seminars in related fields of specialization in a balanced way, in order to foster expertise and skills in a sophisticated and comprehensive manner for the pursuit and advancement of research.

(2) Special Exercise B

These are one-year exercises conducted by research groups on specialized fields, including taking turns presenting on the latest literature. Pass/fail will be determined by the main supervisor.

(3) Research Plan (Proposal)……(Submit Form 1)

After students have taken some coursework, they will conduct preliminary experiments and calculations regarding the social needs of their fields of specialization, and propose them in the form of creative research themes with potential, taking into account studies and reviews of the status of relevant research being conducted in and outside of Japan. Students will give oral presentations of their research purpose, approach, expected outcomes, among other items. The supervisory group will review the research plan. Pass/fail will be determined by the main supervisor.

(4) Special Plan Research……(Submit Form 2)

This is a practical course for students to broaden their engineering horizons and cultivate abilities to identify problems and find solutions. Students will engage in practical work, including development and production in disciplines outside of students' specialties, as well as information collection, at industry sites, research facilities, and other laboratories of specialized fields.

Students will compile a report of and present the challenges they faced in their work, as well as the results of their study and review. Grades will be assigned by the director whom the main supervisor requested.

(5) Special Educational Training……(Submit Forms 3 and 4)

Students will receive training in teaching methods for knowledge and technologies. At the same time, it is practical training for cultivating students' ability to provide leadership in collaborative activities. Students will choose from the following three options:

1. Mentoring experiments or exercises of undergraduate students or Master's students
2. Mentoring undergraduate students or Master's students on drafting presentations and on presentation skills for academic conferences, symposiums, and other fora.
3. Research and technical guidance for production and development professionals of companies, etc.

The experiment or exercise in 1. shall last around one semester. Guidance in 2. and 3. shall also last for a similar number of hours. Pass/fail will be determined by the main supervisor.

(6) Special Experiment B ("regional technology vision exercises B" for Management of Technology for Manufacturing (MOT) major)

This is an experiment conducted through students' majors in relation to their theses. It includes numerical simulation and theoretical thought experiment. The "regional technology vision exercises B" for the MOT major are studies, research, and experiments conducted in relation to students' theses. Grades are assigned by

the main supervisor.

(7) Foreign Language Writing

This course is designed to foster professionals who can play an active role in the international community by equipping them with adequate proficiency in a foreign language (especially English). Students are encouraged to actively write and contribute foreign language papers and make oral presentations at international meetings.

(8) Thesis Proposal

Anyone who is writing a thesis must have his or her thesis proposal reviewed by the Thesis Review Panel, whose membership includes the supervisory group. The proposal will include the research purpose, originality of approach, usefulness of output, composition of thesis, and the thesis presentation plan.

*If you wish to count your experience with a company or other organizations prior to your enrollment at the university towards "Special Plan Research" and "Special Educational Training," please submit your request using the Course Accreditation Application Form (Form 5). Even if you submit the Course Accreditation Application Form, you will still need to submit the "Special Plan Research Review Report (Form 2)" and "Special Educational Training Completion Report (Form 4)."

1-3 Course Registration Form

(1) At the beginning of the semester, students will choose courses in consultation with their main supervisor.

(2) Students shall write down the courses they will be taking on the list of courses, have it approved by their main supervisor, and submit the list to the academic support section within the designated period. Prior to writing down the courses, students shall obtain permission to take the courses from the faculty in charge.

(3) Please be warned that students may not be able to take courses other than the ones they registered for. Students must register the courses they will be taking, even if they are practical training, exercise, and experiment courses only.

1-4 Grading and Credit Criteria

Same as Master's program.

1-5 Study Criteria

(1) A minimum of 12 credits in total is needed to graduate: Special Plan Research (2 credits); Special Experiment B (4 credits) ("Regional technology vision exercise B" for Management of Technology for Manufacturing (MOT) major: 4 credits); Seminar (6 credits).

(2) Special Exercise B, Research Plan, and Special Educational Training are compulsory courses with zero credit.

Doctoral Program Study Criteria Table
(Bioengineering, Electrical Engineering and Informatics, Mechanical Systems Engineering)

Course Category	No. of Credits
Seminar	6 credits or more
Special Exercise B	*
Research Plan	*
Special Plan Research	2 credits
Special Educational Training	*
Special Experiment B	4 credits

*Indicates compulsory course with zero credit.

Doctoral Program Study Criteria Table
(Chemistry and Chemical Engineering)

Course Category	No. of Credits
Seminar	6 credits or more#
Special Exercise B	*
Research Plan	*
Special Plan Research	2 credits
Special Educational Training	*
Special Experiment B	4 credits

*Indicates compulsory course with zero credit.

#When taking seminars (specialized basic subjects and specialized applied subjects), obtain at least two credits in subjects of the field in which you are specializing from among the specialized basic subjects (either organic chemistry, inorganic chemistry, electrochemistry, analytical chemistry, or chemical engineering) and at least two credits in subjects of fields outside your area of expertise, and from the specialized applied subjects obtain at least two credits in subjects of the field in which you are specializing.

Doctoral Program Study Criteria Table
(Management of Technology for Manufacturing)

Course Category	No. of Credits
Seminar	6 credits or more
Special Exercise B	*
Research Plan	*
Special Plan Research	2 credits
Special Educational Training	*
Regional technology vision exercise B	4 credits

*Indicates compulsory course with zero credit.

1-6 Review of Doctoral Thesis and Final Examination

If students show sufficient promise to master the courses specified in the study criteria and have received necessary research guidance, they will be eligible to write their doctoral thesis and apply for review once they successfully pass the thesis proposal screening.

Submitted theses will be reviewed by a Thesis Review Panel selected by the Graduate School of Science and Engineering Committee.

The thesis review criteria for the doctoral program are as follows:

Thesis review criteria for the doctoral program of the Graduate School of Science and Engineering

(a) Research theme is new and unique.

(b) The research background and purpose are accurately stated based on specialized knowledge for planning and pursuing research.

(c) The thesis has appropriate composition and proper format.

(d) The thesis is written logically, and a clear conclusion is presented in line with the established research theme.

The final examination will be implemented as oral or written response to questions by the Thesis Review Panel at thesis presentations conducted as public hearings organized for each major.

1-7 Graduation Requirements

(1) To graduate from the doctoral program, students must be enrolled in the graduate school for at least three years, acquire at least 12 credits in the study criteria table, and pass the review of doctoral thesis and final examination upon receiving the necessary research guidance.
(2) For those who have demonstrated particularly outstanding research achievements, enrollment in the university for three years or more (sum of Master's program and doctoral program) shall be sufficient for graduation.

For those who enrolled in the university recognized as having at least the equivalent academic ability as those with a Master's degree and those who demonstrated particularly outstanding research achievements, enrollment in the university for one year or more shall be sufficient for graduation.

However, "one year" shall be replaced with "the period in which the period of enrollment in the Master's program is subtracted from the standard three years of the doctoral program."

1-8 Conferral of Degree

A doctoral degree (in engineering or science) is conferred to those who completed the doctoral program of the Graduate School of Science and Engineering (see Appendix Table of "Yamagata University Regulations on Degrees").

1-9 Special Measures for the Education of Working Professionals

The Graduate School [Engineering] applies the special measures for education set forth in Article 14 of the Standards for the Establishment of the Graduate Schools, if it is deemed that such measures are especially needed for the education of working professionals. Working professionals shall be able to take courses as follows:

(1) Aside from normal hours (8:50 a.m. to 3:55 p.m.), working professionals shall be able to attend classes and receive research guidance during the evening hours (4 p.m. to 9:10 p.m.).
(2) Working professionals shall be able to attend classes and receive research guidance on Saturdays and Sundays.
(3) Working professionals shall be able to attend classes and receive research guidance during their summer and winter breaks as needed.
(4) At the start of the relevant academic year, those wishing to attend classes and receive research guidance during the hours and the time of year pursuant to the special measures shall submit an application for the application of special measures for education, obtain the approval of their main supervisor, and obtain the permission of the faculty in charge of the courses.

２．Guidelines for the Doctoral Thesis Review

Students who are expected to complete required classes and received necessary research supervision may prepare their Doctoral thesis following approval in the thesis plan review and submit it for review after fulfilling various procedures. The submitted thesis shall be reviewed in accordance with detailed guidelines for the Graduate School of Science and Engineering. Thesis reviews follow the process presented in Figures 2-4.

２－１　Submission of the thesis plan

Students prepare the thesis plan review application, thesis plan content, and content disclosure (using prescribed forms) and submit them to the main supervisory instructor.

The group of supervisory instructors handles the thesis plan review and conducts its review by the final day of October in the previous year for program thesis submission in the second term (finish in March) and by the final day of April for program thesis submission in the first term (finish in September).

※The thesis plan review refers to a review of the thesis plan (composition, content, etc.) and confirmation of program thesis application criteria by the group of supervisory instructors.

２－２　Submission of the thesis topic

Students shall fill out the prescribed form after receiving approval in the thesis plan review and submit to the person in charge of educational assistance after obtaining approval from the supervisory instructor.

Submission deadlines (day or two days before in the case of holidays)

① Second term (March completion): Final day of October

② First term (September completion): Final day of April

２－３　Application for review of the Doctoral program thesis

Students shall submit the program thesis review application along with the program thesis and other items to the person in charge of educational assistance after obtaining approval from the group of supervisory instructors. Students shall prepare the program thesis based on the rules for preparation of the Doctoral program thesis in 2-4.

(1) Program thesis review application form, etc. and required copies

① Program thesis review application form (prescribed form)……1 copy

② Program thesis (also prepare the number of copies needed for the review) Electronic data for all documents

③ Report catalog (prescribed form)……5 copies

④ Thesis content summary (Japanese and English) (prescribed form) ……5 copies each

⑤ Personal resume (prescribed form)……1 copy

⑥ Co-author consent form (prescribed form)……4 copies each

⑦ Separate copies of reports contained on the report catalog, copies of originals for published works, or copies of publishing decision notification　　1 copy each

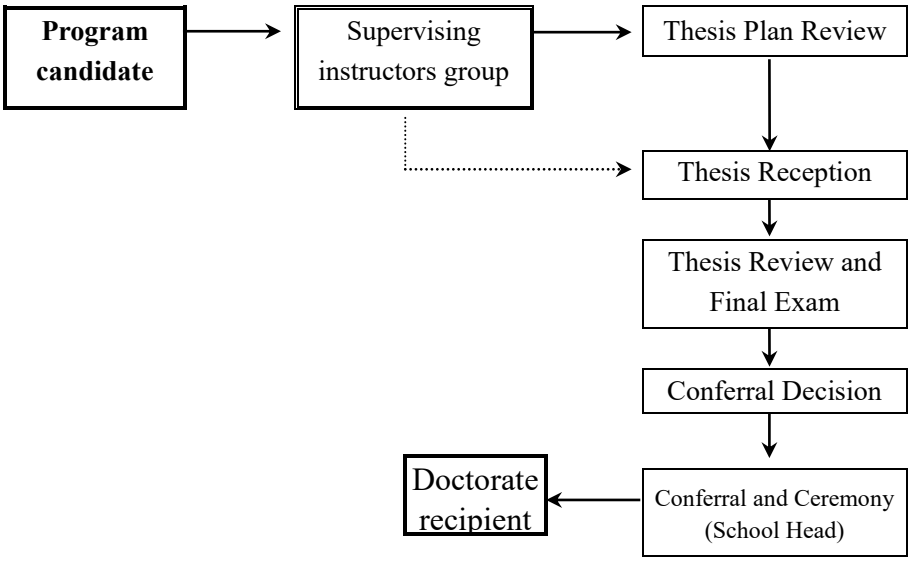
（evidence of report reception in the absence of a decision on publishing）

(2) Submission deadline (day (or two days) prior in the case of holidays)

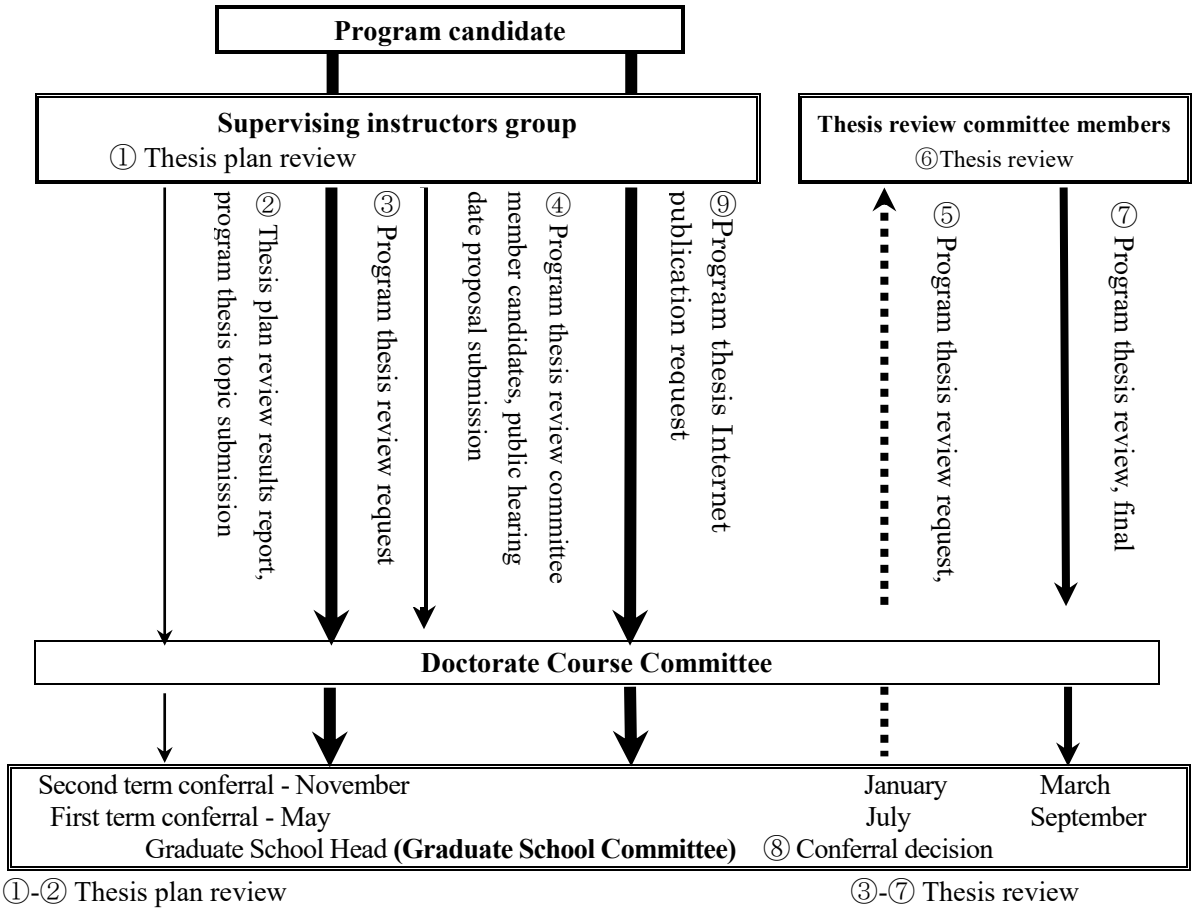
① Second term submission (March finish):　December 20

② First term submission (August finish):　July 1

２－７　Flow from Doctoral Program Thesis Review to Doctorate Conferral and Flow of Procedures Related to Doctoral Program Thesis Review



Flow from Doctoral Program Thesis Review to Doctorate Conferral



２－４　Rules for preparation of the Doctoral program thesis

１　Program thesis

(1) The Doctoral thesis shall be written in Japanese or English.
(2) The thesis shall have a table of contents, and page numbers shall be positioned in the bottom center.
(3) It shall be written on A4 white paper used in an upright position with text presented in horizontal fashion.
(4) The front page of the Doctoral thesis shall specify the thesis title, the major, and the student's name. When the thesis is written in English, a Japanese translation shall be shown underneath the title in parentheses.
(5) The Doctoral thesis shall be prepared on a PC or word processor or written using a black pen for Japanese. It shall be typed or prepared on a PC or word processor for English.
(6) The Doctoral thesis format is not designated, but the document should use a suitable format that can be readily understood based on past examples (including figures, tables, and photographs).
(7) Reference documents shall be footnoted with the author's name (all authors), the name of the scientific magazine (book name), publisher, volume, issue number, page (starting-ending page), and year of issuance (Western dating)

２　Rules for the Program thesis summary

(1) A4 white paper shall be used in an upright position with text presented in horizontal fashion.
(2) Prepare a Japanese summary and English summary using the prescribed form.
(3) Japanese summary – 10pt and about 2,000 characters (within two pages); English summary – 12pt, single space, and about 300 words

２－５　Submission of documents related to the program thesis release

Students shall submit the following documents related to the program thesis release promptly after receiving a conferral decision.

① Attachment 1: Doctoral thesis Internet release (register in the University repository) confirmation
② Attachment 2: Reasons (only the related person)
③ Attachment 3: Thesis content summary

２－６　Forms to be submitted for requesting a Doctoral thesis review

Forms for application documents listed from the following page can be downloaded from the Faculty of Engineering website.

●Downloading method

１．Click on the [Faculty of Engineering's Faculty of Engineering website] tab under the [Faculties, Graduate Schools, and Institute of Arts and Science website] tab on the Yamagata University website

２．Click on “在学生の方” [Enrolled Students] and scroll down to “学位論文の申請(後期課程)” [Program Thesis Review Application (Doctoral Program)]