

## (2) Guidelines for the Master's Program

(2024. 3. 4 Approved by Graduate School Faculty Assembly)

### 1) Curriculum Guide

#### a. Determination on the System for Advising Students

Students must register following information with the Student Affairs Division at the time of the admission to the Master's Program after obtaining approval of the research advisor.

##### (a) Research Advisor

###### • Research Advisor

Research advisors provide guidance and advice on curriculum selection to students who have already chosen the theme of their theses etc., and guides these students primarily on thesis writing etc. Research advisors must be 1) a full-time faculty members of the Graduate School, and 2) there must be two-year or longer term of office before the day of resignation by retirement. Students affiliated with the Graduate Department of Computer and Information Systems will be affiliated, in principle, with a field of study with which their research advisor is associated.

###### • Curriculum advisor

Curriculum advisors shall give the students other than the ones mentioned above guidance and advice on course registration only during their first academic year. Even though students have been assigned to curriculum advisors, research advisors must be assigned and approved at Graduate School Faculty Assembly before the fourth quarter of the first academic year starts.

##### (b) Course Plan for the Master's Program

• Students shall make a course registration plan until the completion of Master's course under the guidance of their research advisor. The course plan can be revised under the guidance of the research advisor.

#### b. Courses

The curriculum of the Master's Program is designed for students to acquire specialized knowledge and skills in computer science and engineering from fundamentals to applications, to solve practical problems in ICT (Information and Communication Technologies) and related industries, and to learn the methods used to conduct research on the structure and function of information systems. The courses feature across a range of the following categories; 1.2.1 to 1.2.5.

Students affiliated with the Graduate Department of Computer and Information Systems must obtain at least 30 credits: at least 16 credits from regular courses, at least 8 credits from seminars, and 6 credits from thesis research course.

**(Students admitted in AY2022 or earlier)**

Students affiliated with the Graduate Department of Information Technologies and Project Management must obtain at least 50 credits: 22 credits from regular courses, 8 credits for seminars, and 20 credits from 4 courses of Software Development Arena.

**(Students admitted in AY2023 or later)**

Students affiliated with the Graduate Department of Information Technologies and Project Management must obtain at least 40 credits: 16 credits from regular courses, 10 credits for seminars, and 14 credits from 4 courses of Project Development Arena.

##### (a) Regular Courses

A varied selection of regular courses, including high-level and advanced studies, has been prepared to meet the goals of each field of study. When selecting courses, students are expected to consider the objectives of their studies and future career. Do not limit your selection of courses to a particular field, but choose well-balanced courses from an expanded range of studies.

Students affiliated with the Graduate Department of Computer and Information Systems must obtain at least 16 credits from the regular courses. And students in the Graduate Department of Information Technologies and Project Management

who were admitted in AY2022 or earlier must obtain at least 22 credits, who were admitted in AY2023 or later must obtain at least 16 credits, among the regular courses to complete the master's program. At least 4 credits must be earned from Fundamental Core Courses and Application Core Courses respectively.

(b) Seminar Courses

The Graduate School requires students to acquire higher knowledge and to foster their creativity and ability to identify and solve problems through positive and self-directed learning. Toward this end, the School offers seminars for students to supplement their own voluntary studies through exposure to diverse points of view, and at the same time to study with a wider perspective, not limited solely to their field of study.

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Students are required to earn a total of 4 credits among Research Seminars I and II (2 courses, 4 credits). These students must also earn at least 4 course credits from Creative Factory Seminar (2 credits) of their choice, Research Progress Report Seminar (2 credits), External Presentation/Publication Seminar (2 credits), Research Paper Writing Seminar (2 credits), ICT Global Venture Laboratory (2 credits), or Effective Academic Research Presentation Seminar (2 credits) to earn a minimum of 8 credits. Students must make a Research Plan Presentation and pass it for earning credits of Research Seminar I or Special Research Seminar I.

Those who have been authorized at Graduate School Faculty Assembly for early completion of the Master's Program, or whose standard enrollment period in the Master's Program is less than two years based on inter-university agreements, are eligible to register for Special Research Seminars I or II instead of Research Seminars I and II which are full-year courses. Students of Dual Degree Program are required to earn total of 4 credits from Special Research Seminar I (4 credits) even they are affiliated to the second year of the Master's Program. However, should those students be unable to complete the Master's Program in a period of time shorter than the academic residence requirement period, registration for special research seminars I and II shall be nullified, and registration shall be reverted to research seminars I and II. Applicants for early completion of the Master's Program upon their first-year enrollment of the Master's Program need to submit documents verifying their "outstanding achievements" by the relevant designated date. Otherwise, reapplication for early completion of the Program is required for requesting early completion a half year later than the original request. Other than those mentioned above shall register for Research Seminar II, a full-year course.

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**(Students admitted in AY2022 or earlier)**

Students must earn a total of at least 5 course credits for research seminars/conferences (3 credits) and tea seminars/contests (2 credits). These students must also earn at least 3 course credits from Educational Seminars (3 credits), Creative Factory Seminar (2 credits) of their choice, Research Paper Writing (2 credits), ICT Global Venture Laboratory (2 credits), or Effective Academic Research Presentation Seminar (2 credits) to earn a minimum of 8 credits.

In cases where students have been authorized for early completion of the Master's Program based on their work experience in the ICT business circle, these students are allowed to shorten the period of completion of the courses, "Educational Seminars," "Research Seminars/Conferences" and "Tea Seminars/Contests."

**(Students admitted in AY2023 or later)**

Students must earn a total of at least 6 course credits for PM Research Seminar (2 credits), Conference Presentation Seminar (2 credits), and Educational Seminars (2 credits). These students must also earn at least 4 course credits from Tea Seminar (2 credits), Contest (2 credits), Creative Factory Seminar (2 credits) of their choice, Research Paper Writing I (2 credits), ICT Global Venture Laboratory (2 credits), or Effective Academic Research Presentation Seminar (2 credits) to earn a minimum of 10 credits.

In cases where students have been authorized for early completion of the Master's Program based on their work experience in the ICT business circle, these students are allowed to shorten the period of completion of the courses, "PM Research Seminar", "Conference Presentation Seminar", and "Educational Seminars".

Detail methods of implementation for Seminars are posted on the web.

(c) Thesis Research Course

This is a required course for students affiliated with the Graduate Department of Computer and Information Systems. In taking the course, guidance from relevant research advisors on the writing of the thesis, etc. should be taken into consideration.

(d) Project Development Arena

**(Students admitted in AY2022 or earlier)**

Students affiliated with the Graduate Department of Information Technologies and Project Management must obtain 20 credits from Software Development Arena I to IV.

In cases where students have been authorized for early completion of the Master's Program based on their work experience in the ICT business circle, these students are allowed to concurrently register for the courses, "Software Development Arena III" and "Software Development Arena IV."

**(Students admitted in AY2023 or later)**

Students affiliated with the Graduate Department of Information Technologies and Project Management must obtain 14 credits from Project Development Arena I to IV.

In cases where students have been authorized for early completion of the Master's Program based on their work experience in the ICT business circle, these students are allowed to concurrently register for the courses, "Project Development Arena III" and "Project Development Arena IV."

(e) Conversion Courses

These courses are basic to studies related to computer science and engineering. Students who have not completed courses equivalent to the conversion courses before entering the University (because they have majored other than computer science and engineering, etc.) are allowed to take Conversion Courses under the guidance of their research advisor. When students fulfill the requirements, credits of optional courses are given, and those credits are not counted as required credits for the Master's course completion.

c. Course Registration

(a) To enroll in a course, students should use the Academic Administration System to input the necessary information, and pay attention to Articles 5 and 6 of the Graduate School Regulation on the Completion of University of Aizu Graduate School Studies. For cancellation of regular courses, students should use the Academic Administration System within the first 2 weeks of a quarter (10 working days). For cancellation of intensive courses and seminars, please send an email to Academic Affairs Section ([sad-aas@u-aizu.ac.jp](mailto:sad-aas@u-aizu.ac.jp)) with following information within on the first day of the course.

- Title of email: "Cancellation of GS course registration---(Course code)"
- Your Student ID No.
- Your Name
- Code and Title of the Course

(b) There is no upper limit in the number of courses that one student can register for. In addition, up to 10 credits earned from course work at respective graduate schools will be approved as credits earned within the Master's Program of the UoA by Graduate School Academic Affairs Committee. This credit transfer will be based on consultation by the UoA President with the respective graduate schools.

(c) Students affiliated with the Graduate Department of Information Technologies and Project Management form one project team consisting of two to four students on entering the School, and then select one project per team. Research advisors are responsible for the project of their own supervising students as a team advisor.

Limited to situations in which a student is unable to form a team for unavoidable reasons after admission or transfer to the PM Department, said student shall be exceptionally allowed to engage in a product individually. Further, said student shall be able to independently earn the credits for courses normally taken as part of a team.

## 2) Schedule for Thesis Reviews etc.

### a. Master's Thesis Review in the Graduate Department of Computer and Information Systems

Submission of a thesis theme shall be in the last year of Master's course. Submission dates of each forms will be announced separately or posted on the web.

#### (a) Determination of thesis titles

- Research advisors shall determine the thesis titles in consultation with relevant students. In cases where a sub research advisor is assigned to a student, the sub research advisor must be included to the consultation.
- The thesis titles shall be provided both in English and Japanese, or English only.

#### (b) Permission to submit the thesis and recommendation of reviewers

- Research Advisors shall give a permission to students of submitting the thesis and report this to the Dean of the Graduate School by the report form.
- Thesis Review Committees consist of one chief referee and two co-referees of the University of Aizu including student's research advisor.
- The chief referee must be Doctoral "MARUGO" or "GO" within the graduate department.

The research Advisor shall submit the recommendation form of two referees to the Dean of the Graduate School.

#### (c) Review of the thesis

- Students must submit the thesis drafts to the referees for review after getting the approval of the research advisor.
- The referees shall carefully examine the thesis draft, and make comments to the student.

#### (d) Submission of the thesis

- Students must complete and submit final draft of the thesis to Student Affairs Division and referees.
- Graduate School Academic Affairs Committee shall arrange presentations.

#### (e) Thesis presentation

- The presentation is a part of review of the thesis and the final examination for completing the Master's Program.
- Time allotted to each student is 30 minutes (15 minutes each for presentation and oral examination) and review by the referees to be followed.
- The chief referee and the co-referees must attend the presentation.
- All students, faculties and staff members can freely participate.

#### (f) Review criteria of the thesis

Based on the Diploma Policy, the content of the thesis, achievement of the research and the thesis presentation, etc. will be assessed comprehensively by the evaluation form.

(Review criteria)

- Clear and proper description of the scope, background, problems, procedures and hypotheses of the research
- Proper terminology, figures and tables
- Quantitative description of the research achievement
- Academic or technical contributions of the research
- Sufficient knowledge related to the research topics for completing the Master's program
- Presentation skills and English ability at the thesis presentation

#### (g) Judgment of the results of the review

- Each referee shall have 100 points in assessment. The students receiving 150 points or more shall successfully pass in the review.
- The chief referee, with a consultation with the co-referees, must submit a report on the results of the review to the Dean

of the Graduate School.

- Graduate School Academic Affairs Committee deliberates the results.
- Graduate School Faculty Assembly deliberates the result based on the deliberation results at Graduate School Academic Affairs Committee and makes final judgements.

(h) Reposition of thesis

- Students shall submit the original copy of final thesis signed by 3 referees, electric file and "Consent to Use of Academic Degree Thesis" to Student Affairs Division.

b. Reviews of achievements made in specific research theme in the Graduate Department of Information Technologies and Project Management

(a) Determination of titles of specific research themes

- Achievements made in specific research themes of this Department are four Technical Reports of each Arena I ~ IV.
- Research advisors shall determine titles of specific research themes in consultation with relevant students. In cases where a sub research advisor is assigned to a student, the sub research advisor must be included to the consultation
- The titles shall be provided both in English and Japanese, or English only.

(b) Recommendation of reviewers

- Review Committees consists of one chief referee and two co-referees of the University of Aizu including team advisor(s).
- The chief referee must be Doctoral "MARUGO" or "GO" within the graduate department.
- One of the co-referees may be an external advisor assigned to the team (Technical Advisor).
- The team advisor shall submit the recommendation form of two referees to the Dean of the Graduate School.

(c) Review of the achievements made in specific research themes

- At the end of each Arena, students must submit the technical reports to the referees after getting the approval of the Team Advisor.
- The referees shall carefully examine the drafts.

(d) Submission of the achievements made in specific research themes

- Each team member must complete and submit the technical report of Arena Project signed by 3 referees to Student Affairs Division at the end of each arena.
- In addition to the technical reports, students may submit an academic paper written based on the achievements made in Specific Research Theme.

(e) Presentations on the achievements made in specific research themes

- The presentation is a part of review of the achievements made in specific research themes and the final examination for completing the Master's Program.
- Time allotted to each project is 30 minutes (15 minutes each for presentation and oral examination) and review by the referees will follow.
- The chief referee and the co-referees must attend the presentation.
- All students, faculties and staff members can freely participate.

(f) Review criteria of the achievements made in specific research themes

Based on the Diploma Policy, the achievements made in specific research themes and the its presentations, etc. will be assessed comprehensively by the evaluation form.

(Review criteria)

- Clear and proper description of the background, problems, plans and executions, role and contributions, and

achievements of the project

- Proper presentation materials
- Presentation skills and English ability at the presentation on the project achievements
- Contributions of project achievements to the related field or society
- Sufficient knowledge related to the project for completing the Master's program

(g) Judgement of the review results

- Each referee shall have 100 points in assessment. The students receiving 150 points or more shall successfully pass in the review.
- The chief referee, with a consultation with the co-referees, must submit a report on the results of the review to the Dean of the Graduate School.
- Graduate School Academic Affairs Committee deliberates the results.
- Graduate School Faculty Assembly deliberates the result based on the deliberation results at Graduate School Academic Affairs Committee and makes final judgements.

(h) Reposition of the achievements made in specific research themes

- Students shall submit the original copy of the achievements made in specific research themes signed by 3 referees, electric file and "Consent to Use of the achievements made in specific research themes" to Student Affairs Division.

### 3) Degree conferment

a. Degree Conferment Period

- Twice a year, in March and September, to correspond to Spring and Autumn admissions.

b. Degree Authorization

- Students must submit an application form to the President for obtaining the degree along with the final thesis or the technical report for Software Arena IV.
- Graduate School Academic Affairs Committee and Graduate School Faculty Assembly shall deliberate the degree conferment.