

2. Academic and Research Procedures in Information Systems Science Major

2.1. Research Guided Schedule (Information Systems Science Major)

2.1.1 Master's Program

In the first and second years, students take elective courses in the three fields of "Mathematical Informatics System," "Information Processing Systems," and "Communication and Control System," as well as elective common courses. In each semester, students also have to take required research guidance courses of "Advanced Seminar" and "Advanced Research" to deepen their research step by step under the guidance of their academic advisors and to prepare their thesis. The coursework and research procedures are explained at the orientation at the time of enrollment.

At the end of the first year, students are required to submit a "research proposal" and make a presentation, and students will receive advising from faculty members other than their supervisors, as well as discussions among graduate students to support their independent research activities. The Master's thesis is reviewed by a main supervisor and two sub-supervisors.

*Schedule for students enrolled in September will slide for half a year.

First Year	Apr	<ul style="list-style-type: none"> Receive course and research guidance during Orientation, discuss research guided plan with advisor. Course registration under supervision of advisor.
	Apr-Jul	<ul style="list-style-type: none"> Course Registration for elective courses. Course registration for research guided course of "Advanced Seminar 1" and Advanced Research 1."
	Sep	<ul style="list-style-type: none"> Course registration under supervision of advisor.
	Sep-Jan	<ul style="list-style-type: none"> Course Registration for elective courses. Course registration for research guided course of "Advanced Seminar 2" and Advanced Research 2."
	Feb	<ul style="list-style-type: none"> Submit Research Proposal with the permission by advisor, report research progress and future action, and receive advice from advisor and faculty members.
Second Year	Apr	<ul style="list-style-type: none"> Course registration under supervision of advisor.
	Apr-Jul	<ul style="list-style-type: none"> Course Registration for elective courses. Course registration for research guided course of "Advanced Seminar 3" and Advanced Research 3."
	Sep	<ul style="list-style-type: none"> Course registration under supervision of advisor.
	Sep-Jan	<ul style="list-style-type: none"> Course Registration for elective courses. Course registration for research guided course of "Advanced Seminar 4" and Advanced Research 4."
	Dec	<ul style="list-style-type: none"> Appoint the examiner committee for thesis evaluation. Meeting with examiners for questions and receive appropriate advice.
	Jan	<ul style="list-style-type: none"> Master's Thesis submission. Conduct a thesis evaluation and final oral examination.
	Mar	<ul style="list-style-type: none"> Degree conferral.

2.1.2. Doctoral Program

In each semester from the first to the third year, students take the required research guidance courses of "Special Seminar on Information Systems" and "Special Research on Information Systems" to deepen their research step by step under the guidance of their supervisors and prepare their dissertations. The coursework and research procedures will be explained at the orientation at the time of enrollment. The main instruction until the completion of the dissertation will be provided by the supervisor.

A preliminary review is conducted for the dissertation review, and the main examiner and two or more associate examiners will review the dissertation to determine whether it is acceptable to proceed to the full review or not. In addition, as part of the preliminary examination, a doctoral dissertation presentation will be held and advice will be provided by faculty members other than the main and associate advisors. The final examination of the doctoral dissertation will be conducted by the main examiner's supervisor and two or more secondary examiners.

*Schedule for students enrolled in September will slide for half a year.

First Year	Apr	<ul style="list-style-type: none"> Receive course and research guidance during Orientation, discuss research guided plan with advisor. Course registration under supervision of advisor.
	Apr–Jul	<ul style="list-style-type: none"> Course Registration for Research guided courses; “Advanced Seminar 5” and “Advanced Research 5.”
	Sep	<ul style="list-style-type: none"> Course registration under supervision of advisor.
	Sep–Jan	<ul style="list-style-type: none"> Course Registration for Research guided courses; “Advanced Seminar 6” and “Advanced Research 6.”
Second Year	Apr	<ul style="list-style-type: none"> Course registration under supervision of advisor.
	Apr–Jul	<ul style="list-style-type: none"> Course Registration for Research guided courses; “Advanced Seminar 7” and “Advanced Research 7.”
	Sep	<ul style="list-style-type: none"> Course registration under supervision of advisor.
	Sep–Jan	<ul style="list-style-type: none"> Course Registration for Research guided courses; “Advanced Seminar 8” and “Advanced Research 8.”
Third Year	Apr	<ul style="list-style-type: none"> Course registration under supervision of advisor.
	Apr–Jul	<ul style="list-style-type: none"> Course Registration for Research guided courses; “Advanced Seminar 9” and “Advanced Research 9.”
	Sep	<ul style="list-style-type: none"> Course registration under supervision of advisor. Submission for preliminary review of dissertation.
	Sep–Jan	<ul style="list-style-type: none"> Course Registration for Research guided courses; “Advanced Seminar 10” and “Advanced Research 10.”
	Oct–Nov	<ul style="list-style-type: none"> Dissertation acceptance by the Graduate School Committee, evaluation by Preliminary review committee to decide on whether to proceed with a full review.
	Jan	<ul style="list-style-type: none"> Submission of a dissertation.
	Jan–Feb	<ul style="list-style-type: none"> Dissertation acceptance by the Graduate School Committee. The Review Committee conducts an evaluation and final examination for the dissertation.
	Mar	<ul style="list-style-type: none"> Degree conferral.

2.2. Thesis Review Criteria (Information Systems Science Major)

2.2.1. Master's Thesis

A master's thesis is the result of a research that an applicant has worked on independently and must be original and contributable to the development of the foundation or application of information systems science or related fields. The review will be conducted on the following items, based on the content of the thesis and the presentation at the master thesis presentation:

- The background and purpose of the research are appropriately described using excerpts from related theses.
- The originality of the research is sufficiently explained.
- The research method is sufficiently explained.
- The evaluation of research results is appropriate and sufficient, and the discussions of them has been developed.
- The thesis is logically structured, and the notation and wording are appropriate and clear.
- The oral presentation for the thesis was given appropriately, and the defense was sufficient.

Each reviewer will score achievement levels for respective evaluation items based on the following table and calculate the total score. If the average value of the total score of the chief reviewer and those of two sub-reviewers is 70 or more, the review result will be "pass."

Achievement Level	Score
5	20
4	18
3	16
2	14
1	10

○ Evaluation Item 1

- The background and purpose of the research are appropriately described using excerpts from related theses.

Achievement Level	Evaluation
5	The description of the background and purpose of the research is highly clear and appropriate.
4	The description of the background and purpose of the research is clear and appropriate.
3	The description of the background and purpose of the research is appropriate.
2	The description of the background and purpose of the research is mostly appropriate.
1	The background and purpose of the research are unsound and unclear.

○ Evaluation Item 2

- The originality of the research is sufficiently explained.

Achievement level	Evaluation
5	The explanation of the originality of the research is highly accurate and appropriate.
4	The explanation of the originality of the research is accurate and appropriate.
3	The explanation of the originality of the research is appropriate.
2	The explanation of the originality of the research is mostly appropriate.
1	The explanation of the research originality includes many insufficient or unclear parts.

○ Evaluation Item 3

- The research method is sufficiently explained.

Achievement level	Evaluation
5	The explanation of the research method is highly accurate and appropriate.
4	The explanation of the research method is accurate and appropriate.
3	The explanation of the research method is appropriate.
2	The explanation of the research method is mostly appropriate.
1	The explanation of the research method includes many insufficient or unclear parts.

○ Evaluation Item 4

- The evaluation of research results is appropriate and sufficient, and the discussions of them has been developed.

Achievement level	Evaluation
5	The development of the evaluation and discussions of the research is highly appropriate and sufficient.
4	The development of the evaluation and discussions of the research is appropriate and sufficient.
3	The evaluation and discussions of the research are appropriate.
2	The evaluation and discussions of the research is mostly appropriate.
1	A significant portion of the evaluation and discussions of the research is insufficient or inappropriate.

○ Evaluation Item 5

- The thesis is logically structured, and the notation and wording are appropriate and clear.

Achievement level	Evaluation
5	The structure of the thesis is highly logical, and the notations and wording are appropriate and clear.
4	The structure of the thesis is logical, and the notations and wording are appropriate and clear.
3	The structure of the thesis is logical, and the notations and wording are appropriate.
2	The structure of the thesis is mostly logical, and the notations and wording are almost appropriate.
1	The structure of the thesis is illogical, and a significant portion of notations and wording is unclear.

2.2.2. Doctoral Dissertation

A doctoral thesis must be the result of an applicant that has produced independently and must be original and contributable to the development of the foundation or application of information systems science or related fields. It must also include academically assessed content, such as the content published in academic journals with a peer-review system. The review will be conducted on the following items, based on the content of the thesis and the presentation at a dissertation defense:

- The background and purpose of the research are appropriately described using excerpts from related theses.
- The novelty, originality, importance, and impact of the research are sufficiently explained.
- The research method is sufficiently explained.
- The evaluation of research results is appropriate and sufficient, and the discussions of them has been developed.
- The thesis is logically structured, and the notation and wording are appropriate and clear.
- The oral presentation for the thesis was given appropriately, and the defense was sufficient.

Each reviewer will score achievement levels for respective evaluation items based on the following table and calculate the total score. If the average value of the total score of the chief reviewer and those of two sub-reviewers is 70 or more, the review result will be "pass."

Achievement level	Score
5	20
4	18
3	16
2	14
1	10

○ Evaluation Item 1

- The background and purpose of the research are appropriately described using excerpts from related theses.

Achievement level	Evaluation
5	The description of the background and purpose of the research is highly accurate and appropriate.
4	The description of the background and purpose of the research is accurate and appropriate.
3	The description of the background and purpose of the research is appropriate.
2	The description of the background and purpose of the research is mostly appropriate.
1	The background and purpose of the research are unsound and unclear.

○ Evaluation Item 2

- The novelty, originality, importance, and impact of the research are sufficiently explained.

Achievement level	Evaluation
5	The explanation of the novelty, originality, importance, and impact of research is highly accurate and appropriate.
4	The explanation of the novelty, originality, importance, and impact of research is accurate and appropriate.
3	The explanation of the novelty, originality, importance, and impact of research is appropriate.
2	The explanation of the novelty, originality, importance, and impact of research is mostly appropriate.
1	The explanation of the originality of the research includes many insufficient or unclear parts.

○ Evaluation Item 3

- The research method is sufficiently explained.

Achievement level	Evaluation
5	The explanation of the research method is highly accurate and appropriate.
4	The explanation of the research method is accurate and appropriate.
3	The explanation of the research method is appropriate.
2	The explanation of the research method is mostly appropriate.
1	The explanation of the research method includes many insufficient or unclear parts.

○ Evaluation Item 4

- The evaluation of research results is appropriate and sufficient, and the discussions of them has been developed.

Achievement level	Evaluation
5	The development of the evaluation and discussions of the research is highly appropriate and sufficient.
4	The development of the evaluation and discussions of the research is appropriate and sufficient.
3	The evaluation and discussions of the research are appropriate.
2	The evaluation and discussions of the research is mostly appropriate.
1	A significant portion of the evaluation and discussions of the research is insufficient or inappropriate.

○ Evaluation Item 5

- The thesis is logically structured, and the notation and wording are appropriate and clear.

Achievement level	Evaluation
5	The structure of the thesis is highly logical, and the notations and wording are appropriate and clear.
4	The structure of the thesis is logical, and the notations and wording are appropriate and clear.
3	The structure of the thesis is logical, and the notations and wording are appropriate.
2	The structure of the thesis is mostly logical, and the notations and wording are almost appropriate.
1	The structure of the thesis is illogical, and a significant portion of notations and wording is unclear.