## Milestone / capstone indicators for the Master's Course

## Milestones (spring entrance : by November of M2, autumn entrance : by May of M2):

As a general rule, receive a B or higher grade for the "4. Research plan", and receive Cs or higher grades for 5 or more out of the 11 items that exclude "6. How to show research method" in the rubric table below

## Capstone (spring entrance : February of M2, autumn entrance : August of M2):

As a general rule, receive Bs or higher grades for 5 or more of the 12 items that exclude "4. Research plan", and there are no D grades, for completion of the Master's Course

Rubric table Evaluation A (advanced) B (accomplished) C (developing) D (beginning) Remarks After the research theme is established, the background The research theme is The research theme is and objectives of that research established, but an explanation established and the background are clearly organized and The research theme is under 1 Establish theme and objectives of that research of the background and analyzed, and then an consideration as well as the significance if the objectives of the research are explanation is made including issue is achieved are explained. not clear. the significance if the issue is achieved. Understand and sufficiently Understand basic knowledge Understand previous researche explain previous researches as Almost no understanding of as well as knowledge that is related to the research theme well as knowledge that is basic or of relevant fields of the basic knowledge related to the 2 Knowledge/ understanding basic or of relevant fields of the hat has been established, but research theme that has been research theme that has been knowledge of previous esearch theme that has been established. established. researches is insufficient. established. Certain aspects of own researc There is precedence to the There is precedence to the Encompassing any relevant theme is similar to that of research theme, and any degree esearch theme, but a certain \*Content of Master's and Doctoral is previous researches, originality 3 Originality relevant previous researches, degree of originality is of originality cannot be different. of the research theme is clear. but originality of research recognized. recognized. theme is recognized. A research plan is being A research plan is being A research plan is being prepared through consultation prepared through consultation prepared through consultation A research plan has not been with the academic supervisor with the academic supervisor with the academic supervisor prepared. Or, a research plan and the timing and content of and the timing and content of but the timing and content of has been prepared but content 4 Research plan research activities such as an Milestone only specific research activities such research activities such as an is lacking or incomplete and advance research survey, data is an advance research survey, dvance research survey, data cannot be accepted as a collection for the theme, result collection for the theme, result data collection for the theme. research plan. result analysis, and writing of analysis, and writing of thesis, analysis, and writing of thesis, thesis, etc. are clear. etc. are relatively apparent. etc. are not clear. Based on the feasibility of previous research surveys and methods, research methods and Based on the feasibility of Examining whether the previous research surveys and research method is the most materials that are deemed There has been no examining suitable for solving the methods, research methods and suitable for solving the Relevance of research 5 into suitable research methods research theme is insufficient. methods research theme have been materials that are deemed for solving the research theme. suitable for solving the researcl selected. Also, the best option or other more suitable methods theme have been selected. has been considered by, for and materials exist. example, looking into multiple nethods. A research method is presented utilizing academic methods A research method is presente such as referencing literary utilizing academic methods A research method is A research method is not itations, and researchers with such as referencing literary presented, but even researchers presented and researchers in equivalent knowledge and in the same field would have citations, and researchers with the same field would not be 6 Presenting research meth Capstone only techniques would be able to difficulty understanding the equivalent knowledge and able to assume research reproduce the research results. techniques would be able to esearch method. method. Or, explanation of the research eproduce the research results method is excellent as a genera eview. The minimum amount of Results quantity and quality \*"Results" refer to those of Sufficient results in terms of Quantitative and gualitative Results that are needed to quantitative and qualitative quantity and quality have been results are insufficient to achieve the purpose of the 7 results necessary to achieve th nent, calculation, desig obtained in order to achieve the achieve the purpose of the research have not been prototyping, program collection, etc. purpose of the research has purpose of the research. obtained. research. been obtained. Analysis in line with the esearch purpose and method Analysis in line with the Analytical results from has been conducted, and in research purpose and method statistical analysis, etc. are Evaluation with results from addition to evaluation by Evaluation of experimenta 8 has been conducted, and shown, but a more suitable statistical analysis, etc. has not statistical analysis, etc., data evaluation by statistical evaluation method is been made evaluation is also done in an analysis, etc. has been made onceivable. integrated manner in multiple ways Results are presented with innovative charts, etc. that Results are presented with Results are presented with make the research results very Results are presented with charts, etc. and results are charts, etc. but the contents are 9 Suitability of charts, etc. easy to understand, and the charts, etc. and research result comprehensible but leave room not organized and cannot be contents can be readily can be understood. for improvement. understood. understood by researchers of different fields. Based on the experiment results and reference materials Based on the experiment results obtained, objective and There are no misunderstanding and reference materials npartial interpretation is regarding the interpretation of Interpretation of results has not Consideration of results obtained, objective and performed. Consideration of Results" means experiment calculation, design, the experiment results. but been made, or there are impartial interpretation is reproducibility, accuracy of there are insufficient aspects in misunderstandings with 10 performed. Consideration of esults, exceptional results, etc prototyping, program ing, the consideration of regards to portions of the reproducibility, accuracy of collection, etc. are also appropriate. Also, implications of the results have interpretation of the results. reproducibility and accuracy of esults, exceptional results, etc the results. are also appropriate. been considered from multiple perspectives. The research results obtained The research results obtained are discoveries of innovative are discoveries of meaningful knowledge or completely new knowledge and new events in Whether the knowledge

1'	Significance and development of research results	being put to good use in	the relevant field and it can be said to a certain degree that	Whether the knowledge obtained is meaningful in the relevant field leaves a certain level of doubt.	It cannot be said that meaningful knowledge in the relevant field was obtained.	
12	Oral presentation and organization of papers	Oral presentation or paper are logically structured, and it is easy for researchers in different fields to understand.	Oral presentation or paper are logically structured.	It is difficult to say that the oral presentation or paper are logically structured and there is room for improvement.	The oral presentation or paper are not logically structured and they are difficult to understand.	*Oral presentation: milestone *Paper: capstone
1:	International communication skills	being made at international conferences, etc. Or there is active involvement in	groups. Or he/she can give	the laboratories.	International students is	*Items with different content in the first and second term

Milestone/ capstone indicator for Doctoral Course

Milestone (1) (spring entrance : by November of D1, autumn entrance : by May of D1): As a general rule, receive B grades for 3 or more out of the remaining 12 items excluding "6. How to show research method" in the following rubric table.

Milestone (2) (spring entrance : by November of D2, autumn entrance : by May of D2): As a general rule, in the rubric table below, receive a B or higher grade for "4. Research plan" and Bs or higher grades for 4 or more out of the 11 items that exclude "6. How to show research method", and there are no more than 3 items that are D grades.

Milestone (3) (spring entrance : by November of D3, autumn entrance : by May of D3): As a general rule, in the rubric table below, receive a B or higher grade in "4. Research plan", and Bs or higher grades for 5 or more out of the 11 items that exclude "6. How to show research method", and there are no items that are D grades.

Capstone (spring entrance : February of D3, autumn entrance : August of D3): As a general rule, in the rubric table below, receive Bs or higher grades for all items for completion of the Doctoral Course.

Rubric table

Rubin	c table					[]
1	Evaluation Establish theme	A (advanced) After the research theme is established, the background and objectives of that research are clearly organized and analyzed, and then an explanation is made including the significance if the issue is achieved.		of the background and objectives of the research are	D (beginning) The research theme is under consideration.	Remarks
2	Knowledge/ understanding	Understand and sufficiently explain previous researches as well as knowledge that is basic or of relevant fields of the research theme that has been established.		Understand basic knowledge related to the research theme that has been established, but knowledge of previous researches is insufficient.	Almost no understanding of basic knowledge related to the research theme that has been established.	
3	Originality	Encompassing any relevant previous researches, originality of the research theme is clear, and it is also evident that the research theme is challenging in the relevant field.	previous researches, originality of the research theme is clear.	Certain aspects of own research theme is similar to that of relevant previous researches, but originality of research theme is recognized.	There is precedence to the research theme, and any degree of originality cannot be recognized.	*Content of Master's and Doctoral is different.
4	Research plan	A research plan is being prepared through consultation with the academic supervisor and the timing and content of specific research activities such as an advance research survey, data collection for the theme, result analysis, and writing of thesis, etc. are clear.	with the academic supervisor and the timing and content of research activities such as an advance research survey, data collection for the theme, result	A research plan is being prepared through consultation with the academic supervisor but the timing and content of research activities such as an advance research survey, data collection for the theme, result analysis, and writing of thesis, etc. are not clear.	A research plan has not been prepared. Or, a research plan has been prepared but content is lacking or incomplete and cannot be accepted as a research plan.	*Milestone only
5	Relevance of research methods	Based on the feasibility of previous research surveys and methods, research methods and materials that are deemed suitable for solving the research theme have been selected. Also, the best option has been considered by, for example, looking into multiple methods.	Based on the feasibility of previous research surveys and methods, research methods and materials that are deemed suitable for solving the research theme have been selected.	research theme is insufficient,	There has been no examining into suitable research methods for solving the research theme.	
6	Presenting research method	A research method is presented utilizing academic methods such as referencing literary citations, and researchers with equivalent knowledge and techniques would be able to reproduce the research results. Or, explanation of the research method is excellent as a general review.	such as referencing literary	A research method is presented, but even researchers in the same field would have difficulty understanding the research method.	A research method is not presented and researchers in the same field would not be able to assume research method.	*Capstone only
7	Results quantity and quality *"Results" refer to those of experiment, calculation, design, prototyping, programming, collection, etc.	Sufficient results in terms of quantity and quality have been obtained in order to achieve the purpose of the research.	The minimum amount of quantitative and qualitative results necessary to achieve the purpose of the research has been obtained.	Quantitative and qualitative results are insufficient to achieve the purpose of the research.	Results that are needed to achieve the purpose of the research have not been obtained.	
8	Evaluation of experimental data	Analysis in line with the research purpose and method has been conducted, and in addition to evaluation by statistical analysis, etc., evaluation is also done in an integrated manner in multiple ways.	has been conducted, and evaluation by statistical	Analytical results from statistical analysis, etc. are shown, but a more suitable evaluation method is conceivable.	Evaluation with results from statistical analysis, etc. has not been made.	
9	Suitability of charts, etc.	Results are presented with innovative charts, etc. that make the research results very easy to understand, and the contents can be readily understood by researchers of different fields.	Results are presented with charts, etc. and research results can be understood.	Results are presented with charts, etc. and results are comprehensible but leave room for improvement.	Results are presented with charts, etc. but the contents are not organized and cannot be understood.	
10	Consideration of results *"Results" means experiment, calculation, design, prototyping, programming, collection, etc.	Based on the experiment results and reference materials obtained, objective and impartial interpretation is performed. Consideration of reproducibility, accuracy of results, exceptional results, etc. are also appropriate. Also, implications of the results have been considered from multiple perspectives.	Based on the experiment results and reference materials obtained, objective and impartial interpretation is performed. Consideration of reproducibility, accuracy of results, exceptional results, etc. are also appropriate.	There are no misunderstanding regarding the interpretation of the experiment results, but there are insufficient aspects in the consideration of reproducibility and accuracy of the results.	Interpretation of results has not been made, or there are misunderstandings with regards to portions of the interpretation of the results.	
11	Significance and development of research results	The research results obtained are discoveries of innovative knowledge or completely new events in the relevant field and it will undoubtedly lead to a more important research, or being put to good use in society can be highly foreseen.	The research results obtained are discoveries of meaningful knowledge and new events in the relevant field and it can be said to a certain degree that they will lead to a more important research or be put to good use in society.	Whether the knowledge obtained is meaningful in the relevant field leaves a certain level of doubt.	It cannot be said that meaningful knowledge in the relevant field was obtained.	
12	Oral presentation and organization of papers	Oral presentation or paper are logically structured, and it is easy for researchers in different fields to understand.	Oral presentation or paper are	It is difficult to say that the oral presentation or paper are logically structured and there is room for improvement.	The oral presentation or paper are not logically structured and they are difficult to understand.	*Oral presentation: milestone *Paper: capstone
13	International aspects of research activities	Presentations in English are being made at international conferences, etc. with sufficient communication in Q&A sessions and discussions, and there is active involvement in international collaborative researches.	conferences, etc. Or there is active involvement in	Presentations in English are being made on campus or within collaborative research groups. Or there is involvement in an international collaborative research.	There are no research presentations being made in English.	*Items with different content in the first and second term