Course Requirements

❑ Master's Program

1) Thesis Master

General Course	Major Course		Research	Total
	Mandatory	Elective		
3 and 1AU	6	12 or more	12 or more	33

A. Graduation Credits: at least 33 credits in total

B. Mandatory General Course: 3 credits and 1AU (choose one from the following table)

Classification	Subject No.	Subject Name	Lecture:Lab.:Credit (Homework)	Remark
Mandatory General Courses	CC010	Special Lecture on Leadership	1:0:0	
	CC020	Ethics and Safety I	1AU	
	CC500	Scientific Writing	3:0:3(4)	
	CC510	Introduction to Computer Application	2:3:3(10)	
	CC511	Probability and Statistics	2:3:3(6)	
	CC513	Engineering Economy and Cost Analysis	3:0:3(6)	
	CC522	Introduction to Instruments	2:3:3(8)	
	CC530	Entrepreneurship and Business Strategies	3:0:3(6)	
	CC531	Patent Analysis and Invention Disclosure	3:0:3(6)	

- Special Lecture on Leadership (CC010) is a no-credit course, and is compulsory for those who entered in 2002 or later. Students with corporate sponsorship and foreign students are exempt from this requirement.
- CC020 Ethics and Safety I (1AU, Must be taken in the first semester in the program, Required once throughout the Master's and Ph.D. program)

C. Mandatory Major Courses: 6 credits
   - GCT501 Introduction to Culture Technology
   - GCT503 Culture Technology Project I

D. Elective Major Courses: at least 12 credits
   - Take at least 12 credits mainly from major electives listed in the Curriculum List of the CT program (Should include at least 9 credits from the major electives listed in the Curriculum List of the CT program)
   - Maximum of 6 credits can be earned from other departments graduate level courses with the main advisor and track advisor's consent.
   - Credits earned from other graduate schools can be credited through the advisors and course committee's consent depending on similarities and relevance. (maximum 6 credits)

E. Research Courses: at least 12 credits (including 2 seminar credits)
   - Take at least 12 credits including thesis, individual study, and seminar courses
   - 3 credits of this research course can be earned by internship program with at least 2 months in duration.

2) Coursework Master

General Course	Major Course		Research	Total
	Mandatory	Elective		
3 and 1AU	6	21 or more	6 or more	36

A. Graduation Credits: at least 36 credits in total

B. Mandatory General Course: 3 credits and 1AU (choose one from the following table)

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit (Homework)	Remark
Mandatory General Courses	CC010	Special Lecture on Leadership	1:0:0	
	CC020	Ethics and Safety I	1AU	
	CC500	Scientific Writing	3:0:3(4)	
	CC510	Introduction to Computer Application	2:3:3(10)	
	CC511	Probability and Statistics	2:3:3(6)	
	CC513	Engineering Economy and Cost Analysis	3:0:3(6)	
	CC522	Introduction to Instruments	2:3:3(8)	
	CC530	Entrepreneurship and Business Strategies	3:0:3(6)	
	CC531	Patent Analysis and Invention Disclosure	3:0:3(6)	

- Special Lecture on Leadership (CC010) is a no-credit course, and is compulsory for those who entered in 2002 or later. Students with corporate sponsorship and foreign students are exempt from this requirement.
- CC020 Ethics and Safety I (1AU, Must be taken in the first semester in the program, Required once throughout the Master's and Ph.D. program)

C. Mandatory Major Courses: 6 credits
   - GCT501 Introduction to Culture Technology
   - GCT503 Culture Technology Project I

D. Elective Major Courses: at least 21 credits
   - Take at least 21 credits mainly from major electives listed in the Curriculum List of the CT program (Should include at least 12 credits from the major electives listed in the Curriculum List of the CT program)
   - Maximum of 6 credits can be earned from other departments graduate level courses with the main advisor and track advisor's consent.
   - Credits earned from other graduate schools can be credited through the advisors and course committee's consent depending on similarities and relevance. (maximum 6 credits)

E. Research Courses: at least 6 credits (including 3 seminar credits)
   - Take at least 6 credits including individual study and seminar courses
   - 3 credits of this research course can be earned by internship program with at least 2 months in duration.
   - Organize a committee of 3 people including the main advisor and the track advisor. Present the research outcome to the committee during the last semester. Upon the committee's approval, submit a final report. The report requires final approval from the main advisor.
   - Coursework master can be applied at the beginning of 3rd semester with the approval of the main advisor and the department chair.
   - 6 months period is required before graduation after the switching between coursework master and thesis master (No immediate graduation allowed after the semester of switching)

❏ **Doctoral Program**

General Course	Major Course		Research	Total
	Mandatory	Elective		
3 and 1AU	6	21 or more	30 or more	60

A. Graduation Credits: at least 60 credits in total
   - credits earned in GSCT and CT interdisciplinary Master's courses can be accumulated for the credits toward doctoral program.
B. Mandatory General Course: 3 credits and 1AU (choose one from the following table)

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit (Homework)	Remark
Mandatory General Courses	CC020	Ethics and Safety I	1AU	
	CC500	Scientific Writing	3:0:3(4)	
	CC510	Introduction to Computer Application	2:3:3(10)	
	CC511	Probability and Statistics	2:3:3(6)	
	CC513	Engineering Economy and Cost Analysis	3:0:3(6)	
	CC522	Introduction to Instruments	2:3:3(8)	
	CC530	Entrepreneurship and Business Strategies	3:0:3(6)	
	CC531	Patent Analysis and Invention Disclosure	3:0:3(6)	

   - CC020 Ethics and Safety I (1AU, Must be taken in the first semester in the program, Required once throughout the Master's and Ph.D. program)
   - same as the Master's program (not mandatory if taken in the Master's program)
C. Mandatory Major Courses: 6 credits
   - GCT501 Introduction to Culture Technology
   - GCT602 Culture Technology Project II
     (not mandatory if taken in the Master's program)
D. Elective Major Courses: at least 21 credits
   - Take at least 21 credits mainly from major electives listed in the Curriculum List of the CT program (Should include at least 15 credits from the major electives listed in the Curriculum List of the CT program)
   - Maximum of 6 credits can be earned from other departments graduate level courses with the main advisor and track advisor's consent.
   - Credits earned from other graduate schools can be credited through the advisors and course committee's consent depending on similarities and relevance. (maximum 9 credits)
E. Research Courses: at least 30 credits (including 4 seminar credits)
   - Take at least 30 credits including thesis and seminar courses

※ Miscellaneous
   - The requirements are applicable to all students. The entering class of 2007 or earlier must take the seminar class once. The entering class of 2008 or later must take the seminar class twice, 3 times, and 4 times for thesis master, coursework master, and Ph.D., respectively.