

**Major Course Completion Requirement of Department of
Management Engineering
(Mater's Program)**

Thesis Degree

Please check the common graduation requirements.

■ **Credit Requirement for Graduation:** at least 45 credits

■ **Mandatory General Courses :** 3 credits & 1AU

- CC511 Probability and Statistics (3),
CC020 Research Ethics and Safety Management I (1AU)

Designation	Substitution	Area
CC511 Probability and Statistics	BA581 Probability and Statistics	All
	BA582 Statistical Decision Analysis and Forecasting	Managerial Economics, Finance, Marketing, Operations Strategy & Management Science, Accounting, IT Management
	BA583 Statistical Analysis for Behavioral Science	Marketing, Organization & Strategic Management, IT Management

■ **Mandatory Major Courses :** 3 credits

Area	Designation	Substitution
Finance, Accounting	BA582 Statistical Decision Analysis and Forecasting	BA522 Econometrics BA683 Time Series Analysis and Forecasting
Marketing, IT Management	BA541 Research Methods in Behavioral Science	
Organization & Strategic Management	BA541 Research Methods in Behavioral Science	BA741 Advanced Research Methods
Managerial Economics, Operations Strategy & Management Science	BA541 Research Methods in Behavioral Science BA582 Statistical Decision Analysis and Forecasting	BA522 Econometrics BA683 Time Series Analysis and Forecasting

■ **Elective Courses** : at least 30 credits

※ Students are required to choose on(or up two) tracks including.

1. Managerial Economics (9 credits)

Classification	Designation	Substitution
Mandatory	BA521 Microeconomic Analysis	BA621 Microeconomic Theory BA624 Industrial Organization
	BA522 Econometrics	BA721 Applied Econometrics
	BA623 Economics of Innovation	

2. Finance (9 credits)

Classification	Designation	Substitution
Mandatory	BA521 Microeconomic Analysis	BA621 Microeconomic Theory
	BA631 Theory of Finance I	
	BA632 Theory of Finance II	

3. Marketing (9 credits)

Classification	Designation	Substitution
Mandatory	BA551 Marketing Theory	
	BA652 Marketing Data Analysis	BA651 Theories in Consumer Behavior
	BA751 Advanced Issues in Marketing	

4. Operations Strategy & Management Science (9 credits)

Classification	Designation	Substitution
Mandatory	BA572 Operations Management	
	BA683 Time Series Analysis and Forecasting	
	BA771 Operations Strategy	

5. Organization & Strategic Management (12 credits)

Classification	Designation	Substitution
Mandatory	BA542 Organizational Behavior	
	BA544 R & D Management	
	BA545 Organization Theory	
	BA546 Theoretical Foundation of Strategic Management	

6. Accounting (12 credits)

Classification	Designation	Substitution
Mandatory	BA511 Financial Accounting	BA811 Seminar in Financial Accounting BA813 Empirical Methods in Financial Accounting
	BA512 Accounting Information and Capital Market	BA812 Analytical Research in Accounting BA814 Advanced Topics in Accounting Research
	BA521 Microeconomic Analysis	BA621 Microeconomic Theory
Choose 1	BA811 Seminar in Financial Accounting	
	BA812 Analytical Research in Accounting	
	BA813 Empirical Methods in Financial Accounting	
	BA814 Advanced Topics in Accounting Research	

7. IT Management (9 credits)

Classification	Designation	Substitution
Mandatory	BA561 IT Management	
	BA562 Business Modeling Analysis	
	BA563 Business Media and Communication	

8. Green Business (10.5 credits)

Classification	Designation	Substitution
Mandatory	GG501 Green Business Theory and Practice	
	GG510 Green Technologies and Green Industries	
	GG604 Studies on Green Growth Strategy	
Choose 1	GG511 Creating Green Business and Commercialization	MG534 Entrepreneurship and the Entrepreneur
	GG531 Green Accounting	
	GG532 Carbon Emission Trading Market and Carbon Finance	
	GG535 Valuation of Green Firms	FMB663, FIN551 Valuation of Green Firms
	GG536 Green Fund Investment Strategy	FMB666 Green Fund Investment Strategy
	GG537 Green Derivatives	
	GG538 Case Study in Green Finance	
	GG540 Green Marketing	
	GG542 Green Innovation and Strategy	
	GG545 Green Value Chain and Carbon Management	
	GG551 Green IT and Smart Grid	
	GG552 Security for Information and Energy Infrastructure	
	GG555 Environmental and Energy System Risk Management	
	GG570 Green Growth Policy	
	GG571 Green Technology R&D and Green Industry Policy	

Classification	Designation	Substitution
Choose 1	GG572 Energy and Environment Economics	
	GG601 Research Methodology for Green Business	BA522 Econometrics BA571 Mathematical Programming BA863 Research Methodology for Management
	GG603 Special Topics in Green Business	

■ **Research** : at least 9 credits (including seminar credits)

- Seminar : 1 Credit (required)
("CC010 Leadership Lecture" is counted as seminar)
- Personal Research : up-to 3 credit
- Student of double major green business are required more than 1/3 whereas more in-depth study on green business.

■ **English Proficiency Requirement** :

Students are required to complete at least two English Courses.

- BUS927 Business Presentation, BUS929 Academic Writing in English
- This requirement can be waived for the students who have passed English screening test.

Major Course Completion Requirements for Department of Management Engineering, (Doctoral Program)

Please check the common graduation requirements.

- Credit Requirement for Graduation:** at least 66 credits
 - Not required, if you have already fulfilled this in the master's program.

- Mandatory General Courses :** 3 credits & 1AU
 - CC511 Probability and Statistics (3),
CC020 Research Ethics and Safety Management I (1AU)

Designation	Substitution	Area
CC511 Probability and Statistics	BA581 Probability and Statistics	All
	BA582 Statistical Decision Analysis and Forecasting	Managerial Economics, Finance, Marketing, Operations Strategy & Management Science, Accounting, IT Management
	BA583 Statistical Analysis for Behavioral Science	Marketing, Organization & Strategic Management, IT Management

- Mandatory Major Courses :** 3 credits

Area	Designation	Substitution
Finance, Accounting	BA582 Statistical Decision Analysis and Forecasting	BA522 Econometrics BA683 Time Series Analysis and Forecasting
Marketing, IT Management	BA541 Research Methods in Behavioral Science	
Organization & Strategic Management	BA541 Research Methods in Behavioral Science	BA741 Advanced Research Methods
Managerial Economics, Operations Strategy & Management Science	BA541 Research Methods in Behavioral Science BA582 Statistical Decision Analysis and Forecasting	BA522 Econometrics BA683 Time Series Analysis and Forecasting

■ **Elective Courses** : at least 30 credits

※ Students are required to choose on(or up two) tracks including.

1. Managerial Economics (12 credits)

Classification	Designation	Substitution
Mandatory	BA521 Microeconomic Analysis	BA621 Microeconomic Theory BA624 Industrial Organization
	BA522 Econometrics	BA721 Applied Econometrics
	BA622 Game Theory and Applications	
	BA623 Economics of Innovation	

2. Finance (9 credits)

Classification	Designation	Substitution
Mandatory	BA631 Theory of Finance I	
	BA632 Theory of Finance II	
	BA635 Empirical Studies in Finance	BA732 Empirical Corporate Finance BA734 Empirical Asset Pricing BA736 Empirical Research in Capital Markets BA737 Financial Econometrics

3. Marketing (9 credits)

Classification	Designation	Substitution
Mandatory	BA551 Marketing Theory	
	BA652 Marketing Data Analysis	BA651 Theories in Consumer Behavior
	BA751 Advanced Issues in Marketing	

4. Operations Strategy & Management Science (15 credits)

Classification	Designation	Substitution
Mandatory	BA521 Econometrics	BA621 Microeconomic Theory
	BA522 Econometrics	
	BA572 Operations Management	
	BA683 Time Series Analysis and Forecasting	
	BA771 Operations Strategy	

5. Organization & Strategic Management (18 credits)

Classification	Designation	Substitution
Mandatory	BA542 Organizational Behavior	
	BA543 Seminar on Strategy Implementation	
	BA544 R & D Management	
	BA545 Organization Theory	
	BA546 Theoretical Foundation of Strategic Management	
Choose 1	BA741 Advanced Research Methods	
	BA744 Advanced Technology and Innovation Management	BA623 Economics of Innovation

6. Accounting (21 credits)

Classification	Designation	Substitution
Mandatory	BA521 Microeconomic Analysis	BA621 Microeconomic Theory
	BA522 Econometrics	BA681 Multivariate Statistical Analysis BA683 Time series analysis and forecasting
	BA632 Theory of Finance II	
	BA811 Seminar in Financial Accounting	
	BA812 Analytical Research in Accounting	
	BA813 Empirical Methods in Financial Accounting	
	BA814 Advanced Topics in Accounting Research	

7. IT Management (15 credits)

Classification	Designation	Substitution
Mandatory	BA561 IT Management	
	BA562 Business Modeling Analysis	
	BA563 Business Media and Communication	
	BA764 Classical Readings in Information Systems Research	
	BA863 Research Methodology for Management	

8. Green Business (13.5 credits)

Classification	Designation	Substitution
Mandatory	GG501 Green Business Theory and Practice	
	GG510 Green Technologies and Green Industries	
	GG604 Studies on Green Growth Strategy	
Choose 1	GG511 Creating Green Business and Commercialization	MG534 Entrepreneurship and the Entrepreneur
	GG531 Green Accounting	
	GG532 Carbon Emission Trading Market and Carbon Finance	
	GG535 Valuation of Green Firms	FMB663, FIN551 Valuation of Green Firms
	GG536 Green Fund Investment Strategy	FMB666 Green Fund Investment Strategy
	GG537 Green Derivatives	
	GG538 Case Study in Green Finance	
	GG540 Green Marketing	

Classification	Designation	Substitution
Choose 1	GG542 Green Innovation and Strategy	
	GG545 Green Value Chain and Carbon Management	
	GG551 Green IT and Smart Grid	
	GG552 Security for Information and Energy Infrastructure	
	GG555 Environmental and Energy System Risk Management	
	GG570 Green Growth Policy	
	GG571 Green Technology R&D and Green Industry Policy	
	GG572 Energy and Environment Economics	
	GG601 Research Methodology for Green Business	BA522 Econometrics BA571 Mathematical Programming BA863 Research Methodology for Management
	GG603 Special Topics in Green Business	

- **Research** : at least 30 credits (including seminar credits)
 - Don't admit credits to take in Master's degree
 - Personal Research : up-to 7 credit
 - Student of double major green business are required more than 1/3 whereas more in-depth study on green business.

■ **English Proficiency Requirement :**

Students are required to complete at least three English Courses.

- BUS927 Business Presentation
BUS928 Teaching Effectiveness in English
BUS929 Academic Writing in English
- BUS927 and BUS929 can be waived for the students who have passed English screening test
- Students are required to obtain level 8(Advanced-Mid) or higher score in OPI Test before final evaluating dissertations for requesting degrees.

■ **Completion of Business Basic Course**

Doctoral students of unrelated bachelor's degree in Business Administration must complete at least three courses from one course in each major(area), excluding courses on one's major