

**Course Structure for M.A. Program**  
**Technology Application and Management area, Department of Industrial Education**  
**National Taiwan Normal University**

Adaptive to Class of	Required Credit(s)	Elective Credit(s)	Free Elective Credit(s)	Minimum Total Credits for Graduation
109	21.0	11.0	0.0	32.0

**I. Required Courses: 8.0 credits are required**

Course Category Code	Course Code	Course Name	Credit(s)	Credit Unit		Note
				Lecture Hour	Lab/Practice Hour	
	IEM0001	1 Educational Statistics	2.0	2.0	0.0	
400	IEM0002	2 Research Methods in Industrial Education (I)	2.0	2.0	0.0	
400	IEM0084	3 Research Methods in Industrial Education (II)	2.0	2.0	0.0	
	IEM0179	4 Theories and Methods in Vocational Technical Education	2.0	2.0	0.0	

**II. Elective Courses: 0.0 credit is required****III. Courses Offered to Students in Different Divisions**

Required Course, 13.0 credits are required

Course Category Code	Course Code	Course Name	Credit(s)	Credit Unit		Note
				Lecture Hour	Lab/Practice Hour	
400	IEM0395	1 Seminar on Technological Application Management(I)	1.0	1.0	0.0	
400	IEM0396	2 Seminar on Technological Application Management(II)	1.0	1.0	0.0	
400	IEM0387	3 Seminar on Technological Application Management(III)	1.0	1.0	0.0	
400	IEM0388	4 Seminar on Technological Application Management(IV)	1.0	1.0	0.0	
400	IEM0095	5 Advanced Educational Statistics (I)	2.0	2.0	0.0	
400	IEM0086	6 Technology Management	2.0	2.0	0.0	
400	IEC0021	7 Strategic Management	2.0	2.0	0.0	
400	IEC0029	8 Creativity Application and Innovation Management	2.0	2.0	0.0	
400	IEM0334	9 Enterprise Practice	1.0	0.0	2.0	

Elective Course: 11.0 credits are required

Course Category Code	Course Code	Course Name	Credit(s)	Credit Unit		Note
				Lecture Hour	Lab/Practice Hour	
455	IEC8001	1 Special Topics in Human Resource Management	2.0	2.0	0.0	
	IEC0011	2 Commodity Innovation and Pricing	2.0	2.0	0.0	
	IEC0016	3 The Philosophy and History of Technology	2.0	2.0	0.0	
	IEC0019	4 Technology Innovation and Transfer	2.0	2.0	0.0	
	IEC0022	5 Special Topics on High-Tech Human Resource Management	2.0	2.0	0.0	
	IEC0023	6 Studies in E-Commerce Management	2.0	2.0	0.0	
	IEC0024	7 Knowledge - based Economy	2.0	2.0	0.0	
	IEC0027	8 Technology and Social Culture	2.0	2.0	0.0	
455	IEC8003	9 Organization Innovation and Development	2.0	2.0	0.0	
455	IEC8004	10 Special Topics in Creative Thinking and Innovation of Technical-Vocational Education	2.0	2.0	0.0	
	IEM0088	11 Financial Management	2.0	2.0	0.0	
	IEM0322	12 Qualitative Research	2.0	2.0	0.0	
	IEM0323	13 Development of Technology Policy	2.0	2.0	0.0	
	IEM0325	14 R&D and Project Management	2.0	2.0	0.0	
	IEM0328	15 Global Business Management	2.0	2.0	0.0	
	IEM0333	16 Innovation Management on Small and Medium Enterprise	2.0	2.0	0.0	
	IEM0346	17 Intellectual Property	2.0	2.0	0.0	
	IEM0347	18 Studies in Production and Operation Management	2.0	2.0	0.0	
	IEM0356	19 Industrial Analysis and Competitive Strategies	2.0	2.0	0.0	
471	IEM0399	20 Technology Marketing Management	2.0	2.0	0.0	
461	IEM0400	21 Technology Forecasting	2.0	2.0	0.0	
335	IEM0425	22 Market Analytics	2.0	2.0	0.0	
340	IEC9003	23 Innovation, Business and Patent	2.0	2.0	0.0	
340	IEC9004	24 Theory and Practice of Big Data Analysis	2.0	2.0	0.0	

**IV. Free Elective Credits: 0.0 credit is required**