

# Education Plan for Academic Graduate in Mechanical Engineering (I)

(Discipline Code:0802,Award Master Degree of Engineering)

## I Objectives

1. To master the basic theory of Marxism, establish a scientific world outlook, adhere to the party's basic line, have ardent love for the motherland; obey the laws, good conduct; keep honest and trustworthy, rigorous style of study, solidarity and cooperation, have good research ethics and professionalism.

2. To master the specialized foundation theory and the professional knowledge of the system, Be capable of higher-level teaching, scientific research, engineering work and technology management work of Mechanical Engineering.

3. To master a foreign language, be able to skillfully conduct professional reading and writing.

4. To have a healthy body and good psychological quality.

## II Disciplinary Research Areas

Research area

1. Modern design theory and method.
2. Digital manufacturing technology and numerical control equipment.
3. Mechanical condition monitoring and fault diagnosis.
4. Manufacturing system integration and information Technology.
5. Magnetic levitation theory and Application.
6. Tribology and material manufacturing equipment.

## III Educational System and Years of Study

The educational system is 3 years, and the schooling is generally 3 years, no more than 5 years.

The Master courses include degree courses and no degree courses. Degree courses are marked with public degree course and professional degree courses.

The curriculum and credit distribution are listed as follows:

Total Credits	Degree Course Credit (≥17 credit)				An elective course (a course or research method must be opened)	Required other credits
	Public courses			Professional Degree courses		
	Politics	Foreign language	Math			
≥27	3	4	4	≥6	≥5	5

1 public degree courses are as follows, total credits 11 credits.

The first foreign language 72 hours, 4 credits; the theory and practice of socialism with Chinese characteristics 36 hours, 2 credits;

Introduction to natural dialectics 18 hours, 1 credits; mathematics class two, each 36 hours, each of the 2 credits.

2 professional degree courses: 3~4, 6 credits or more.

3. The non degree courses: graduate students can according to the direction of the research needs and individual ability, elective professional or interdisciplinary curriculum to broaden the knowledge of surface course, the non degree courses must meet the training plan "three, study period and credits" requirements, 5 or more credits.

As a professional foreign language elective courses or research methods, experimental courses as a required course in professional elective.

4 required steps: including practical aspects, academic activities, the topic of the report and mid-term examination, 5 credits.

5. Where the equivalent or cross disciplines (Professional) admission of students shall repair the disciplines (Professional) corresponding university undergraduate courses, regardless of the credits. See "on the specific provisions of Wuhan University of Technology graduate course provides in graduate manual" .

#### IV Curriculum System and Credit Requirements

Course Category	Course No.	Course name	Theory Hrs	Experimental Hrs	Credit	Semester	School	Remark
Degree Courses	003281001	First Foreign Language(Chinese)		108	6	1、 2	School of Internation Education	Compulsory courses
	003281002	Introduction to China		54	3	1	School of Internation Education	
	01421062	Matrix	36		2	1	School of Science	Select any three courses
	01421065	Numerical Calculation	36		2	2		
	01421066	Mathematical Model	36		2	2		
	01421067	Mathematical modeling and Simulation	45		2.5	1	School of science	Required by Recommended Students
	00421001	Mechanical Engineering Mechanics	36		2	1	School of Mechanical and Electronic Engineering	Select any three courses
	00421002	Modern Design Method	30	6	2	1		
	00421003	Advanced Manufacturing technology	36		2	1		
	00421004	Modern Control Engineering	32	4	2	1		
	00421005	Digital Manufacturing technology	36		2	2		
	00421006	Engineering Testing and Data Processing	36		2	1		

Course Category	Course No.	Course name	Theory Hrs	Experimental Hrs	Credit	Semes-ter	School	Remark
	00421007	Computer Control Technology of Mechanical Equipment	36		2	2		
	00421008	Mechanical System Dynamics	26	10	2	1		
	00421009	Advanced Mechanism	34	2	2	1		
	00421301	Theory and Method of production operations	36		2	1		
	00421302	Logistics System Design and Analysis	36		2	1		
Interdisciplinary Elective Course	02223001	Taijiquan and its	18		1	1	Department of Physical Education	
Elective Courses	00422601	Professional Science and Technology Paper Writing	18		1	2	School of Mechanical and Electronic Engineering	Compulsory
	00422701	Principles and Methods of Experimental Design	18		1	2	School of Mechanical and Electronic Engineering	Select one course
	00422702	Finite Element Method in Machine	26	10	2	2		
	00422002	Data Structure and Database	36		2	2	School of Mechanical and Electronic Engineering	At least 1 courses
	00422003	Software Engineering	28	8	2	2		
	00422004	Computer Vision and Image Processing	36		2	2		
	00422005	Computer-aided Process Design	28	8	2	2		
	00422006	Embedded System and Interface Design	36		2	2		
	00422007	ProfiBus and Network Control Technology	32	4	2	2		
	00422008	Mechanical Condition Monitoring and Fault Diagnosis	36		2	2		

<b>Course Category</b>	<b>Course No.</b>	<b>Course name</b>	<b>Theory Hrs</b>	<b>Experi-mental Hrs</b>	<b>Credit</b>	<b>Semes-ter</b>	<b>School</b>	<b>Remark</b>
	00422009	Micro-Electro-Mechanical Systems	36		2	2		
	00422010	Robotics	36		2	2		
	00422011	Vibration and Noise Control	36		2	2		
	00422012	Multibody Dynamics and Applications	36		2	2		
	00422013	Tribology Theory and Design	36		2	1		
	00422014	Foundation of Magnetic Suspension Technology	26	10	2	2		
	00422015	New Building Materials Technology and Equipment	36		2	1		
	00422016	Modern Packaging Technology and Equipment	36		2	1		
Compulsory link	00424004	Practice Link			3	3	Graduate school	
	00424002	Topic Selection Report			1	3		
	00424003	Academic Activities	5		1	3		