#### Mechanical Design, Manufacturing and Automation

(**Program Code: 080202**)

### I. Program Objectives

The specialty educational aim is to adapt the needs of the development of modern mechanical engineering, help students to develop all-round morality, intellectuality and physical fitness, cultivate qualified persons with wide international perspective, good foundation of machinery design and manufacture theory and practical operation skills. After graduation, the students should be able to engage in machinery design and manufacturing relate work with intermediate abilities.

#### 2. Requirements

Graduates should acquire the following knowledge and capabilities.

- 1) Graduates will have solid foundation on math, physics, chemistry, mechanics, and etc. They are able to use the basic Chinese to read Chinese books and magazines of their own specialty and have some skills such as listening, speaking, reading, writing and translation etc.
- 2) Graduates will master the basic theory, basic skills and professional knowledge, and get the primary ability to solve the machinery design and manufacturing problems with the fundamental theory and knowledge.
- 3) Graduates will get the abilities to engage in engineering practice including manufacturing, operating and maintenance of machinery, and have the ability of scientific research, organization and management.
- 4) Graduates will have the basic abilities of experimental measurement, calculation and expression, and master the basic methods of literature search..
- 5) Graduates will have the basic team cooperation ability, engineering consciousness, innovative consciousness and consciousness of lifelong learning and have certain international vision and cross-cultural communication skills.

## 3. Graduate Requirements and Program Credits

Classi	Credits	Hours	Note										
Dagwined	Theory	114	2016	Including 104 experiment hours and 24 on-line hours									
Required	Experiment	4.5	80										
	Practice	30											
	1. Students will graduate after they earn 148.5 credits required in the teachi												
	program of their specialty, 10 credits required in the auxiliary teaching												
Graduate	program and get	HSK 4 ce	rtificate.										
requirements	2. Engineering	bachelor's	degree wi	ill be conferred to the qualified students.									
	3. The students	are requir	red to writ	te their graduation theses in English, and									
	the abstracts sho	uld be in C	Chinese.										

# 4. Curriculum

				Allocation of credit hours							Semesters/Credits   2 <sup>nd</sup> year   3 <sup>rd</sup> year   4 <sup>th</sup> year   81   3   4   S2   5   6   S3   7   8     8							
Course Code	Course Name	Credits	Credit Hours	Lecture	Experiment	Computer lab	Practice	1 <sup>st</sup> year			2 <sup>nd</sup> year			3 <sup>rd</sup> year			4th year	
				Lec	Expe	Con	Pra	1	2	S1	3	4	S2	5	6	S3		8
2090199	Primary Oral Chinese (2-1)	4.0	64	64				4.0										
2090299	Primary Chinese reading (2-1)	4.0	64	64				4.0										
2092099	Moral Education and Law	1.0	16	16				1.0										
0711299	Computer Program Design	3.0	48	48		(16)		3.0										
2090199	Primary Oral Chinese (2-2)	4.0	64	64					4.0									
2090299	Primary Chinese reading (2-2)	4.0	64	64					4.0									
0711399	Computer Technology	1.0	24	24		(24)			1.0									
2090599	Intermediate Chinese (2-1)	4.0	64	64							4.0							
2090499	Survey of China (2-1)	3.0	48	48							3.0							
2090499	Survey of China (2-2)	3.0	48	48								3.0						
2090599	Intermediate Chinese (2-2)	4.0	64	64								4.0						
2090699	Advanced Chinese (2-1)	4.0	64	64										4.0				
2090699	Advanced Chinese (2-2)	4.0	64	64											4.0			
0434199	Engineering Drawing	4.0	64	64				4.0										
0910199	Advanced Math (2-1)	6.0	96	96				6.0										
0910199	Advanced Math (2-2)	5.0	80	80					5.0									
0930199	University Physics (2-1)	4.0	64	64					4.0									
0940199	Physics Experiments (2-1)	1.0	24		24				1.0									
2010199	Metalworking Practice	2.0	2 weeks				2 weeks		2.0									

		Credits			Allocation of	Semesters/Credits												
Course Code	Course Name		Credit Hours	Lecture	Experiment	Computer lab	Practice	1 <sup>st</sup> year			2 <sup>nd</sup> year			3 <sup>rd</sup> year			4 <sup>th</sup> year	
				Гес	Expe	Com	Pra	1	2	S1	3	4	S2	5	6	<b>S</b> 3	7	8
0930199	University Physics (2-2)	3.5	56	56							3.5							
0940199	Physics Experiments (2-2)	1.0	24		24						1.0							
0641199	Theory Mechanic	3.0	48	48							3.0							
0540499	Electrical Engineering and Electronics II	2.5	40	30	10						2.5							
0641299	Material Mechanics	4.0	64	60	4							4.0						
0435199	Mechanical Principles	4.0	64	64								4.0						
0411099	Computer Aided Mechanical Engineering	4.0	64	64												4.0		
0419799	Mechanical And Electrical Integration	3.0	48	40	8											3.0		
0413499	Design of Mechatronics System	3.0	48	40	8											3.0		
0494499	Engineering Mapping	1.0	1 week				1week						1.0					
0540399	Electrical Engineering and Electronics I	2.5	40	30	10						2.5							
0419599	Introduction To Mechanical Processing.	4.0	64	56	8									4.0				
0417799	Fundamentals of Interchangeability and Measurement	4.0	64	48	16									4.0				
0419899	Mechanical Integrity Testing	3.0	48	40	8									3.0				
0413599	Control Engineering	4.0	64	64										4.0				
0435299	Mechanical Design	4.0	64	64											4.0			
0400599	Mechanical and Production Engineering	4.0	64	56	8										4.0			
0412599	Virtual Prototyping Technology	3.0	48	32	16										3.0			
0594199	Electronic and electrical engineering practice	2.0	2 weeks				2 weeks						2.0					
0494699	Course Design Of Mechanical Design	3.0	3 weeks				3 weeks									3.0		

Course Code	Course Name			Allocation of credit hours					Semesters/Credits										
		Credits	Credit Hours	Lecture	Experiment	mputer Iab	ctice	1 <sup>st</sup> year		2 <sup>nd</sup> year			3 <sup>rd</sup> year		4 <sup>th</sup>	year			
						Com	Prac	1	2	<b>S</b> 1	3	4	S2	5	6	S3	7	8	
0411399	Introduction to petroleum engineering equipment	3.0	48	48													3.0		
0499999	Graduation Design Project	18.0	18 weeks				18 weeks											18.0	