

**National Technical University of Ukraine**

**"Kyiv Polytechnic Institute"**

Department of Machines and Apparatus for Chemical and Oil Refining Production

**A P P R O V E D**

Head of Department of  
Machines and Apparatus for Chemical and  
Oil Refining Production

\_\_\_\_\_ Y.M. Korniyenko

16 September 2015

## **INDIVIDUAL STUDY PLAN**

**specialty** 8.05050315 “Equipment of Chemical Production and Building Material Plants”

**specialization** “Machines and Apparatus for Chemical and Oil Refining Production”

**Group LN-41m**

Yaroslav Martynenko

**for 2015/2016 academic year**

Scientific advisor: Associate Professor at the Department of Machines and Apparatus for Chemical and Oil Refining Production, Candidate of Engineering Sciences Andreev I.A.

Theme of Master Thesis:

“Process of vibra extrusion of fibre concrete products with square cross-section”

Kyiv 2015

## Implementation of curriculum for a Master degree

<i>№</i>	<i>Course</i>	<i>ECTS credits (hours)</i>	<i>Reporting form</i>	<i>Note</i>
<b>Autumn semester</b>				
1.	Patenting and Copyright	2	Credit	
2.	Philosophical Principles of Scientific Cognition	1,5	Credit	
3.	Fundamentals of Sustainable Development of Society	2	Credit	
4.	Mathematical Methods of Optimization	4	Exam	
5.	Mathematical Modeling of Systems and Processes	4	Exam	
6.	Foreign Language for Specific Purposes - 2	1,5	Credit	
7.	Transfer Processes white Equipping of Chemical Manufactures-2. Design of processes of transfer	3	Exam	
8.	Academic Year Project within the Subject -3: Processes of oil-processing productions	1	Course work	
9.	Manufacturing Technology, Reliability and Durability -2. Reliability and longevity of equipment of chemical productions	3	Graded credit	
10.	Theory of the Experiment and Measurement Techniques	3	Exam	
11.	Computer Design of Chemical Engineering Complexes	5	Credit	
<b>Spring semester</b>				
1.	Scientific-research Practice		Graded credit	

## Research work

1.	Choosing and reasoning of mathematical model methods solving of vibro-extrusion.	A thesis section	30.09.15
2.	Preparation of materials on research results preliminary to an article publishing in specialized issues and before thesis publishing and participating in the conference.	Thesis report	15.11.15
3.	Developing of advanced calculating algorithm of shaping of fiber-concrete makes of square and transversal overcut.	A thesis section An article in a specialized issue	30.01.16
4.	Modeling study of advanced process of vibro-extrusion of fiber-concrete makes of square and transversal overcut.	A thesis section	30.02.16
5.	Validity check of developed mathematic model by experimental data.	A thesis section	31.03.16
6.	Conclusions and recommendations concerning the design geometrical configuration of shaping vibro-extrusion machine. Design of research results.	A thesis section	20.04.16
7.	Preliminary defense of the master thesis. Preparation of materials on research results for publishing of the thesis report and participating in the conference.	Thesis reports	30.04.16
8.	The thesis completion of master and its preparation for defense.		30.05.16

## III Pedagogical and educational work

1.	Assistance in SRWS for section “ Processes and apparatus for chemical and oil refining production ”	Report	During study
----	---	--------	--------------

Scientific advisor:

Associate Professor at the  
Department of Machines and  
Apparatus for Chemical and  
Oil Refining Production, Cand. Engr.

Andreev I.A.

Master student

Martynenko Y.M.

Approved at the Department of  
Machines and Apparatus for Chemical and  
Oil Refining Production meeting  
Protocol № 2 from 16 September 2015