

**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**

Mykyta Lialka

**for 2015/2016 academic year**

Scientific advisor: Professor at the Department of Machines and Apparatus for Chemical and Oil Refining Production , Doctor of Engineering Sciences Y. M. Korniyenko

Theme of Master Thesis:

“The process of regeneration of functional characteristics of spiral wound membranes for water purification systems”

Kyiv 2015

## Implementation of curriculum for a Master degree

<i>Nº</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.	Experimental verification of the mathematical model. Analysis and generalization of results	Chapter of Master Thesis	24.09.15
2.	Preparation of materials for publication of research results. Presenting materials for obtaining patent and publishing two articles in specialized scientific magazine	Articles, patent application	13.11.15
3.	Clarification of the structure of a mathematical model of spiral wound membranes regeneration process	Chapter of Master Thesis	26.01.16
4.	The economic justification of process. Formation of recommendations for the rational management of regeneration process	Chapter of Master Thesis	21.02.16
5.	Design of construction of apparatus for regeneration of wound membranes process	Chapter of Master Thesis	23.04.16
6.	Public testing of work. Writing reports on the Master Thesis. Presentation of abstracts at scientific conferences and seminars	Theses	12.04.16
7.	Preparation of Master Thesis for defense	Master Thesis	28.05.16

## 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:

Head of Department of  
Machines and Apparatus for Chemical and  
Oil Refining Production, D. Engr.

Y.M. Korniyenko

Master student

M.O. Lialka

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