

**Annex No. 4***To the education program  
at the Interdisciplinary Doctoral School of Agricultural Sciences***National Veterinary Institute - National Research Institute in Puławy Discipline:  
veterinary science**

Item	Number of hours	ECTS points	Year	Form of crediting	Learning outcomes <sup>1</sup>
<b>1. Obligatory courses</b>					
<b>1.1.</b> A major subject related to the discipline of veterinary science	30	2	I/II-	Exam	W01, W02, W03, W04, U03, K01, K03
<b>1.2.</b> Statistical methods in scientific research	30	2	I/II	Exam	W06, U06, K02, K03, K04, K05
<b>1.3.</b> Ethical and legal aspects in scientific research	5	1	I/II	Pass with grade	W08, U06, K05, K06, K07, K08
<b>1.4.</b> Specialized workshops in a selected foreign language	30	2	1st/2nd year	Exam	W05, U04, U05, K03, K02, K04
<b>1.5.</b> Fundraising for research and project preparation	15	2	1st/2nd year	Pass with grade	W07, U01, U05, K02, K03, K05, K06
<b>1.6.</b> Preparation and editing of a scientific text	15	2	I/II	Pass with grade	W04, W05, U01, U04, U06, K02, K03, K04, K05
<b>1.7.</b> Copyright and Intellectual Property	5	1	I/II	Pass with grade	W08, U01, K01, K02, K03, K04, K05, K06, K07
<b>2. Elective courses</b>					
<b>2.1.</b> Molecular biology techniques	15	2	I/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
<b>2.2.</b> Food Safety	15	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
<b>2.3.</b> Proteome Analysis Methods	10	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
<b>2.4.</b> In vitro techniques	15	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
<b>2.5.</b> Alternative methods to animal testing used in toxicology.	10	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
<b>2.6.</b> Transfer of knowledge and technology	5	1	II/III	Pass with grade	W02, W03, U01, U02, U03, K02,

					K03, K04, K05, K09
<b>2.7.</b> Disciplinary lecture	5	1	I/IV	Passing	W01,W02, U03, K01, K03
<b>2.8.</b> extra-disciplinary lecture	5	1	I/IV	Passing	W01,W02, U03, K01, K03
<b>3. Seminar</b>	60	4	I/IV	Passing	W08, U01, K03, K04, K05, K08
<b>4. Other scientific activities</b>					
<b>4.1.</b> Conducting your own research project/grant	2 ECTS/ project	4	I/IV	Passing	W01, W02, W03, W04, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07, K08, K09
<b>4.2.</b> Research internship abroad	2 ECTS/inter nship	4	I/IV	Passing	W01, W02, W03, W05, U01, U02, U03, U04, K01, K02, K03, K04, K05, K06,K07
<b>4.3.</b> Participation in a research/commercialization /implementation project	2 ECTS/proje ct	2	I/IV	Passing	W01, W02, W03, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07,K08
<b>4.4.</b> Participation in a scientific conference	1ECTS/ conference	3	I/IV	Passing	W01, W02, W03, W05, U01, U02, U03, U04, K01, K02, K03, K05,
<b>4.5.</b> Authorship of a scientific publication from the current list of the Ministry of Science and Higher Education	4 ECTS/publi cation	8	I/IV	Passing	W01, W02, W03, W04, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07, K08, K09
<b>4.6.</b> Activities promoting science	1 ECTS/activi ty	3	I/IV	Passing	W01, W02, W04, W05, W08, U01, U04, K01, K02, K05, K06, K08
<b>5. Professional practice</b>	10	1	I/IV	passing	W01, W02, W03, W05, W08,W09 U01, U02, U03, K01, K03, K06, K07, K09

<sup>1)</sup> Learning outcomes achieved as a result of completing a given subject. A detailed description of the outcomes marked with symbols can be found in *Annex 6 to the Education Program*.