Course name:

TECHNICAL INFRASTRUCTURE OF AGRICULTURE

ECTS	**4**
Course status	**obligatory**
Course final assessement/evaluation of outcomes	**Credit**
Prerequisites	

Main field of study:

AGRICULTURE

Profile of study	**General-academic**
The code of studies (education level)	**SI (bachelor)**
Semester of studies	**winter / summer**
Language of instruction	**English**

Course offered by:

Name of faculty offering the course	**Faculty of Production and Power Engineering**
Name of department offering the course	**Department of Production Engineering, Logistics and Applied Computer Science**
Course coordinator	**dr hab. inż. Zbigniew Kowalczyk**

Learning outcomes of the course:

Symbol of outcome	Description of learning outcome	Reference to	
		main field of study outcomes	discipline#
KNOWLEDGE – student knows and/or understands:			
TEG.SI_W01	has basic knowledge of the life cycle of the equipment, production facilities and technical systems used in agriculture	R01_W13	RR
TEG.SI_W02	construction and operation of agricultural tractor systems and assemblies	R01_W16	TZ
SKILLS – student is able to:			
TEG.SI_U01	read and create simple technical construction drawings	R01_U21 R01_U24	TZ
TEG.SI_U02	draw diagrams of building sets of agricultural machines	R01_U21 R01_U24	TZ
TEG.SI_U03	select technical means of production to the operating conditions of the farm in terms of the nature of the production	R01_U21 R01_U24 R01_U25	RR
SOCIAL COMPETENCE- student is ready to:			
TEG.SI_K01	understand the need for lifelong learning	R01_K01	RR

TEG.SI_K02	be aware of the importance of technical progress in the development of agriculture	R01_K03	TZ

Teaching contents:

Lectures		**20**	**hours**
Topics of the lectures	1-4. Technical means of production in agriculture - types, characteristics 5-7. Life cycle and consumption of technical means of production used in agriculture 8-10. Basics of technical drawing 11-16. Fundamentals of agricultural machinery 17-20. Working conditions of the tractor, tools and agricultural machines		
Accomplished learning outcomes	*TEG.SI_W01, TEG.SI_U01, TEG.SI_U02, TEG.SI_K01, TEG.SI_K02*		
Verification methods, rules and criteria of outcome assessment	*Credit for the lecture in writing: open questions assessed individually. Participation in the final evaluation of the module 50%. The percentage scale of assessment of learning outcomes was adopted, defined as follows:* *1. Unsatisfactory grade (2.0): it is issued if, in the scope of at least one of the three components (K, S or SC) of the subject learning outcomes, the student obtains less than 50% of the effective outcomes for a given component.* *2. Sufficient grade (3.0): it is issued if for each of the three components (K, S or SC) of learning outcomes, the student obtains at least 50% of the applicable outcomes for a given component.* *3. Assessment more than satisfactory (3.5): it is given on the basis of an average arithmetic with three components (K, S or SC) of learning outcomes (61-70% on average).* *4. A similar method of calculating the grades as presented in point 3 was adopted for the grades good (4.0 • average 71-80%), above good (4.5 • average 81-90%) and very good (5.0- average> 90%).* *NOTE: The person conducting the classes, on the basis of the student's mastery of the applicable curriculum content of a given subject, based on his own didactic experience, formulates an assessment using the above-mentioned formal criteria.*		
Classes		**10**	**hours**
Topics of the classes	1-4. General structure and principles of the operation of an agricultural tractor 5-7. Principles of the operation of the agricultural machinery and equipment 8-10. Assessment of the consumption of selected technical means of production used in agriculture		
Accomplished learning outcomes	*TEG.SI_W02, TEG.SI_U01, TEG.SI_U02, TEG.SI_U03, TEG.SI_K01, TEG.SI_K02*		

Verification methods, rules and criteria of outcome assessment	*Credit for the workshops on the basis of:* *- individual project (obligatory), assessed on a scale of 2.0-5.0. Participation in the final evaluation of the module 50%. NOTE: The person conducting the classes, based on the student's mastery of the applicable curriculum content of a given subject, based on his own didactic experience, formulates an assessment using the above-mentioned formal criteria.*

Seminars		**…**	**hours**
Topics of the seminars			
Accomplished learning outcomes	*symbol of learning outcomesof the seminars*		
Verification methods, rules and criteria of outcome assessment	*together with participation in the final asessement (in %)*		

References:

Basic	*Skrobacki A., Ekielski A. Pojazdy i ciągniki rolnicze. Warszawa : Wydawnictwo "Wieś Jutra"; 2012* *Białczyk W., Cudzik A., Czarnecki J..Ciągniki i pojazdy rolnicze. Oficyna Wydawnicza Atut - Wrocławskie Towarzystwo Oświatowe. 2012.*
Supplementary	*Dobrzański T. Rysunek techniczny maszynowy. Wydawnictwo WNT. 2015*

Structure of learning outcomes:

Discipline: RR				*2*	ECTS**
Discipline: TZ				*2*	ECTS**
Structure of student activities:					
Contact hours		39	hours	1,6	ECTS**
including:	lectures	20	hours		
	classes and seminars	10	hours		
	consultations	5	hours		
	participation in research	…	hours		
	mandatory trainerships	…	hours		
	participation in examinations	4	hours		
e-learning		…	hours	…	ECTS**
student own work		60	hours	2,4	ECTS**

*** where 10 hours of classes = 1 ECTC (in case of 15 h → 2 ECTS)**

** stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes

academic discipline code: RZ - animal science and fishery, PB - biological sciences, etc.