

## Description of the outcomes of learning for a field of study

**Field of study:** Management and Production Engineering

**Level:** first-cycle studies

**Profile:** general

**An academic discipline or disciplines to which the outcomes of learning apply:**

**leading academic discipline (%): mechanical engineering (82%) other**

**academic disciplines (%): management and quality sciences (18%)**

The description of the outcomes of learning takes into account the universal characteristics of first-cycle studies, level 6, specified in the Act of 22 December 2015 on the Integrated Qualifications System (Dz.U./Journal of Laws/ of 2016 item 64 and 1010, as amended) and the characteristics of the outcomes of learning of second-cycle studies, level 6, specified in the regulations issued based on Art. 7 sec. 3 of the aforementioned Act.

Characteristics of the outcomes of learning for the qualifications at Polish Qualifications Framework, level 6

Symbols of outcomes of learning for the field of studies	Outcomes of learning	Reference to characteristics of the second-cycle studies the learning outcomes Polish Qualifications Framework
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### KNOWLEDGE

#### the graduate knows and understands:

ZI_W01	issues related to mathematics, physics, and chemistry that are useful to formulate and solve tasks in the field of Management and Production Engineering	P6S_WG
ZI_W02	economic, legal and social issues that enable to describe and analyse processes of production and the rational management of goods and services appropriate to the field of study of Management and Production Engineering	P6S_WK
ZI_W03	technical and physical and chemical processes adapted for the field of study of Management and Production Engineering	P6S_WG

ZI_W04	the life cycle of devices, objects, technical systems and industrial products and the influence of technology on the quality of raw materials and products, that are used methods to determine occupational risks for the users of technical facilities and risks for the environment	P6S_WG
ZI_W05	issues related to technical knowledge in the field of Management and Production Engineering that are necessary to understand basic phenomena and technical processes	P6S_WG
ZI_W06	principles of sustainable development; the student demonstrates the knowledge in the field of implementation of integrated production processes	P6S_WG
ZI_W07	norms and rules of social structures and institutions in terms of functioning and development; the student knows the principles of operation of enterprises and relations among them	P6S_WK
ZI_W08	issues related to management including the creation and development of forms of entrepreneurship; the student knows and understands the basic concepts and principles in the field of industrial property protection and copyright	P6S_WK
ZI_W09	social, economic, legal and other non-technical conditions of engineering activities	P6S_WK
ZI_W10	processes of production of raw materials, their quality and suitability for production	P6S_WG
ZI_W11	standardised methods and tools of information technology to collect, analyse and present economic and social data in the field of Management and Production Engineering	P6S_WG
ZI_W12	trends and methods of research related to particular areas of activities of companies: market research, financial analysis, levels of product quality, etc.	P6S_WG
ZI_W13	issues related to materials, processes of production, production management, transport and services, entrepreneurship, quality management, finance and accounting	P6S_WG
ZI_W14	methods, techniques, tools and materials that are used to solve engineering tasks in the field of production systems engineering in selected industries	P6S_WG

**SKILLS, the graduate can:**

ZI_U01	use information obtained from various sources - also in a foreign language - to prepare own works with respect to copyright	P6S_UW P6S_UK
ZI_U02	use basic available information technologies to obtain and process information in the field of agricultural and agri-food production; the student is able to use the acquired knowledge to resolve issues and communicate regarding problems arising at work including those related to technological and logistical processes	P6S_UW
ZI_U03	prepare, analyses and projects related to Management and Production Engineering	P6S_UW
ZI_U04	undertake standard engineering activities with the use of appropriate methods, techniques, technologies, tools and materials to solve current problems related to production processes in agriculture and agri-food processing, services, the condition of the environment, management of human, financial and natural resources	P6S_UW
ZI_U05	analyse chemical and physical processes, identify and prepare a standard analysis of the phenomena that affect processes of production, the state of the environment and natural resources; the student is able to identify and apply techniques and technologies typical of those processes	P6S_UW
ZI_U06	undertake engineering business independently, recognizing its systemic aspects and non-technical	P6S_UW P6S_UU
ZI_U07	develop an engineering project in the field of Management and Production Engineering, prepare and deliver a presentation that contains a summary of the results of the implementation of the project	P6S_UW P6S_UK
ZI_U08	use: tools, norms and standards in the processes of planning, organising, motivating and controlling the quality as well as health and safety at work, etc. in agricultural, agri-food and industrial production	P6S_UW
ZI_U09	use specialised knowledge related to Management and Production Engineering to communicate with various entities and professional groups verbally, in writing and with the use of graphic forms	PS6_UW P6S_UK
ZI_U10	apply health and safety regulations at work, manage personnel and finances	P6S_UW P6S_UO

ZI_U11	design new and supervise existing operational and production processes and systems taking into account ecological aspects	P6S_UW
ZI_U12	use a foreign language at B2 level of the Common European Framework of Reference for Languages, communicate orally and in writing in a foreign language using specialized terminology, read and understand simple specialist texts	P6S_UK

**SOCIAL COMPETENCES, the graduate  
is prepared to:**

ZI_K01	work in a team, is able to organise and supervise the work of groups of people (projects, tasks, etc.) in a working environment	P6S_KK
ZI_K02	set priorities, communicate at work and outside of the workplace and convey the knowledge with the use of various media (in a mother tongue and a foreign language)	P6S_KO
ZI_K03	setting priorities for the implementation of various tasks and understands the need to independently acquire knowledge and has professional and research skills, also to inspire other people to improve professional, personal and social competences, regardless of their age	P6S_KK
ZI_K04	demonstrate ethical behaviour within assigned organisational and social roles, is able to take responsibility for assigned tasks	P6S_KR