

Description of the education module/course (syllabus)

Course name:	Medicinal and Aromatic Plants		ECTS	3
Translation of the course name into English:	-			
Study field:	General Horticulture			
Language of lectures:		Study level: Master of science		
Study form: <input checked="" type="checkbox"/> stationary <input type="checkbox"/> extramural	Status of lectures: <input type="checkbox"/> primary <input checked="" type="checkbox"/> directional	<input type="checkbox"/> obligatory <input checked="" type="checkbox"/> facultative	Semester number: 1	<input type="checkbox"/> winter semester <input checked="" type="checkbox"/> spring semester
Academic year from which the description applies		2021/2022	Catalog number:	OGR-O2-S-1L07.28 ang
Course coordinator:	Prof. Katarzyna Bączek			
Lecturers:	Prof. Katarzyna Bączek, Dr Olga Kosakowska			
Unit running the course:	Department of Vegetable and Medicinal Plants			
Unit ordering the course:	Faculty of Horticulture			
Assumptions, objectives and description of the course:	The aim of the subject is to acquaint the students with diversity of medicinal plants growing wild and cultivated in Poland – in respect of the number of species, their occurrence (habitat type), plant part collected as a raw material, its chemical composition and application. The methods of preservation of natural resources of medicinal plants will be presented, including the rules of sustainable harvesting. During field practices the students will have an opportunity to identify the species of medicinal plants. They will see the results of experiments on introduction of these plants into cultivation.			
Didactic forms, number of hours:	<p>Lecturers (15): Classification of plant raw materials. Characteristics of the Polish and European medicinal plant raw materials market. The products obtained from medicinal plants. Biologically active constituents of plant raw materials. Factors influencing the quality of plant raw materials. Main threats for wild growing medicinal plants and their habitats. Rules of the sustainable exploitation of natural resources of medicinal plants. Methods of plant conservation. Cultivation of medicinal and aromatic plants. Problems concerning introduction of wild growing medicinal plants into cultivation.</p> <p>Classes (15): Characteristics of chosen medicinal plants: morphological traits necessary for identification of a species, habitat requirements, occurrence in plant communities, time and method of raw material harvesting, organoleptic traits making possible identification of the raw material, main biologically active compounds, pharmacological activity and application of the raw material. Basic methods of quality evaluation of medicinal and aromatic plant raw materials. Visit to the experimental field of the Department of Vegetable and Medicinal Plants: identification of medicinal plants while growing; to get acquainted the students with the <i>ex situ</i> collection of wild growing medicinal plants and the experiments on introduction of these plants into cultivation.</p>			
Teaching methods:	Lectures (15), laboratory and field classes (15)			
Formal requirements and prerequisites:	Chemistry, botanics at the level of high school			
Learning outcomes:	<p>Knowledge:</p> <p>01 - student knows the most important medicinal and aromatic plants (MAPs) collected from cultivation and from wild-growing plants.</p> <p>02 – student knows the factors affecting the quality of plant raw materials and methods of quality evaluation</p> <p>03 – student knows the groups of main biologically active compounds and their activity</p> <p>04 - student knows the rules and methods of sustainable harvesting of wild-growing plants</p> <p>05 – student knows the basic data concerning cultivation of most important MAPs</p>	<p>Skills:</p> <p>01 - ability to identify the most important species of medicinal plants and raw materials obtained from these plants</p> <p>02 – ability to carry out a preliminary evaluation of the quality of plant raw materials</p>	<p>Competences:</p> <p>01 – awareness of the threats for wild growing medicinal plants and knowledge on the methods of <i>in situ</i> and <i>ex situ</i> plant conservation.</p> <p>02 - student is aware of the need to act in accordance with the principles of ethics in medicinal plant production</p>	
The way of verification of learning outcomes :	Exam, tests during the classes and identification of medicinal raw materials, self-working task			
Form of documentation of achieved learning outcomes :				

Elements and weights affecting the final grade:	The assessment of learning outcomes consists of: Exam – 40%, tests – 40%, herbarium – 20%,
Place of classes:	lecture room, experimental field of the Department of Vegetable and Medicinal Plants
<p>Basic and supplementary literature :</p> <p>Duke J.A., Bogenschutz-Godwin M.J., duCellier J., Duke P.-A.K. 2002. Handbook of medicinal herbs. Second edition. CRC Press, Boca Raton, London, New York, Washington D.C.</p> <p>Hamilton A.C. 2004. Medicinal plants, conservation and livelihoods. Biodiversity and Conservation 13: 1477-1517.</p> <p>Heywood V.H., Iriondo J.M. 2003. Plant conservation: old problems, new perspectives. Biological Conservation 113: 321-335.</p> <p>Li T.S.C. 2000. Medicinal plants. Culture, utilization and phytopharmacology. CRC Press, Boca Raton, London, New York, Washington D.C.</p> <p>WHO guidelines on good agricultural and collection practices (GACP) for medicinal plants. WHO, Geneva 2003.</p> <p>WHO, IUCN, WWF. 1993. Guidelines on the Conservation of Medicinal Plants. Castel Cary Press, Somerset, UK.</p> <p>Wichtl M. (Ed.) 2004. Herbal Drugs and Phytopharmaceuticals. CRC Press, Boca Raton, London, New York, Washington D.C.</p>	
COMMENTS	

Quantitative indicators characterizing the module / object:

Estimated total number of student work hours (contact and own work) necessary to achieve the assumed learning outcomes - on this basis, complete the ECTS field:	60 h
The total number of ECTS points that a student receives in classes requiring direct participation of academic teachers or other lecturers:	2 ECTS

Table of compliance of the directional learning outcomes with the effects of the course:

Effect category	Learning outcomes for the course:	Reference to learning outcomes specific for study program on particular study field (direction)	The impact of course on the directional effect ^{*)}
Knowledge - 01	01 - student knows the most important medicinal and aromatic plants (MAPs) collected from cultivation and from wild-growing plants.	K_W03; K_W07	2;2
Knowledge -02	02 – student knows the factors affecting the quality of plant raw materials and methods of quality evaluation	K_W06	2
Knowledge -03	03 – student knows the groups of main biologically active compounds and their activity	K_W03; K_W06	1;2
Knowledge -04	04 - student knows the rules and methods of sustainable harvesting of wild-growing plants	K_W09	2
Knowledge -05	05 – student knows the basic data concerning cultivation of most important MAPs	K_W05; K_W07	2;2
Skills - 01	01 - ability to identify the most important species of medicinal plants and raw materials obtained from these plants	K_U02, K_U06	1;2
Skills -02	02 – ability to carry out a preliminary evaluation of the quality of plant raw materials	K_U02	2
Competences - 01	01 – awareness of the threats for wild growing medicinal plants and knowledge on the methods of <i>in situ</i> and <i>ex situ</i> plant conservation.	K_K01; K_K04	1;1
Competences -02	02 - student is aware of the need to act in accordance with the principles of ethics in medicinal plant production	K_K04	1

*)

3 – znaczący i szczegółowy,

2 – częściowy,

1 – podstawowy,