COURSE DESCRIPTION

Course code	Volume in ECTS credits	Institution	Faculty	Department
AGR8017	7		Agronomy	

Course title in Lithuanian

Sodininkystė

Course title in English

Horticulture - fruit growing

Study methods	Volume in ECTS credits
Lectures	40
Consultations	3
Exam	3
Individual work	141

Short course annotation in Lithuanian (up to 500 characters)

Studentai žinos sodininkystės mokslo ir gamybos vystymosi tendencijas ir perspektyvas pasaulyje, norminius aktus, reglamentuojančius uogų ir vaisių auginimo, kokybės ir realizavimo klausimus, aplinkos veiksnius ir klimatines sąlygas, sąlygojančias sodininkystės plėtrą, augalų sistematiką, biologiją, morfologiją, architektoniką, sodo augalų augimo, vystymosi, derėjimo dėsningumus, sodo augalų dauginimo, uogynų ir sodų įveisimo, priežiūros bei derliaus dorojimo ypatumus.

Short course annotation in English (up to 500 characters)

The students will know the tendencies and perspectives of the development of horticultural science and production in the world, normative acts regulating berry and fruit growing, quality and realization issues, environmental factors and climatic conditions, which determine the development of horticulture, plant systematics, biology, morphology, architectonics, regularities of garden plant growth and development , the peculiarities the propagation of plants, the maintenance and harvest.

Relevance of the course

Students will be able to analyze the changes in the growth, development, and coherence of garden plants under the influence of anthropogenic factors, model technologies based on the latest results of fundamental and applied research, propose strategic ways of solving issues related to the propagation, planting, care, yield and harvesting of garden plants, critically to assess the impact of horticultural development on the environment.

Course aims

Providing knowledge and skills for complex horticultural activities, gathering new knowledge about technologies, solutions, methods and processes; to help prepare for scientific activities.

Content (topics) and methods

Lectures: 1. Development and perspectives of horticulture. Trends in horticulture. Tribal composition of garden plants. 2. Horticultural production. Value and need of fruit in Lithuania, Europe, world. Fruit consumption rates. 3. Development of horticultural science. Research institutions in Lithuania, research directions. 4. Institutions and regulatory acts regulating horticultural production and scientific activities. 5. Conditions for the development of topographical and economic horticulture. 6. Environmental factors limiting gardening and climatic conditions. 7. Agrotechnical and environmental problems in horticulture. 8. Plant systematics, biology, morphology, architectonics. 9. Regularities of growth, development and consistency of garden plants. 10. Specific physiological, anatomical, morphological features of garden plants. 11. Peculiarities, techniques, technologies for propagation of garden plants. 12. Theoretical and technological solutions for gardening, planting and care. 13. Problems of quality assurance of growing material. 14. Nutrition of orchards and berry plants to preserve high quality

harvest and plant potential. 15. Problems of young gardens. 16. Specificity of garden maintenance. 17. Distinctive features of janitor care and harvesting. 18. Physiology of Fruit, Problems of Picking, Logistics and Trade. 19. Specifics of research and methodology in horticulture.
Study subject methods: lecture material visualized, problematic lectures focusing on critical plant development factors and scientific issues to be addressed by individual garden plants. During these, doctoral students are included in the discussion. Targeted readings and presentations are provided for analysis of normative documents regulating horticultural production and scientific activities. Approximately 10 minutes are given to discuss each lecture topic. In the absence of a minimum number of doctoral students, individual consultations will be provided.

Structure of cumulative score and value of its constituent parts

1. Description of the development, production and prospects of horticultural science. 2. Description of environmental factors and climatic conditions, plant systematics, biology, morphology, architectonics, garden plant growth, development and consistency patterns. 3. Acquisition of knowledge about the propagation, planting, care and harvesting of garden plants and their application to problem gardening. 4. Adaptation of knowledge about the peculiarities of gardening nutrition and its application in mineral nutrition issues. 5. Understanding and applying regulatory acts on horticultural production and research in the development of horticultural technology. 6. Ability to communicate. 7. Ability to analyze.

Compulsory reference materials

No.	**Authors of publication, title, publishing house, year of publication.**
1.	Acquaah G. Horticulture principles and practices. Pearson Prentice Hall, 2009. - 760 p.
2.	Adams C. R., Early M.P. Principles of horticulture. Oxford: Elsevier Butterworth-Heinemann, 2004, Repr. 2006. - 230 p.
3.	Forshey C.G. Training and Pruning. Apple and Pear Trees.- Michigan, 1992.- 166 p.
4.	Uselis N. (sudarytojas). Intensyvios obelų ir kriaušių auginimo technologijos. Babtai, 2005.- 210 p.
5.	Uselis N. (sudarytojas). Intensyvios uoginių kultūrų auginimo technologijos. Babtai, 2002.- 190 p.
6.	Tromp J., Wertheim A.D., Wertheim S.J. Fundamentals of temperate zone tree fruit
7.	production.- Backhuys Publishers. 2005. - 400 p.

Supplementary reference materials

No.	**Authors of publication, title, publishing house, year of publication.**
1.	Acta Horticulture. Mineral nutrition of deciduous fruit plants// Editors M. Tagliavini.G.H. Neilsen. P. Millard.- Trento, 1993. - 520 p.
2.	Bergmann W., Farbatlas. Ernarungsstorungen bei kulturpflanzen. -Jena, 1983. - 254 p.
3.	Brown L.V. Applied principles of horticultural science.- Butterworth Heinemann, 2002. -
4.	322. Lind K., G.Lafer, K.Schloffer, G.Innerhofer,H.Meister. Organic fruit growing.- CABI publishing. 2003. 281p.
5.	Privalomieji kokybiniai reikalavimai šviežiems vaisiams ir daržovėms.- Babtai, 2001. 186p
6.	Tuinyla V., A. Lukoševičius (sudarytojai). Lietuvos pomologija. T.2. Vilnius, 1996. - 390 p.
7.	The Journal of Horticultural Science & Biotechnology
8.	Horticultural Science, Czech Academy of Agricultural Sciences
9.	Journal of the American Society for Horticultural Science
10.	Scientia Horticulturae. Elsevier
11.	European Journal of Horticultural Science. Verlag Eugen Ulmer.
12.	Acta Horticulturae. ISHS

Course programme designed by

No.	**Name, surname**	**Institution**	**Degree**	**E-mail address**

1.	Vidmantas Stanys,		prof. habil. dr.	v.stanys@lsadi.lt