

Course name: Integrated plant protection

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| ECTS | 5.0 |
| Course status | facultative |
| Course final assessment /evaluation of outcomes | The grade based on Student's work |
| Prerequisite | no requirements |

Main field of study:

Agriculture and Horticulture (Erasmus+)

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| Educational profile | General academic |
| Code of studies and education level | bachelor/engineer (SI) or master of science (SM) |
| Semester of studies | winter or summer |
| Language of instruction | English |

Course offered by:

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| Name of faculty offering the course | Faculty of Biotechnology and Horticulture |
| Name of department offering the course | Department of Botany, Plant Physiology and Plant Protection |
| Course coordinator | Maria Pobożniak (DSc, PhD), Jacek Nawrocki (DSc, PhD) |

Learning outcomes:

| Symbol of outcome | Description of the learning outcome | Reference to main field of study outcomes | Area symbol* |
|--|---|---|--------------|
| KNOWLEDGE – student knows and understands: | | | |
| IPP_W1 | the basic definitions in the field of integrated plant protection | OGR1-W01 | R |
| IPP_W2 | rules for forecasting diseases and pests of fruit crops and vegetables | OGR1-W05 | R |
| IPP_W3 | methods of integrated protection of fruit plants and vegetables against diseases and pests | OGR1-W05 | R |
| IPP_W4 | selection of appropriate preparations for plant protection in integrated cultivation | OGR1-W05 | R |
| IPP_W5 | combining elements from the biology and development of pest populations and the etiology of diseases in order to correctly select monitoring methods and choose the most beneficial techniques of pest prevention and control from the point of view of integrated plant protection | OGR1-W05 | R |
| SKILLS – student is able to: | | | |
| IPP_U1 | prepare programs for the protection of fruit plants and vegetables against diseases and pests | OGR1-U02 | R |
| IPP_U2 | identify pathogens, pests, damage and beneficial organisms found in fruit and vegetable crops | OGR1-U03 | R |
| IPP_U3 | define risk limits for pathogens and pests of fruit and vegetable crops | OGR1-U06 | R |
| IPP_U4 | correctly use appropriate equipment used for pest forecasting and monitoring (pheromone, sticky and odor traps) | OGR1-U07 | R |
| IPP_U6 | prepare reports on topics presented as part of the course | OGR1-U04 | R |
| IPP_U7 | use specialist literature | OGR1-U02 | R |
| SOCIAL COMPETENCIES – student is ready to: | | | |
| IPP_K1 | teamwork and responsibility to jointly implemented tasks | OGR1-K02 | R |

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| IPP_K2 | recognition of the importance of social, professional and ethical responsibility for the production of high-quality food | OGR1-K01 | R |
| IPP_K2 | risk assessment resulting from not applying the principles of good practice | OGR1-K03 | R |
| IPP_K2 | openness to new knowledge and awareness of its practical application | OGR1-K04 | R |

Teaching contents

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| Lectures | 15 hours | | |
| Topics | Integrated pest management - definition, history, evaluation and principles of IPM. Principles of Good Agricultural Practice. Principles of forecasting pests and diseases. Pesticides and non-chemical protection in IPM systems. Principles of biological control. | | |
| Accomplished learning outcomes | IPP_W1-W5 | | |
| Means of verification, rules and criteria of assessment | multiple choice test (30% participation in the final grade) | | |
| Classes: | ours | | |
| Topics | Identification of main pests occurring in vegetable crops. Identification of main pathogens occurring in vegetable crops. Identification of main pests occurring in orchard crops. Identification of main pathogens occurring in orchard crops. Protection methods recommended in IPM system (quarantine, agrotechnical, physical, biological and rearing methods). Selection and rules for the use of plant protection substances in IPM. | | |
| Accomplished learning outcomes | IPP_U1-U7 | | |
| Means of verification, rules and criteria of assessment | Activity (30 % participation in the final grade) | | |

Seminar

6 hours

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| Topics | Integrated protection of selected crops (economically important) in the country of origin of the student. | | |
| Accomplished learning outcomes | IPP_W1-W5 | | |
| Means of verification, rules and criteria of assessment | Presentation (40 % participation in the final grade) | | |

References:

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|---------------|--|--|--|
| Basic | Abrol.D.P., Shankar U. Integrated Pest Management: Principles and Practice. CABI, 2012 - Electronic books – 512 pp Agrios G. N.: Plant Pathology. Academic Press. San Diego, London, Boston, N. York, Sydney. Tokyo, Toronto 1997, ss. 635. | | |
| Supplementary | Peshin, Rajinder; Dhawan, Ashok K. (Eds.). Integrated Pest Management. Volume 1. 2009 | | |

Structure of learning outcomes

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| Area of academic study: R – Agricultural, forestry | 5.0 ECTS ** |
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| and veterinary sciences | |
| Area of academic study: P | |

Structure of student activity

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|------------------------------|----|------|-----|--------|
| Contact hours | 50 | hrs. | 2.0 | ECTS** |
| Including: | | | | |
| lectures | 15 | hrs. | | |
| classes and seminars | 30 | hrs. | | |
| consultations | 3 | hrs. | | |
| participation in research | | hrs. | | |
| obligatory traineeships | | hrs. | | |
| participation in examination | 2 | hrs. | | |
| e-learning | | hrs. | | ECTS** |
| student own work | 75 | hrs. | 3.0 | ECTS** |

*Areas of academic study in the fields of: H- humanities; S - social studies; P – biological sciences; T – technological sciences; M- medical, sport and health sciences; R – Agricultural, forestry and veterinary sciences; A – the arts

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