<table>
<thead>
<tr>
<th><strong>Subject name</strong></th>
<th>Integrated Plant Protection</th>
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<td><strong>Subject code</strong></td>
<td>E.I.INTE.SC.ECTIE.O</td>
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<tr>
<td><strong>Department</strong></td>
<td>Department of Plant Protection</td>
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<tr>
<td><strong>Faculty</strong></td>
<td>Faculty of Biotechnology and Horticulture</td>
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| **Subject supervisor/Lecturer** | dr hab. inż. Maria Pobożniak  
dr hab. inż. Jacek Nawrocki |

**General information**

<table>
<thead>
<tr>
<th>Teaching period</th>
<th>winter OR summer</th>
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<tr>
<td>ECTS credit</td>
<td>7</td>
</tr>
<tr>
<td>Lectures total</td>
<td>15 h</td>
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<tr>
<td>Lab classes</td>
<td>30 h</td>
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**Objective and general description**
The main objective of the course is identification of the most important pests and diseases occurring in crop plants (vegetables - field crops and greenhouses, orchards, some agricultural). Introduction of vegetable and orchard programs integrated plant protection (IPM systems). Principles of using biological agents and chemical protection in IPM.

**Lectures**  
5 x 3 hours

1. Integrated Pest Protection - definition, history, principles of the organization farm with integrated plant production.  
2. Principles of forecasting and monitoring of pests and pathogens.  
3. Protection methods recommended in IPM system (quarantine, agrotechnical, cultural and biological methods).  
4. Pesticides and biopesticides in IPM systems. Technique for plant protection treatments.  
5. Rules for the registration of pesticides  
6. Beneficial organism limiting the number of pests. The importance of biodiversity of species of plants and animals in IPM.  
7. Ecological plant protection.  
8. The use of resistant and tolerant cultivars in integrated plant production.  
9. The use of pheromone, sticky traps and odour traps in monitoring of pest in IPM

**Lab classes**  
6 x 4 + 2 x 3

1. Economic injury levels and economic threshold  
2. Identification and methods of preventing and control of main pathogens occurring in vegetable crops.  
3. Identification and preventing and control of main pests occurring in vegetable crops.  
4. Identification and preventing and control of main pathogens occurring in orchard crops.  
5. Identification and preventing and control of main pests occurring in orchard crops.  
6. Identification preventing and control of main pests occurring in agricultural crops.  
7. Field exercises in orchards and vegetable plantations

**Literature**

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|                               | Dr hab. inż. Jacek Nawrocki j.nawrocki@ogr.ur.krakow.pl |