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| **Subject** | **Soilless cultivation** |
| **Type** | **Semester** | **ECTS** | **Code** |
|  E |  III |  6 |  |
| **Aims and Objectives** | The purpose and objectives of this course is that MSc students. to gain in-depth knowledge on the principles of soilless plant cultivation, organic and inorganic substrates, and their physical and chemical properties. Information about the main systems used for growing plants without soil, the composition of nutrient solutions, and advanced techniques for growing plants without soil. |
| **Learning outcomes** | At the end of this subject, students should know the importance, history, spread, condition, and development perspective of soilless cultivation. Main systems, substrates and their chemical and physical properties. The main systems and methods for microclimate control, irrigation and fertilization in these systems.Features of root system development in soilless cultivation. The basic principles for the composition of nutrient solutions, the principles of watering and fertilizing plants cultivated without soil. Cultivation techniques of vegetables, flowers and small fruits in soilless plant cultivation systems. In order to better absorb the knowledge of soilless cultivation, such a system will be designed and managed by students on campus, and they will monitor the development of plants in such systems. An additional opportunity to increase capacities will be visits to farms that apply landless cultivation and dealing with activities that occur in the production of crops in landless systems. |
| **Literature/References** | Hydroponics, A practical Guide for Soilless grower. J. Benton Jones Jr. Technical Equipment in soilless production systems. E.A. Van Os, TH. H. Gieling and J.H. Lieth.Practical Hydroponics & Greenhouses. http://www.hydroponics.com.au/ Michael Raviv & J.Heinrich Lieth: Soilless culture Theory and Practice |