**Table 5.1** Course specification to doctoral study programs

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| **Course name: Selected chapters in irrigation and drainage** |
| **Teacher or teachers:** [**Trajković R. Slaviša**](../P%209.3%20Knjiga%20Nastavnika%20DOS%20He/34.%20Slavisa%20R.%20Trajkovic%2C%20redovni%20profesor.xlsx) |
| **Course status:** Elective |
| **Number of ECTS:** 10 |
| **Precondition courses:** None |
| **Educational goal**Mastering knowledge in the field of irrigation and drainage. |
| **Educational outcomes** Building capacity for independent scientific work in the field of irrigation and drainage. |
| **Course content**Importance and role of draining. Determining the standard of draining and critical depth of ground water for creation of optimal conditions for plant life. Technical elements of the draining system. Drainage ways and methods. Main water collection facilities and regulation of water-air regime of the soil. Horizontal, vertical, critical drainage. Drainage calculation methods. Methods of calculation of the drainage system filter. Drainage and protective network of the drainage system. Drainage of low and closed terrains.Place and role of irrigation in hydraulic land reclamation. Chemical and physical properties of irrigation water. Calculation of irrigation and watering standard. Determination of water flow rate for design of the irrigation system. Elements of the irrigation system. Methods and ways of watering. Supply and outlet network. Choice of the method and watering device. The structures on the canals, fittings, devices and structures on pipelines. River pumping stations. Organization of works and technology of construction of irrigation and drainage structures. Maintenance works on these structures. |
| **Literature**1. Steduto et al., Crop yield response to water, FAO Irrigation and Drainage Paper 66, 20122. L.C.P.M. Stuyt, W. Dierickx, and J. Martínez Beltrán, Materials for subsurface land drainage systems, FAO Irrigation and Drainage Paper 60, rev 1, 20053. Richard G. Allen et al., Crop evapotranspiration. Guidelines for computing crop water requirements, FAO Irrigation and Drainage Paper 56, 19984. R.S. Ayers and D.W. Westcot, Water quality for agriculture, FAO Irrigation and Drainage Paper 29, rev 1, 19945. N.G. Dastane, Effective Rainfall, FAO Irrigation and Drainage Paper 25, 1978.6. Avakumović, D., Elementi navodnjavanja i odvodnjavanja, GF-Belgrade, 2005.7. Avakumović, D., Navodnjavanje, Građevinski fakultet-Belgrade, 2005.8. Avakumović, D., Odvodnjavanje, Građevinski fakultet-Belgrade, 2005.9. Kolaković, S. i Trajković, S., Hidrotehničke melioracije – Odvodnjavanje, FTN – Novi Sad i GAF-Niš, 2006. |
| **Number of active teaching classes (weekly)** | Lectures: 4 | Study research work: 0 |
| **Teaching methods**Lectures. Tests and calculation tasks during the course. Case study analysis.Research work. Term paper. Field classes. |
| **Knowledge evaluation (maximum 100 points)****Pre-examination obligations Points Final exam Points**Lecture attendance **10**  Oral part of the exam **30**Project task **30**Term paper **30**  |