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| **Title and code** of the subject: **Agricultural water supply systems, MTMVG7012A** | **Credit: 4** |
| **Type** of the subject: compulsory |
| **Ratio of theory and practice:** (credit%) **50/50** |
| **Type and number of classes per semester**: 28 hour(s) lecture and 28 hour(s) practice per **semester**  |
| **Type of exam**: exam |
| **Subject in the curriculum:** semester 4 |
| Preliminary requirements:- |

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| **Summary of content - theory**:  |
| Course objectives: acquiring theoretical and practical knowledge of agricultural water supply systems (mainly of their technical tasks and legislation).1. The basics and tasks of water management planning. The most important separate provisions of water licensing and the water management planning process.
2. The water management and water protection authorities
3. Water legislation
4. The elements of water supply for agricultural purposes
5. Authorization of agricultural water facilities
6. Watercourses, channels, reservoirs
7. Flood protection, readiness states, flood barriers, water meadows
8. Legislation of maintain river basins and sides
9. The water use charge, and the agricultural water supply fee. Agricultural water management sector development.
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| **Summary of content - practice**: |
| Skills to be learnt: 1. GIS and remote sensing in water management planning
2. The water management and water protection authorities
3. Water legislation
4. The elements of water supply for agricultural purposes
5. Authorization of agricultural water facilities
6. Inland water channel design
7. The concept, purpose and means of flood protection, readiness states, flood barriers, water meadows
8. Legislation of maintain river basins and sides
9. The water use charge, and the agricultural water supply fee.
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| **Literature, handbooks in English**  |
| 1. M. Gupta, P. Srivastava, G. Tsakiris, N. Quinn.: 2019. Agricultural Water Management. Theories and Practice. Academic Press. 416 p.
2. A. Iglesias, L. Garrote, A. Cancelliere, F. Cubillo, D. Whilhite.: 2009. Coping with Drought Risk in Agriculture and Water Supply Systems. Springer. 356 p.
3. S.N. Ghosh.: 2018. Flood Control and Drainage Engineering. CBC Press. 400 p.
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| **Competencies gained** *(acc. to the Regulation on training and outcome requirements)* |
| 1. **Knowledge:**
* he/she has a high level of natural sciences and technical knowledge for agricultural water management
* he/she knows in detail the characteristics of agricultural water management (processes and the relationships between them)
1. **Skills:**
* Able to interpret the law independently
* Able to define, plan and organize the activity of agricultural water supply systems
* Able to create a project team, and to be an active participant in research and development projects
* Able to analyse different problems which are related to agricultural water supply systems
1. **Attitude:**
* Committed to environmental protection and sustainable agriculture
* Characterized by law-abiding behaviour and expects from subordinates
* Makes her/his opinion on a professional basis, and consistently represents them
1. **Autonomy and responsibility:**
* Has a high degree of autonomy in developing comprehensive and specialized professional issues, representing professional views
* Take responsibility for all of this
* Make decisions with professional responsibility
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| **Responsible lecturer: Csaba Juhász, PhD., associate professor** |
| **Other lecturer(s): Bernadett Gálya, PhD., assistant lecturer** |

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| **Terms of course completion:** |
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| **Form of examination:** |
| Written exam |
| **Requirement(s) to get signature:** |
| Exercise attendance and active participation in exercises. |

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| **Exam questions:** |
| The title of the weekly lectures covers the questions.  |