

**Annex 1
Curriculum**

Semester	Course Uni.	Course ID.		Course name	Credit
1	MURRAY	AGR755	Online	Soil Management	3
1	MATE			Applied Organic and Biochemistry	3
1	MATE			Plant Physiology and Stress Biology	3
1	MATE			Plant Ecology	3
1	MATE			Plant Breeding and Biotechnology	6
1	MURRAY	AGR751	Online	Climate Change Impacts	3
1	MATE or MURRAY			Optional Course	3
1	MATE			Thesis + Symposium (thesis presentation by Zoom or MS Teams)	6
					30
2	MATE			Integrated Crop Production I.	6
2	MATE			Plant Protection I. (Weed Science)	3
2	MATE			Plant Protection II. (Crop Pathology)	3
2	MATE			Plant Protection III. (Crop Pests)	3
2	MURRAY	AGR655	Online	Advance Soil Fertility	3
2	MURRAY	AGR661	Online	Sustainable Agriculture	3
2	MATE or MURRAY			Optional Course	3
2	MATE			Thesis + Symposium (thesis presentation by Zoom or MS Teams)	6
					30
3	MATE			Integrated Crop Production II.	6
3	MATE			Global Food Security and Nutritional Inequality	3
3	MATE			International Agricultural Systems	3
3	MATE			Experiment Planning and Evaluation in Crop Production	3
3	MATE			Digital Skills for Agriculture	3
3	MURRAY	AGR 735	Online	Research Methodology	3
3	MURRAY	AGR686	Online	Training and Presentation Development Strategies for Agricultural Audiences	3
3	MATE			Thesis + Symposium (thesis presentation by Zoom or MS Teams)	6
					30
4	MURRAY	AGR 671	Online	Advanced Precision Agriculture	3
4	MATE			Plant Protection Strategies and Systems (IPM)	3
4	MATE			Economy of Crop Production	3
4	MATE			Innovation and Project Management	3
4	MATE			Rural Development and Agricultural Policy	3
4	MATE			Thesis Seminar and Defense	6
4	MATE			Thesis + Symposium (thesis presentation by Zoom or MS Teams)	6
4	MATE or MURRAY	AGR700		Research in Agriculture (summer course, optional USA field trip)	3
				Overall credit	120

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Murray Program Requirements

Thesis Requirements				
Course ID.	Course Name	Credit	Does the curr. contain it?	Equivalent
AGR686	Training and Presentation Development Strategies for Agricultural Audience	3	yes	Murray Course
AGR713	Graduate Computer Applications	3	yes	Digital Skills for Agriculture
AGR720	Experimental Design and Statistical Analysis	3	yes	Experiment Planning and Evaluation in Crop Production
AGR722	Graduate Capstone Seminar	1	yes	Thesis Seminar and Defense
AGR735	Research Methodology	3	yes	Murray Course
AGR798	Thesis	3	yes	Thesis and Symposium
AGR799	Thesis	3	yes	Thesis and Symposium

Non-thesis Requirements				
Course ID.	Course Name	Credit	Does the curr. contain it?	Equivalent
AGR686	Training and Presentation Development Strategies for Agricultural Audience	3	yes	Murray Course
AGR700	Research in Agriculture	3	yes	Research in Agriculture
AGR713	Graduate Computer Applications	3	yes	Digital Skills for Agriculture
AGR720	Experimental Design and Statistical Analysis	3	yes	Experiment Planning and Evaluation in Crop Production
AGR722	Graduate Capstone Seminar	1	yes	Thesis Seminar and Defense
AGR735	Research Methodology	3	yes	Murray Course

Sustainable Agriculture Concentration				
Course ID.	Course Name	Credit	Does the curr. contain it?	Equivalent
AGR627	Modern Issues in Agriculture Leadership	3	no	
AGR646	Integrated Pest Management	3	yes	Plant Protection Strategies and Systems (IPM)
AGR648	Economics of Sustainable Agriculture and Food Production	3	yes	Economy of Crop Production
AGR655	Advanced Soil Fertility	3	yes	Murray Course
AGR661	Sustainable Agriculture	3	yes	Murray Course
AGR662	Principles of Agroecology	3	yes	Plant Ecology
AGR671	Advanced Precision Agriculture	3	yes	Murray Course
AGR696	Advanced Integrated Agriculture Communications Strategies	3	no	
AGR744	Graduate Cooperative Education	3	no	
AGR745	Biotechnology and Agriculture	3	yes	Plant Breeding and Biotechnology
AGR751	Impacts of Climate Change	3	yes	Murray Course
AGR755	Soil Management	3	yes	Murray Course
Total Murray credits (mandatory)		21		

The Optional Courses and Research in Agriculture courses may also be taken at Murray State University. In this case, students are, of course, responsible for the associated costs. Within the framework of the Research in Agriculture course, students have the opportunity to travel to the United States in the summer as part of a two-week intensive programme. The costs of travel, accommodation, and meals must be borne by the students.

Hungarian mandatory elements (KKK) Educational and Outcome Requirements

natural, agricultural, economic and human sciences providing the foundations of the programme [multidisciplinary natural science knowledge (the physical, chemical, biochemical and biological fields of environmental science); economic and human sciences (sectoral administration, sociology, management); scientific research methodology, analytical and communication skills (environmental and agricultural research methodology, scientific communication)]
15–28 credits

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1	MATE			Applied Organic and Biochemistry	3
1	MATE			Plant Physiology and Stress Biology	3
1	MATE			Plant Ecology	3
1	MURRAY	AGR751	Online	Climate Change Impacts	3
3	MATE			Global Food Security and Nutritional Inequality	3
3	MATE			International Agricultural Systems	3
3	MATE			Experiment Planning and Evaluation in Crop Production	3

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professional knowledge in crop production

– (general and specific crop production, crop production technologies and their technical aspects, precision farming, maintenance of soil fertility and adaptive tillage, plant biotechnology, plant protection aspects of crop production, diseases and pests of field crops and the possibilities for their control, weed science and weed control, grassland management, food chain safety, sectoral administration and management, economic aspects of crop production)
39–56 credits

Semester	Course Uni.	Course ID.		Course Name	Credit
1	MURRAY	AGR755	Online	Soil Management	3
1	MATE			Plant Breeding and Biotechnology	6
2	MATE			Integrated Crop Production I.	6
2	MURRAY	AGR655	Online	Advance Soil Fertility	3
2	MATE			Plant Protection I. (Weed Science)	3
2	MATE			Plant Protection II. (Crop Pathology)	3
2	MATE			Plant Protection III. (Crop Pests)	3
3	MATE			Integrated Crop Production II.	6
4	MURRAY	AGR 671	Online	Advanced Precision Agriculture (spring)	3
4	MATE			Plant Protection Strategies and Systems (IPM)	3
4	MATE			Economy of Crop Production	3

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specific knowledge

(variety registration and seed certification, fundamental issues and techniques of plant breeding and their implications for crop production, opportunities offered by transgenic plants and the risks associated with their use, quality assurance and quality assessment in organic and arable crop production, nutrient supply of arable crops and irrigated crop production, landscape-level and integrated crop production, cultivation of medicinal and spice plants, technical aspects of the mechanisation of crop production, land evaluation and regional/rural development, communication-, crop-production-, advisory- and research-methodological knowledge) **15–30 credits**

Semester	Course Uni.	Course ID.		Course Name	Credit
2	MURRAY	AGR661	Online	Sustainable Agriculture	3
3	MATE			Digital Skills for Agriculture	3
3	MURRAY	AGR 735	Online	Research Methodology (fall)	3
3	MURRAY	AGR686	Online	Training and Presentation Development Strategies for	3
4	MATE			Innovation and Project Management	3
4	MATE			Rural Development and Agricultural Policy	3
4	MATE or MURRAY	AGR 700		Research in Agriculture (field trip) (summer course) optior	3

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other mandatory parts (thesis and optional subjects)

Semester	Course Uni.	Course ID.		Course Name	Credit
1	MATE or MURRAY			Optional Course	3
1	MATE			Thesis + Symposium	6
2	MATE or MURRAY			Optional Course	3
2	MATE			Thesis + Symposium	6
3	MATE			Thesis + Symposium	6
4	MATE			Thesis Seminar and Defense	6
4	MATE			Thesis + Symposium	6

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TOTAL ECTS CREDIT

120