



Landbúnaðarháskóli Íslands
Agricultural University of Iceland

FACULTY OF AGRICULTURAL SCIENCES FAS

SELF-REVIEW REPORT

Version 1 05.01.2021





Summary

During the spring semester 2021, the Faculty of Agricultural Sciences (FAS) at the Agricultural University of Iceland conducted a self-evaluation assessment following the recommendations of the Icelandic Quality Enhancement Framework (QEF2). To perform this task, a Self-Evaluation Committee was established. The committee included the Head of Faculty, two Faculty Professors, two Assistant Professors, two Programme Coordinators, two student representatives and three foreign experts who worked across the three Faculties at AUI. The report covers Study Programmes at the university level and to a limited extent one vocational Study Programme in Agriculture operated in close cooperation with the Faculty university programmes.



Table of Contents

Version 1 05.01.2021	1
Summary	2
1. Faculty of Agricultural Sciences (FAS) – Faculty Level	5
1.1. Introduction	5
1.2 Faculty Characteristics	5
1.2.1 Management Structure and Organisation of Teaching	6
1.2.2 Human Resources	7
1.2.3 Finance	9
1.2.4 Students and Study Programmes	10
1.2.5 Actions – Faculty Characteristics	11
1.3 Academic Vision	11
1.3.1 Strategy for Teaching and Research	11
1.3.2 Research Impact of the Faculty	13
1.3.3 Collaboration and International Context	14
1.3.4 Actions – Academic Vision	17
1.4 Student Support	17
1.4.1 Student Orientation	17
1.4.2 Rights and Obligations	17
1.4.3 Support Services	18
1.4.4 Actions – Student Support	19
2 Study Programmes	21
2.1 Study Programmes at the Vocational Level	21
2.1.1 Actions – Teaching and Learning – Vocational Programme	24
2.2 BS in Agricultural Sciences (600006 180 ECTS) and BS in Equine Sciences (600013 180 ECTS)	24
2.2.1 Students	24
2.2.2 Actions – BS students	28
2.2.3 Teaching and Learning	28
2.2.5 Coordination between Teaching and Research	35
2.2.6 Conclusions	36
2.3 MS & PhD Study Programmes	36
2.3.1 MS in Agricultural Sciences (600005 120 ECTS) / Equine Sciences (600014 120 ECTS)	36
2.3.2 Students	36
2.3.4 Teaching and Learning	38
2.3.6 Coordination between Teaching and Research	40
2.4 PhD in Agricultural Sciences and Equine Sciences (600025 180 ECTS) ...	41
2.4.1 Students	41
2.4.3 Teaching and Learning	42
2.4.5 Coordination between Teaching and Research	43

2.4.6 Conclusions 44

3 Summary and Main Conclusions for the Faculty 45

3.1 Lessons Learned from QEF1 45

3.2 Teaching and Learning 45

3.3 Management of Research..... 45

3.3.1 Action Plan for Management of Research 46

3.4 Follow-up Processes 46

1. Faculty of Agricultural Sciences (FAS) – Faculty Level

1.1. Introduction

In accordance with the Icelandic Quality Enhancement Framework at the University level in Iceland and the Agricultural University's Guidelines for the organisation, schedule and process of institution-led review of faculties and interdisciplinary programmes, the Faculty of Agricultural Sciences at the Agricultural University of Iceland (the AUI) carried out self-evaluation during the spring semester of 2021. The results are presented in this report. A self-evaluation committee was established in January 2021.

The Committee members were:

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- Dr. Susan Bryan, Su.Bryan@uhi.ac.uk, Dean of the Faculty of Sciences, Health and Engineering (Interim) at the University of the Highlands and Islands

1.2 Faculty Characteristics

The Faculty of Agricultural Sciences (FAS) role is to disseminate, preserve and create knowledge that promotes professional and forward-looking utilisation of land and animal resources. This is done through research, publishing and dissemination and teaching at the secondary and tertiary levels.

The subjects are interdisciplinary. They combine biological, technical, economic and social factors related to agricultural production and its impact on the entire environment at all organisation levels.

FAS conducts research, development and innovation for sustainable agricultural production and food security.

In 2019, AUI approved a new strategic plan for 2019–2024 with an associated change in the structures of Faculties. The Faculty of Natural Resources and Environment was split into three, whereof FAS became one of the new independent Faculties from January 2020.

Previous evaluations had been conducted at AUI: the institution-wide review for the Quality Enhancement Framework for Icelandic Higher Education (QEF1) in 2013, Subject Review at the Institutional level in October 2014 with a follow up report in May 2016 and the mid-term progress report conducted in 2020, as a part of the second cycle of the Quality Enhancement Framework (QEF2) that this report belongs to as well. The QEF1 report concluded with the recommendations for improving AUI's management of standards and degrees, as well as the arrangements to secure the quality of the student learning experience. The mid-term progress report identified, for example, advances that had been made in these issues at a university-wide level, including reviews of Study Programmes since 2016 and the establishment of a framework for monitoring graduate student performance and progress. However, it must be kept in mind that these evaluations were conducted at a university level, or targeting a different Faculty structure (for example, AUI had two Faculties in 2013). Thus, the results of these evaluations are not specific to the present FAS, but they still provide a valuable reference point.

With regards to the specific goals and Action Plan (Appendix 1) outlined in the mid-term progress report of 2020 and how FAS is contributing to those:

- continue to update and further formalise the terms of reference for various university committees.
- obtain external funding through research collaboration and innovation projects: FAS has secured ISK 137 million in external funds in 2020.
- increase international collaboration: active international collaborations through international research projects.
- recruitment of new academic staff: 1 (the goal was 3).
- attract more national and international students to all current programmes, especially to the individually designed MS and PhD programmes.
- improve monitoring of student progression.

1.2.1 Management Structure and Organisation of Teaching

FAS, created in 2020 following restructuring of the university, is now one of three Faculties at AUI. The Faculty operates across all three AUI campuses, Hvanneyri, Keldnaholt and Reykir. The roots of FAS go back to 1947, when university studies in agricultural sciences were first established in Iceland at Hvanneyri. Vocational studies in agriculture at Hvanneyri were established in 1889.

FAS is governed by Faculty meetings, which are organised at least twice per year, in accordance with Article 13 of Regulation 366/2020. In addition, FAS has in place a decision-making mechanism approved at the last Faculty meeting (December 2020) that allows

decisions to be made *per capsulam*, without the Faculty members being physically present. Daily administration is in the hands of the Head of Faculty, as described in Article 11 of Regulation 366/2020. FAS has a Faculty Board, composed of the Head of Faculty, Programme Coordinators and elected Faculty members. The task of the Faculty Board is to make decisions between Faculty meetings, at the request of the Head of Faculty. The Faculty Board meets irregularly when needed but communicates and reports by e-mail.

FAS offers six Study Programmes at the university level, two at the BS level, two at the graduate level and two at the PhD level (**Table 1**). In addition, the faculty offers a National Diploma in Agriculture on a vocational level. In this report, matters regarding the vocational programme are briefly discussed, although it is not at the university level, but the teachers and the administrators work in close cooperation with the academic staff of FAS. FAS has also strong links to the continuing education programme at AUI.

Table 1. Overview of present Study Programmes within the Faculty*

Name of Study Programme	Cycle ¹	Degree	Credits (ECTS)	Section
National Diploma in Agriculture	N/A	Vocational	(135 FEIN)	2.1
Agricultural Sciences	1.2	BS	180	2.2
Equine Sciences	1.2	BS	180	2.2
Agricultural Sciences	2.2	MS	120	2.3
Equine Sciences	2.2	MS	120	2.3
Agricultural Sciences	3	PhD	180	2.4
Equine Sciences	3	PhD	180	2.4

¹ See National Qualification Framework for Higher Education No. 530/2011.

*Diploma programmes in Horticulture taught at the Reykir campus are not included, but according to a recent decision of the Ministry of Education and Culture, these programmes will soon be moved from AUI Reykir to a nearby college, Suðurland College at Selfoss.

1.2.2 Human Resources

FAS currently has 26 staff members (**Table 2**). Among these, 8 are in academic teaching positions (3 Professors, 1 Associate Professor, 4 Assistant Professors). FAS also includes 3 Adjunct Lecturers, 9 Vocational Teachers, 2 PhD students, one post-doc researcher, Head of Agronomy Trials, 2 assistants in research. Twenty staff members hold 100% positions.

Staff members are spread across the three campuses of AUI – 14 are in Hvanneyri, 3 in Reykir and 8 in Keldnaholt.

Table 2. Faculty members as of 31.12.2020 and Sessional Teachers in numbers (no.) and full-time-equivalence (FTE)

	Male		Female		Total	
	No.	FTE	No.	FTE	No.	FTE
Professors	3	2.5	-	-	3	2.50
Associate Professors	1	0.85	-	-	1	0.85
Assistant Professors	1	1	3	3	4	4
Adjunct Lectures	2	2	1	0.37	3	2.37
PhD students	1	1	1	1	2	2
Post-doc researcher	1	1			1	1
Head of Agron. Trials	1	1			1	1
Vocational teachers	4	3.9	5	3.25	9	7.15
Res. assist. (BS)	1	1	1	1	2	2
Total	15	14.3	11	8.6	26	22.9
Adjunct Professor	-	-	1	-	1	*
Adjunct Assistant Prof	1	*	*	*	2	*
Sessional Teachers	*	*		*	15	1.64

*Accurate data not available

Table 3. Age of Faculty members as of 31.12.2020

Total	<30	30–39	40–49	50–59	>59	Total No.	Total %
	No.	No.	No.	No.	No.		
Professors	-	-	1	-	2	3	-
Associate Professors	-	-	-	1	-	1	-
Assistant Professors	-	1	1	-	2	4	-
Adjunct Lecturers	-	1	2	-	-	3	-
PhD students	-	-	2	-	-	2	-
Other positions	3	6	1	2	2	14	-
Total	3	6	6	3	6	26	-
%	11.5	30.8	23.1	11.5	23.1	100	-

Table 4. Period of employment of Faculty members (years) as of 31.12.2020

Total	<5	5–15	16–24	25–39	>40	Total No.
	No.	No.	No.	No.	No.	
Professors	-	1	-	2	-	3
Associate Professors	-	-	1	-	-	1
Assistant Professors	1	2	-	1	-	4
Adjunct Lecturers	-	2	1	-	-	3
PhD students	2	-	-	-	-	2

Faculty of Agricultural Sciences						June 2021
Other positions	8	4	-	1	-	13
Total	11	9	2	4	0	26
%	42%	35%	8%	15%	0%	100%

Table 5. Research output of Faculty members, based on the Evaluation System for the Public Universities in Iceland, expressed by total number of research points (A) and research points from peer-reviewed publications (B)

	2016		2017		2018		2019		Mean	
	A	B	A	B	A	B	A	B	A	B
Faculty	138	65	186	99	175	87	184	126	171	94
University	626	410	695	436	518	274	579	388	604	377

Table 6. Teaching obligations (%) of Faculty members and Sessional Teachers divided between Study Programmes*

Study Programmes	Faculty members		Sessional Teachers		Total
	Hours	%	Hours	%	Hours
All	4778	72	1878	28	6656

*Many courses are taught in two or more Faculties, some courses taught by Faculty members of FAS that are hosted or registered as courses in other Faculty programmes.

1.2.3 Finance

Financial figures for FAS for the year 2020 are presented in **Table 7**. The salary costs of the Faculty represent 23% of the total costs of the University, and operating costs are only 8%. FAS secures 73% of the research funds from national sources (*Rannís: Icelandic Research Fund, Technology Development Fund, Icelandic Student Innovation Fund, Infrastructure Fund, Agricultural Productivity Fund and Ministry of Industries and Innovation*) and 12% from international sources (Nordic Council of Ministers). Under the category of “other income”, which represents the largest amount of AUI revenue (besides direct state funds), only 3% is secured by FAS. Most of this is student fees and other services in 2020. Interestingly, there were no values available for internal contributions or facility costs per Faculty. AUI’s total revenues (turnover) in 2020 were ISK 1,917 million, or EUR 12,490 thousand.

Table 7. Key financial numbers for 2020

Budget 2020	ISK Million			€ 1000 (1€ = 153.5 ISK)		
	AUI	Faculty	%Faculty	AUI	Fac.	%Faculty
Revenues*						

National	109	79	73	708	512	73
International	38	5	12	248	30	12
Other income	571	15	3	3,717	96	3
Total	702	99	14	4,673	643	14
Expenses						
Salaries	957	224	23	6,237	1,462	23
Facilities						
Operating costs	960	72	8	6,253	471	8
Total expenses	1,200	198	16	12,490	1,933	15

* Direct state funds not included

1.2.4 Students and Study Programmes

Table 8. Total number of students, number of entrants, retention rate for first year and completion rate (4-year mean, 2017–2020)

Programme	No. of students			No. of entrants ³	Retention rate	No. of graduates	Completion rate ⁴
	Total no.	Full time ¹	Part time ²				
Vocational Agriculture	55	47.5	9.7	30	97%	102	78.4%
Agricultural Science, BS	56	40	16	18	100%	11	42%
Equine Science, BS	6	4.5	1.5	5.5	95%	0	0
Agricultural Science, MS	14	1.25	5.5		100%	1.5	78%
Equine Science, MS	3	0.5	0.25		0	0.25	0
Agricultural Science, PhD	2						
Equine Science, PhD	2						

¹ > 22.5 ECTS completed. For PhD students > 1 ECTS completed.

² 1–22 ECTS completed.

³ For all programmes except MS & PhD, no. of students completing at least one examination in first term.

⁴ 2-year rate for vocational studies, 4-year rate for BS, 3-year rate for MS, 5-year rate for PhD student satisfaction and employability.

Opinion polls among AUI students on student satisfaction and employability are done regularly by the University of Akureyri Research Centre for all public Universities in Iceland, including AUI. The opinion polls provide some opportunities to examine the attitudes of students in agricultural sciences. However, all conclusions and comparisons need to be made with the provision that the number of participants is small and that other comparable groups may not be available. For further discussion on these matters, see Section 2.2.1 Students.

1.2.5 Actions – Faculty Characteristics

	Action	Deliverable	Deadline	Responsible party
Ch. 1.2	Faculty Characteristics			
1	Increase academic positions in specialised fields.	Five-year plan for recruitments based on predicted retirements.	November 2021.	Head of Faculty and Faculty Board.
2	Increase research assistant positions.	Five-year plan for recruitments based on predicted retirements.	November 2021.	Head of Faculty and Faculty Board.
3	Increase encouragement for undergraduate students to pursue further studies at graduate levels.	Increased retention rates from BS programmes to MS and PhD studies.	June 2022.	Programme Coordinators, Teachers in BS programmes
4	Increase encouragement for vocational students to pursue further studies at the university level.	Increased retention rates from vocational programmes to BS studies.	June 2022.	Programme Coordinators, Teachers in vocational programmes.
5	Ensure a gender balance in all positions, with emphasis on academic positions.	A balanced gender ratio in academic positions.	December 2026.	Head of Faculty, Selection Committees

1.3 Academic Vision

1.3.1 Strategy for Teaching and Research

FAS has agreed on the following strategic points for teaching and research (December 2020).

- FAS emphasises the creation, preservation and dissemination of knowledge in livestock and applied plant science and the sustainable use of land for agricultural production. Special emphasis is placed on livestock welfare and nutrition, animal and plant genetics (breeding), soil science and cultivation and on-farm management and techniques.
- FAS emphasises the goals of sustainable development in accordance with the needs of society and international commitments.
- FAS participates in organised quality work (public universities) and fosters a quality culture within the Faculty. FAS safeguards academic freedom and the independence of research.
- FAS is a community of scientists / teachers and students that encourages collaboration and teamwork within the Faculty, between Faculties and with external institutions and associations.
- FAS promotes a connection between research and teaching and emphasises research-oriented learning in all disciplines.
- FAS offers learning with electronic teaching methods and distance learning solutions.
- FAS disseminates research results in peer-reviewed articles in ISI publications and a variety of publications in Icelandic that is of direct benefit to society, businesses and government.
- Innovation projects to transform and adapt theoretical knowledge into tools and equipment that are useful to those who work in the department's professional fields.
- Society's needs for healthy food, food security and sustainable land use are the guiding light of FAS. This is related to both public education and guidance to the government in relevant areas.

The above-mentioned FAS strategy is well reflected in the AUI strategy (<http://www.lbhi.is/strategy>), which is based on decades of development of teaching and research in agricultural sciences. Teaching and research take place on the same locations and are largely carried out by the same staff. This closeness ensures an easy connection between these activities and is used in many ways.

The strategy is also intricately linked to the government's agricultural policy, but the FAS experts are actively involved in professional work in governmental policy-making through a special agreement between AUI and the Ministry of Industries and Innovation.

In accordance with Article 3 of the rules on AUI (Government Bulletin 266/2020), the University Council is responsible for defining overall policies for AUI, including teaching and research at the initiative of the Rector (Article 4). Follow-up monitoring and the development of the strategy is then carried out by the Commission of AUI daily operations (Article 6), the Head of the Faculty (Article 11) and Faculty meetings (Article 13).

1.3.2 Research Impact of the Faculty

I. Livestock behaviour and nutrition

In this field, FAS has primarily carried out projects related to sheep and cattle. Research on the feeding, behaviour and welfare of pigs, poultry and fur animals is not carried out in the country, but it would be desirable for FAS to improve this, such as regarding increased use of domestic feed in pig and poultry farming.

The projects in sheep and cattle breeding are related to several topics: rearing, milk production, feeding during pregnancy, diseases, the effects of fluoride on livestock, facilities, general feeding plans and not least, promoting more targeted feeding programmes. Research on greenhouse gas emissions from livestock farming will also be a key area of research in the future, as will more projects related to environmental issues in animal husbandry.

II. Livestock and livestock breeding

Many projects in this category are related to research into the characteristics and genetic diversity of the unique Icelandic livestock breeds. The projects vary in nature, but most are done as student projects with or without external funding. The breeding programmes at AUI's sheep farm unit has had for many decades a leading role for the sheep farmers' breeding efforts in Iceland. Smaller projects and student projects are often compiled from data from Agricultural Advisory Centre records and the AUI sheep breeding farm at Hestur, including sheep pedigree, offspring and various phenotypic records.

III. Soil, cultivation, and plant breeding

This category includes projects related to soil, fertilisers and many types of crops, with the emphasis on perennial and annual forages and barley cultivation. Research on nutrient cycles, fertiliser requirements, fertiliser utilisation and the utilisation of organic waste create a basis for more efficient and sustainable cultivation. These include long-term experiments with fertilisers, utilisation of livestock manure and nutrient cycling in cultivated ecosystems.

Another important category is the production of winter feed and food in an efficient way through breeding and cultivation experiments in cereals, grasses, clovers and annual forages. These include grain breeding, species and variety testing, seed mixtures, fertiliser requirements and cultivation optimisation towards sustainable and carbon-neutral agriculture. Plant breeding projects aim to increase the crop nutrient efficiency of the varieties used by farmers, e.g., by improving yield stability, earliness and disease resistance in barley, and winter resistance and feed quality in perennial forages. Breeding takes a long time and is therefore less suitable as student projects.

Plant diseases are a major problem in many crops. Research on plant diseases aims to identify the types of pests, their severity and methods to fight them.

Cultivation and production of biomass has been studied and novel species tested. There are also experiments in horticulture aimed at increasing yields in the winter season with recent developments in illumination and reducing production costs (especially energy costs).

Experiments have also been made in cultivated vegetables with the aim of finding varieties that are suitable for Icelandic growing conditions.

The importance of horticultural production is becoming increasingly important. Great progress needs to be made in this field, bringing knowledge, technological utilisation and innovation comparative to best international standards.

IV. Farming and farm technology

Agricultural technology is a field that is greatly important for more efficient agriculture. Agricultural technology projects can be related to quite different topics, such as livestock welfare, milking, feed production, processing and feeding, robotic adoptions in many fields and energy transfer from fossil fuels to more carbon-neutral energy sources. However, the list of contemporary projects underway in this field at FAS is short. Technological advancement in agriculture is evolving rapidly from human labour to novel artificial intelligence. This involves both physical work as well as monitoring, collecting and processing data. At the same time, an increasing proportion of working capital is being invested in recent technology. No systematic agricultural technology research has been carried out at the Institute since 2010 when the last professor in the area retired. The transfer of agricultural technology research from universities to agricultural technology companies internationally is no exception in Iceland.

When assessing the feasibility of different technological solutions, efficiency is a crucial factor. Investments need to bring real economic benefits to farmers as quickly as possible. Since the closure of the Agricultural Economics Service in 2011, no systematic research or performance analysis has been carried out on economic operational aspects of agriculture. However, the Agricultural Advisory Centre has been hired to carry out individual assessments of agricultural economics. There is a great need for such analyses to be performed regularly, e.g., that an annual analysis be made of the performance of different sectors in food production. Such analyses would demonstrate changes in industries and help decision-makers, whether farmers, investors or the public sector.

These are all projects that AUI can be involved in researching and implementing, and many student projects over the years have touched on these issues.

1.3.3 Collaboration and International Context

Cooperation on University farm operation

The AUI has farming operations at Hvanneyri campus and two other nearby farms. The dairy farm is run as a separate enterprise (*Hvanneyrarbúið ehf.*) owned by AUI and in cooperation with other FAS research activities and educational programmes. The sheep farm (*Hestur*) is a part of AUI's establishment and in particular FAS. The horse ranch and riding hall is on a leased farm (*Miðfossar*) close to Hvanneyri. The main goal is to run a teaching and research farm of the highest quality for the university's activities for use by the vocational programme in agriculture and the scientific society. This aims for creating facilities for AUI students and staff

and cooperating colleagues at the university, both abroad and at home, for education and research related to agriculture, resources and environmental issues in a broad sense.

Outreach to business and society

Every year, for decades, AUI and the Agricultural Advisory Centre, in collaboration with various national associations and research institutes, hold at least one-day joint conference. The webpage www.landbunadur.is, hosted by AUI, contains thousands of articles in Icelandic about agriculture, nature utilisation and environmental management, which are among the products of these meetings.

Scientific journal Icelandic Agricultural Sciences (IAS)

IAS (<https://ias.is>) is an ISI journal published by a consortium of universities and research institutions in Iceland and is hosted by AUI, and the Editor-in-Chief is a professor at FAS.

Public universities network

The cooperation between the public universities in Iceland was established in 2010. The goals of the project are, first, to strengthen Icelandic universities, teaching and research; second, to increase efficiency in the operation of universities; and third, to ensure university activities in many parts of the country. The project has also been called the “public university network”. The members of the network are AUI, University of Iceland, the University of Akureyri and Hólar University.

ERASMUS +

AUI has cooperation agreements with various schools in Europe through the ERASMUS program. ERASMUS+ builds e.g. on individual grants for student exchange, and students can apply for a stay for 3–12 months without delaying their studies, as it is a condition that their studies abroad will be fully assessed when they return home.

NOVA

AUI is a full member of NOVA, the cooperation network of seven universities of agriculture, forestry and veterinary medicine in the Nordic countries. NOVA opens the door to studies in the Nordic and Baltic countries (<http://www.nova-university.org/>). AUI students can apply for Nordplus or Erasmus scholarships for exchange studies through NOVA. One of NOVA's main roles is to organise short but demanding master's and doctoral courses, which are held in one of the NOVA schools but open for the students at other member universities.

NordGen

NordGen is an institution under the Nordic Council of Ministers, working as a gene bank and knowledge centre to promote sustainable use and conservation of genetic resources within plants, farm animals and forestry. FAS is active in several working groups and boards administered by Nordgen (<https://www.nordgen.org/en/>)

Public-Private Partnership for pre-breeding (PPP)

The Nordic Public-Private Partnership (PPP) for pre-breeding is a collaboration aiming to strengthen plant breeding in the Nordic countries and through its work promote sustainable use of genetic resources in the Nordic region with its unique climate, temperature and daylight. FAS has been a member of this initiative since its foundation in 2011 (<https://www.nordgen.org/en/our-work/nordic-public-private-partnership-ppp/> and <https://www.ecpgr.cgiar.org/>).

The EVA Wheat and Barley Network

This network is the European extension of a successful national evaluation network in Germany ([EVA-II](#)), which has been operational since 2001 as a public-private partnership to evaluate wheat and barley accessions in German collections. FAS has participated in this initiative since 2020. (<https://www.ecpgr.cgiar.org/european-evaluation-network-eva/eva-networks/wheat-and-barley>)

European Grassland Federation (EGF)

EGF is a forum for research workers, advisors, teachers, farmers and policy makers with active interest in all aspects of grasslands in Europe. These aspects include management of all types of grasslands for production, utilisation, amenities and conservation purposes. Iceland, represented by FAS at AUI, is a full member of EGF. (<https://www.europeangrassland.org/en/>)

European Federation of Animal Science (EAAP)

EAAP is an international non-governmental organisation which aims to improve the knowledge and the dissemination of research results of domestic animals farming. Membership is open to scientists, animal breeders and administrators. The association has its headquarters in Rome, Italy. (www.eaap.org)

The Icelandic Genetic Resource Council in Agriculture (IGRCA)

Iceland is a member of the UN's Convention on Biological Diversity (CBD), which covers all living species in Iceland. The responsibility for genetic resources in agriculture, whether they are cultivated plants, livestock or aquatic, is in the hands of the Ministry of Industries and Innovation. IGRCA is defined in the Agricultural Act from 1998 (2004) and in the Act on animal imports, see <https://english.agrogen.is/>. FAS has two members in the IGRCA Council.

Centre for Genetic Resources (CGR)

Centre for Genetic Resources is hosted by FAS at AUI, and the main tasks are to cooperate with the stakeholders in Iceland, breeding organisations and societies working with small populations; coordinate the conservation work on behalf of IGRCA; provide information on genetic resources through publication; coordinate communication with Nordic and international organisations on genetic resources; and encourage and assist students in projects concerning genetic resources. CGR cooperates with NordGen (www.nordgen.org)

and ERF (European Regional Focal Point for Animal Genetic Resources, <https://www.animalgeneticresources.net/>)

1.3.4 Actions – Academic Vision

	Action	Deliverable	Deadline	Responsible party
Ch. 1.3	Academic Vision			
1	Evolve strategic plan and vision for Faculty teaching and research.	Strategic plan for the Faculty.	June 2021.	Head of Faculty, all Faculty members.
2	Annual measurements of societal impact of Faculty research output.	Defined measurements of societal impact of Faculty research.	June 2026.	Head of Faculty, all Faculty members.
3	Use of measured societal impact to increase the visibility of FAS science among relevant stakeholders.	Increased societal impact of Faculty research.	June 2026.	Head of Faculty, all Faculty members.

1.4 Student Support

1.4.1 Student Orientation

Article 30 of the rules on AUI (Government Bulletin 266/2020), describes all the main formal requirements for enrolling new students in university studies at AUI. The reception of new students in all programmes is organised as a full-day program. The main items on the agenda are an address by the Rector and the Head of Teaching and Learning; a meeting with the Programme Coordinators; presentations from the Study Counsellor; presentation on IT services and AUI electronic data systems; presentations on the library, the International Coordinator and the AUI student association. They are also introduced to the Student Manual, which is available at ugla.lbhi.is.

1.4.2 Rights and Obligations

Students at AUI are treated according to the equal rights policy, aimed at reducing potential inequalities and ensuring equal rights. The equal rights policy at AUI is based on Act No. 10/2008 *on the Equal Rights of Women and Men* and Act No. 59/1992 *on the Affairs of Disabled People*. The Agricultural University places emphasis on persons being treated with respect and is decidedly against any kind of bullying. The school administration has the responsibility to enforce the individual provisions of the equal rights policy. Representatives of students are appointed to the Equal Rights Committee.

1.4.3 Support Services

Office of Teaching and Learning

The Head of the Office of Teaching and Learning oversees the day-to-day operations of all teaching matters. The office is responsible for the reception and registration of students, timetable preparation and other matters concerning the organisation of the implementation of teaching, examination table preparation, examination holding, electronic curriculum vitae of students, certificates and transcripts of certificates., etc. The office also provides services to foreign guest students and AUI students who study in part at foreign educational institutions. The International Coordinator is the Deputy Director of Education in his absence. Other teaching office staff take care of the general reception, registration, etc.

IT service

The website ugla.lbhi.is is the main teaching website and manages the careers of students at AUI. There, students can view their personal schedule and other information, such as grades, exam tables and more. Under Ugla is the teaching website Canvas, which is a website where each course is set up with teachers and students. This is the platform for communication between students and teachers regarding the study. There, teachers publish study materials, records of lectures for distance students, assignments and other relevant information, and in addition, students can submit project solutions via Canvas.

Distance students and staff can get help by switching on AUI's remote connection equipment by Teamviewer. Students and staff have access to a wireless network called LBHI, which is accessible in all the school's main buildings. To connect to the LBHI wireless network, you need to obtain an access key from the IT staff. AUI has EDUROAM, a system of interconnected authentication servers for research and university networks around the world. Students are assigned an e-mail address from the school.

Applications that students have access to are: Office 365, ArcGIS Desktop, ArcGIS Pro, JMP statistics software, AutoCAD and MicroStation. Also, students are provided access to OneDrive which is part of the Office 365 package, including a 1TB personal storage area.

Study Programme Coordinators

The Study Programme Coordinators oversee the supervision of the study programmes and oversee the implementation of teaching for the relevant Study Programme, and they carry the initiative for development and quality work at the programme level. They make proposals in collaboration with the Head of the Faculty for changes in study programmes and the selection of teachers, both permanent teachers and acquired part-time teaching staff. The Programme Coordinator is responsible for communication with teachers and students in his programme.

Students are involved in management and decisions through coordinators on the University Council, the Undergraduate Studies Committee, through participation in internal quality work (teaching evaluation), active discussion with administrators and staff and through the co-operation forum of the Rector and student association.

The Study and Career Counsellor provides students with numerous services, guidance and support during their studies and emphasises tailoring it to the needs of those who seek it, e.g., advice and guidance on working methods in university studies, courses in learning techniques and anxiety management. Students can receive guidance on the choice of studies as well as information about the services available to them within the school. The Study and Career Counsellor oversees the affairs of disabled students and students with special learning difficulties.

The International Coordinator's role is to strengthen cooperation with foreign universities and institutions, and he oversees student and teacher exchange programmes such as NordPlus and Erasmus+. The International Coordinator promotes the university's increased participation in various European Union programmes in the fields of science, education and training.

One of the main roles of the International Coordinator is to assist students who are interested in taking part of their studies at a foreign university. It is recommended that students take advantage of exchange studies if they are considering postgraduate studies abroad. This gives the student opportunity to get to know foreign universities and get acquainted with teachers who can later become their supervisors. Students are also offered internships under the auspices of Erasmus+, both during their studies and immediately after graduation.

The International Coordinator provides students and teachers with information on AUI's foreign cooperation and the opportunities to be found there. This includes assistance with applications for grants for students and teachers exchanges such as in Erasmus+ and NOVA.

Library service

The AUI library is a specialist library that serves the disciplines of the AUI. The library provides the university's staff, students and others who visit it with access to information and sources for studies, teaching and research. Emphasis is placed on continuous development in access to books and journals, with emphasis on access to premium databases and electronic journals. The national portal "Hvar" to international scientific publications is of primary importance in this regard (www.hvar.is), as is ProQuest E-book Central (<https://ebookcentral.proquest.com/lib/lbhi/home.action>) and the Icelandic National Library portal, Leitir (http://leitir.is/primo_library/libweb/action/search.do?vid=HASKOV).

1.4.4 Actions – Student Support

	Action	Deliverable	Deadline	Responsible party
Ch. 1.4	Student Support			
1	Improve Internet service for students.	Complete WiFi Internet coverage in student dormitories, classrooms and library.	August 2021.	Rector, AUI IT service unit.

2	Improve student presentation of AUI facilities in the beginning of studies.	Revise introduction days for students.	August 2021.	Office of Teaching and Learning, Programme Coordinators.
3	Increase awareness of job opportunities after graduation.	Organise sessions with former students and stakeholders.	August 2021.	Programme Coordinators, Office of Teaching and Learning.
4	Improve student participation in Faculty meetings and committees.	Better prepared students for influential participation in Faculty and committee meetings.	June 2022.	Head of Faculty, Student Association

2 Study Programmes

The discussion of study programmes below will be divided so that the National Diploma in Agriculture will be mentioned briefly at first. As this is an upper secondary school education, this coverage will be limited. Nevertheless, FAS decided to keep it in here due to the diverse synergies between this vocational programme and the BS programmes in Agriculture and Equine Sciences. These two BS degrees of FAS will be discussed together, as the curriculum regarding all the basic courses is identical, and their coordination is in the hands of the same persons and administration. However, there are of course separate special and detailed descriptions on learning outcomes for each of the two Study Programmes. The coverage of individualised study at the MS level (agricultural and equine sciences) is entirely comparative to that of individualised MS studies at other Faculties, as they have been managed jointly until now, an arrangement that will be continued as one MS coordinator will serve all MS Studies at AUI. The same goes for PhD Studies. The list of the programmes is shown in Table 1.

2.1 Study Programmes at the Vocational Level

National Diploma in Agriculture, Vocational Education (600008)

A vocational graduate or agricultural technician has gone through a curriculum on how to feed, care and treat animals, how to cultivate and utilise crops and forages for feed and/or food and skills in the use of agricultural machinery and handicraft. In addition, graduates learn about animal and plant genetics, laws and regulations related to agricultural production and safety as well as sustainable management of land resources.

The aim of the programme is to increase the individual's knowledge and skills in dealing with farming and comprehensive agricultural work, not least in the fields of farm operation, management, technology and animal husbandry.

Possibilities for specialisation is in the field of cattle, sheep and horse rearing. The programme is taught *in-situ* at Hvanneyri campus or by distance learning. Hvanneyri campus comprises facilities for in- and outdoor teaching, with auditoriums, laboratories, machinery-, dairy-, sheep- and horse operating units as well as agricultural fields, pastures and undisturbed nature for practical training.

Part of the agricultural studies consists of an internship on one of the 80 teaching farms with which AUI has a cooperation agreement. The student stays there as one of the family for 12 weeks (April–June) and participates in the daily work on the farm.

The programme is a good preparation for undergraduate studies in the field of general natural sciences, agricultural sciences and veterinary medicine.

The programme, although at the upper secondary school level, is based on close collaboration and interconnection with the university community within AUI. Teachers and students, for example, have access to experimental cowsheds, experimental sheepfolds and other experimental facilities in agriculture, where animal care and different methods in agriculture are taught.

The school's academic staff play some role in teaching in this vocational programme by giving lectures to students and thus ensure good connection with the academic activity within AUI.

Students in the vocational programme complete their studies with a final project where they often work with data from the university's experimental farms and thereby gain insight into the work of the university students and supervisors.

In recent years, this interaction of these two educational levels has been reflected in the fact that in recent years, many vocational graduates in Agriculture have enrolled in the BS programme in Agricultural Sciences. Several students have also arranged their studies the other way around and entered the vocational programme after they finished their BS degree. Detailed description of programme composition and learning outcomes are found at https://ugla.lbhi.is/kennsluskra/index.php?tab=nam&chapter=namsleid&id=600008_20216&kennsluar=2021

Table 9. Agriculture, vocational education. Intake rate (%)¹, no. of students completing first term², retention rate (second year) (%)³, number of students graduating, completion rate⁴, total number of registered students 20 October (all study years), of which full time (>22.5 ECTS completed) and part time (1–22 ECTS completed), sex ratio and age group for the years 2013–2016

	2020	2019	2018	2017	Mean
Intake rate (%)	52%	47%	46%	65%	52.5%
No. students in first term	31	29	22	22	26.0
Retention rate (%)	-	96.6%	95.5%	100%	97.4%
No. students graduating	24	25	27	26	25.5
Completion rate (%)	86%	84.9%	73.5%	70.6%	78.4%
Total no. of students	51	56	60	52	54.8
% Male	49%	52%	48%	59%	52.0%
Full time	45	44	49	52	47.5
Part time	6	12	11	0	9.7
Mean age	21.6	22.4	22.3	22.4	22.2
Age range	19–31	18–31	18–31	18–30	

¹ Proportion of applications resulting in a new record (accepted applications and registration fees paid).

² No. of students completing at least one examination in the first-year autumn term.

































































































³ Proportion of students returning in the second-year autumn term, completing at least one examination.

⁴ 4-year completion rate.

Table 10. Structure of the Study Programme National Diploma in Agriculture, vocational education**600008 National Diploma in Agriculture, Vocational education**

(Courses in 2021-2022)

First year	
Fall	Spring
Ⓢ BÚFR1IN03 Introduction to Agriculture 🇫🇮 🇩🇰 🇸🇪 3e Ⓢ BÚTÆ1GV01 Fence Making 🇫🇮 🇩🇰 🇸🇪 1e Ⓢ BÚTÆ1DA02 Tractor driving 🇫🇮 🇩🇰 🇸🇪 2e Ⓢ JARÆ1JA02 Cultivation I 🇫🇮 🇩🇰 🇸🇪 2e Ⓢ BÚFÉ1BA03 Livestock Management I /Livestock husbandry I 🇫🇮 🇩🇰 🇸🇪 3e Ⓢ GRÓÐ3NP05 Plant production and Botany 🇫🇮 🇩🇰 🇸🇪 5e Ⓢ VIÖR1FV02 Work efficiency and security 🇫🇮 🇩🇰 🇸🇪 2e Ⓢ VÉLA2VA03 Farm Machinery I 🇫🇮 🇩🇰 🇸🇪 3e Ⓢ BÚFÉ2BB02 Life Stock Management II 🇫🇮 🇩🇰 🇸🇪 2e Ⓢ BÓKH2BÚ03 Book Keeping in Farming 🇫🇮 🇩🇰 🇸🇪 3e Ⓡ REIM1RA04 Riding I 🇫🇮 🇩🇰 🇸🇪 4e Ⓡ FEÞJ1LA03 Agritourism 🇫🇮 🇩🇰 🇸🇪 🇨🇪 3e Ⓡ BÚTÆ1BT03 Welding and Farm Workshop - Wood Work 🇫🇮 🇩🇰 🇸🇪 3e	Ⓢ BÚFÉ3NA03 Cattle Husbandry I 🇫🇮 🇩🇰 🇸🇪 3e Ⓢ BÚFÉ3SA03 Sheep Husbandry I 🇫🇮 🇩🇰 🇸🇪 3e Ⓢ ÁBUR3FV03 Fertilizers and Fertilization 🇫🇮 🇩🇰 🇸🇪 3e Ⓢ UMHV3SL03 Environment and Sustainable Land Use 🇫🇮 🇩🇰 🇸🇪 3e Ⓢ VÉLA3VB03 Farm Machinery II 🇫🇮 🇩🇰 🇸🇪 3e Ⓢ GRÓÐ1PS02 Herbarium (Analysis course) 🇫🇮 🇩🇰 🇸🇪 2e Ⓢ NÁMD2ND15 Practical Farm Work 🇫🇮 🇩🇰 🇸🇪 15e Ⓢ BÚFÉ3AT03 Behaviour of Domestic Animals 🇫🇮 🇩🇰 🇸🇪 3e Ⓡ BÚFÉ1ÖD03 Minor Farm Animals 🇫🇮 🇩🇰 🇸🇪 3e Ⓡ ULLI2FV03 Wool Processing and Handcrafts 🇫🇮 🇩🇰 🇸🇪 3e Ⓡ HEST1JÁ01 Horse shoeing 🇫🇮 🇩🇰 🇸🇪 1e Ⓡ JARÆ2JV01 Practical cultivation 🇫🇮 🇩🇰 🇸🇪 1e

Second year	
Fall	Spring
<ul style="list-style-type: none"> Ⓢ JARÆ2JB03 Cultivation II    3e Ⓢ BÚFÉ3FF03 Animal Nutrition    3e Ⓢ LÍOL3BÚ02 Anatomy and Physiology of the Domestic Animals I    2e Ⓢ GRÓÐ3RP03 Plant cultivation and protection    3e Ⓢ SUÐA1MÁ03 Welding   3e Ⓢ BÚFÉ2FV03 Fodder Conservation/ making   3e Ⓢ NÁMD2VE05 Practical Farm Work – Project    5e Ⓢ BÚTÆ3BB03 Farm Housing and Mechanisation    3e Ⓢ ERKY3BÚ03 Genetics and Animal Breeding    3e Ⓢ BÚRE2FV03 Farm Management I    3e Ⓢ LÍOL3BÆ03 Anatomy and Physiology of the Domestic Animals II    3e Ⓢ REIM2RB04 Riding II    4e Ⓢ ÚRAF1ÚB01 Boning   1e Ⓢ HEAF3LB03 Slaughtering and Meat Quality    3e Ⓢ LÍFR3LL03 Organic Farming    3e Ⓢ VÉLA3VC03 Farm Machinery III    3e Ⓢ GRÓÐ2GR03 Vegetables and root crops    3e Ⓢ BÚFÉ2RÚ01 Shearing    0e Ⓢ BÚTÆ3MÞ01 Milking robots    1e 	<ul style="list-style-type: none"> Ⓢ SKÓG2NY02 Sylviculture   2e Ⓢ MARK3MG03 Marketing awareness and quality control    2e Ⓢ BÚRE4ÁÆ04 Planmaking in Farming    4e Ⓢ BÚRE4FR03 Farm Management II    3e Ⓢ LOKA4BÚ04 Final Project   4e Ⓢ BEIT3FV03 Grazing Management    3e Ⓢ REIM2RC04 Riding III    4e Ⓢ GRÓÐ2FP02 Indoor production of seed plants    2e Ⓢ BÚFÉ4SB03 Sheep Husbandry II    3e Ⓢ BÚTÆ2JÁ03 Welding and Farm Workshop – Welding Projects    3e Ⓢ BÚTÆ3HF01 Total mixed ration feeding    1e Ⓢ HLNÝ4FV03 Natural Resources Utilization and Innovation    3e Ⓢ JARÆ4ET03 Recultivation    3e Ⓢ BÚFÉ2RÚ01 Shearing    1e Ⓢ BÚFÉ4NB03 Cattle Husbandry II    3e

2.1.1 Actions – Teaching and Learning – Vocational Programme

	Action	Deliverable	Deadline	Responsible party
Ch 2.1.1	Teaching and Learning – vocational programme			
1	Increase agricultural-related research presentations.	Introduction seminars on on-going research projects.	September 2021.	Programme Coordinator

2.2 BS in Agricultural Sciences (600006 180 ECTS) and BS in Equine Sciences (600013 180 ECTS)

2.2.1 Students

Admission requirements: Icelandic matriculation examination (school leaving examination after three or four years of secondary school) or another secondary examination which the Undergraduate Studies Committee regards as equivalent. As indicated in Table 11 on progression, most of the data presented can be regarded as acceptable, except for the low proportion of male

students. As can be seen from Table 12, the Equine Sciences Programme is in a restoration phase and the amount of statistical data limited.

An absolute majority of students in both programmes are of Icelandic nationality; only occasional students registered every year are of foreign nationality. In opinion polls made two years after graduation among all AUI BS graduates from the years 2015, 2016 and 2017, 77–80% were working full or part time, 45–50% regarded their jobs fit with their career plans, 65–84% said their education benefitted the current work well or very well. The proportion of students attending further full-time studies was 12–18%. It should be noted that separate data for students of Agricultural Sciences and Equine Sciences is not available in these opinion poll reports. It is, however, a general view that the high demand for AUI graduates in Agricultural Sciences on the work market negatively affects the recruitment rate of students to the MS programmes at AUI.

The BS Study Programme in Equine Sciences was established in 2007 as a joint study between AUI and Hólar University. The first two years were taught at AUI and the third year at Hólar University. In the period 2010–2014, a total of 24 students graduated with a joint BS degree. Since 2020, AUI has offered the study unilaterally. Due to this very recent restoration of the programme in the present form, reliable statistics on the programme's performance has not emerged yet. Therefore, it should be of no surprise that statistics on completion rate and retention rate of the Equines Science are currently zero.

Table 11. AGRICULTURAL SCIENCE BS Intake rate (%)¹, no. of students completing first term², retention rate (second year) (%)³, number of students graduating, completion rate⁴, total number of registered students 20 October (all study years), of which full time (>22.5 ECTS completed) and part time (1–22 ECTS completed), sex ratio and age group for the years 2013–2016

	2020	2019	2018	2017	Mean
Intake rate (%)	87%	82%	84%	93%	87%
No. students in first term	29	17	10	15	18
Retention rate (%)	-	100%	100%	100%	100%
No. students graduating	7	13	11	11	11
Completion rate (%)	41.67%	44.44%	43.75%	37.04%	42%
Total no. of students	60	54	51	58	56
% Male	22%	22%	22%	21%	22%
Full time	44	36	37	44	40
Part time	16	18	14	14	16
Mean age	25.83	26.15	26.51	27	26
Age range	19–47	18–51	18–47	19–56	

¹ Proportion of applications resulting in a new record (accepted applications and registration fees paid).

² No. of students completing at least one examination in the first-year autumn term.

³ Proportion of students returning in the second-year autumn term, completing at least one examination.

⁴ 4-year completion rate.

Table 12. EQUINE SCIENCE BS*, see explanations in Table 11

	2020	2019	2018	2017	Mean
Intake rate (%)	94%	86%	0%	0%	90%
No. students in first term	10	1	0	0	5.5
Retention rate (%)	90%	100%	0%	0%	95%
No. students graduating	0	0	0	0	0
Completion rate (%)	0	0	0	0	0
Total no. of students	11	1	0	0	6
% Male	0%	0%	0%	0%	0
Full time	8	1	0	0	4.5
Part time	3	0	0	0	1.5
Mean age	31.36	31	-	-	31
Age range	19–51	31	-	-	

*As can be seen from the table, the Equine Sciences Programme is just recently restored. Formerly, it was a joint programme with Holar University, but in the recovered form, it is entirely an AUI programme. For few years after Holar's withdrawal, the programme was not up and running but is now resumed.

Student participation in the development and management of the Study Programmes

According to the rules of AUI (366/2020, Article 15), the Undergraduate Studies Committee deals with, among other things, teaching development and coordination between study programmes, discusses curricula and syllabi for individual study programmes, monitors the quality of study and teaching, discusses key issues of individual students and disputes that may arise in the implementation of teaching and assessment. The composition and role of the Undergraduate Studies Committee are further discussed in the rules on BS studies at the university, which are confirmed by the University Council. The Head of Teaching and Learning is the chair of the Undergraduate Studies Committee, which is seated by BS Programmes Coordinators.

At the end of all courses, students are asked to fill out course evaluations and give their opinion on many issues regarding the quality of the course and their level of satisfaction. In the field of cooperation between public universities, regular opinion polls are conducted among students in studies and graduates on many factors that concern, among other things, the quality of studies and services for students. The results of these polls are cited elsewhere in this report. These opinion polls are conducted by the Research Institute of the University of Akureyri and are, like teaching surveys, anonymous.

Student Satisfaction

An opinion poll conducted in 2020 among third-year students at AUI received only 20 student answers, half of which were in Agricultural Sciences and the other half from all other BS programmes at the university. Agricultural Science students were all under 25 years of age and in on-site study. Students in other courses were older than 25 years, and most of them were in distance learning.

Overall, the results for Agricultural Science are positive or very positive for most aspects included; for example, particularly good scores were obtained for course instructors' performance and no one was dissatisfied with the quality of the Study Programme. However, results show that students call for increased teaching method diversity and student active participation in the classroom. Results also show that attention should be given to improve assessment and feedback transparency and quality. Students' views on support and social activities, organisations and management, personal development, learning opportunities, student voice and finally, learning community showed good satisfaction levels, with one exception: transparency regarding actions developed in response to students' feedback on courses.

In connection with the writing of this report, the Head of the Faculty called a meeting on 24.3.2021 with students as well as the Programme Coordinators and the Director of Teaching. In the section under Support Services, the big complaint was poor Internet connection at Hvanneyri campus, both in the student dormitories and some classrooms, which is very disruptive and affects the quality of the study facilities. Now, in early June 2021 when this is written, a major overhaul and upgrade of Internet service is taking place at Hvanneyri campus. Library issues showed students were satisfied, except for a poor Internet connection at the library. Students are also satisfied with the services of study counselling. The Office of Teaching and Learning received nothing but praise for top service.

Regarding student satisfaction, various things were discussed and complaints reviewed. There were clear COVID-19 effects. Students were unhappy they were not able to participate in field trips that had been planned and about the small and superficial presentation of the research facilities that the school has to offer.

In general, the students feel that available facilities could be used much better in teaching, such as on the university dairy farm and the sheep farm unit. There were also complaints about too many and different teachers in some courses. Regarding the student's course evaluation, they found it difficult to respond to those if many teachers were involved with one course. Evaluation submission in the middle of an exam reading is also problematic. It is

intended that students submit teaching course evaluation before the final exam. Students also criticised that in exceptional cases, teachers were using private e-mail addresses to communicate with them. See details in appendix “Students Satisfaction Reports.”

2.2.2 Actions – BS students

	Action	Deliverable	Deadline	Responsible party
Ch 2.1.1	BS students			
1	Increase student participation in course evaluations.	Reach at least 60% participation of students in course evaluation across courses.	May 2022.	Programme Coordinator, Student Office, Teachers

2.2.3 Teaching and Learning

From 2005, when the main revision and in part the establishment of some Study Programmes at the newly established AUI took place, very competent Programme Coordinators were hired, who designed the programmes in collaboration with the Special Prorektor of Education, other coordinators and academic staff and the head of the Faculties at that time. Since then, there has not been a formal process of reviewing and developing the programmes. These pioneer coordinators have all left their roles (retired, etc.), and the current ones do not possess these formative shaping roles. It is thus clear that new formal processes for programme approval and modification needs to be established at AUI. It has been the task of individual teachers to ensure that the courses they teach or supervise are up to date. Leading experts in their fields from other institutions, apart from permanent AUI staff, are involved in teaching some of the courses at AUI. These experts also influence the curricular development at AUI.

The BS programme in Agricultural Sciences aims to give students the basic understanding of agriculture in Iceland and involves perspectives of economics, biological and technical conditions for livestock and land utilisation and various aspects of agricultural sciences, such as feeds and feeding, breeding, housing and animal well-being. Natural resources are addressed, emphasising ecology, biology, livestock science, soil science, chemistry, etc. Insights are provided into the technology of utilising natural resources, for instance work procedures, machines, tools and the environment’s natural processes, on a broad, multi-disciplinary basis in biological, geological and environmental sciences. Emphasis is placed on understanding ecosystems’ functions and components. After completing their studies, students should have a deep understanding of agriculture, the fundamentals of living systems and their interactions with the physical environment and sustainable use of natural resources.

The BS programme in Agricultural Sciences is a 180-ECTS programme that is offered both at campus and as a distance-learning programme. There are 156 ECTS of mandatory courses and 14 ECTS of optional courses, most often between 4 and 6 ECTS (range 2–8 ECTS) and are

offered in four short semesters per year (7 weeks each). The official language of instruction is Icelandic, although some mandatory courses are taught in English. The students finish their programme with a 10-ECTS project that they present as a written thesis which is later published in the open access skemman.is database (see further Chapter 2.2.5).

Agricultural production and land cultivation are essential elements in the Agricultural Sciences program, which provides preparation for various jobs related to agriculture, such as farming, services, counselling, teaching and research assistance. The programme is a good basis for postgraduate studies and scientific work in the field of agricultural sciences.

Emphasis is placed on the basic natural science courses and practical natural sciences, courses in the field of agriculture and animal sciences and operations and technology. The aim is to prepare students for subjects and jobs related to land cultivation and agricultural production, as well as to lay the foundation for postgraduate studies and scholarly work in the field of agricultural sciences.

Emphasis in the first year: teaching in business administration and introduction to agricultural sciences, as well as basic subjects in the field of natural sciences.

Emphasis in the second year: natural sciences continue to have the most weight, but there is a growing emphasis on agricultural sciences.

In the third year, there is space for electives as well as specialties in agricultural sciences. Preparations for the BS final projects will begin early in the third year, but work on them takes most of the students' time in the spring.

Studying for a BS degree provides preparation for various jobs related to agriculture in counselling, teaching and research. The programme is also useful as preparation for the operation of farms and jobs for companies that serve agriculture and businesses in rural areas.

180 ECTS credits must be completed for the qualification, 60 ECTS credits per year. Students must complete all the first-year credits before they commence on their third year. Obligatory courses are 152 ECTS credits, and optional courses are equivalent to 18 ECTS credits. This programme concerns the perspectives of the economic, biological and technical conditions for livestock and land utilisation and various aspects of agricultural sciences, such as feeds and feeding, breeding, housing and animal well-being. Natural resources are addressed, emphasising ecology, biology, genetics, livestock science, soil science, chemistry, etc. Insights are provided into the technology of utilising natural resources, for instance through work procedures, machinery, tools, and the environment.

On completing their studies from the Agricultural Sciences Programme, the students should have acquired learning outcomes that are thoroughly described on the programme web page https://ugla.lbhi.is/kennsluskra/index.php?tab=nam&chapter=namsleid&id=600006_20216&kennsluar=2021g&lang=en.

Table 13. Structure of the Study Programme in Agricultural Sciences**600006 Agricultural Sciences, B.Sc (Courses in 2021-2022)**

First year	
Fall	Spring
Ⓢ 03.44.02 Introduction to Farm Mechanisation 🇺🇸 🇩🇪 🇳🇱 🇬🇧 4e Ⓢ 01.41.03 Introduction to Agricultural and Equine Sciences 🇺🇸 🇩🇪 🇳🇱 6e Ⓢ 03.11.02 Introduction to academic methodology 🇺🇸 🇩🇪 🇳🇱 4e Ⓢ 01.20.03 General Chemistry – theoretical 🇺🇸 🇩🇪 🇳🇱 5e Ⓢ 01.21.01 General Chemistry – practical 🇺🇸 🇩🇪 1e Ⓢ 02.33.02 Basic Practical Statistics 🇺🇸 🇩🇪 🇳🇱 4e Ⓢ 01.42.03 An Introduction to Business Finance 🇺🇸 🇩🇪 🇳🇱 6e	Ⓢ 02.02.02 Botany 🇺🇸 🇩🇪 🇳🇱 🇬🇧 4e Ⓢ 02.26.02 Organic Chemistry 🇺🇸 🇩🇪 🇳🇱 4e Ⓢ 06.45.02 Farm Buildings 🇺🇸 🇩🇪 🇳🇱 🇬🇧 4e Ⓢ 02.06.04 Basic Ecology 🇺🇸 🇩🇪 🇳🇱 8e Ⓢ 04.59.02 Cell Biology 🇺🇸 🇩🇪 🇳🇱 4e Ⓢ 02.29.03 Biochemistry 🇺🇸 🇩🇪 🇳🇱 6e
Elective courses are only for students who have completed compulsory courses in the 1st year.	
Second year	
Fall	Spring
Ⓢ 03.26.03 Genetics 🇺🇸 🇩🇪 🇳🇱 6e Ⓢ 03.39.04 Statistics & Experimental Design 🇺🇸 🇩🇪 🇳🇱 8e Ⓢ 03.63.03 Soil Science 🇺🇸 🇩🇪 🇳🇱 6e Ⓢ 03.21.03 Crop Science I 🇺🇸 🇩🇪 🇳🇱 6e	Ⓢ 04.33.03 Plant Physiology 🇺🇸 🇩🇪 🇳🇱 6e Ⓢ 05.42.03 Animal Nutrition 🇺🇸 🇩🇪 🇳🇱 6e Ⓢ 04.41.04 Anatomy and Physiology of the Domestic Animals 🇺🇸 🇩🇪 8e Ⓢ 01.30.02 Microbiology 🇺🇸 🇩🇪 🇳🇱 4e Ⓢ 05.43.03 Animal Breeding 🇺🇸 🇩🇪 🇳🇱 6e
Third year	
Fall	Spring
Ⓢ 05.21.03 Agronomy II 🇺🇸 🇩🇪 🇳🇱 6e Ⓢ 05.86.03 Microeconomics and Financial Analysis 🇺🇸 🇩🇪 🇳🇱 6e Ⓢ 05.34.02 Resource and Environmental Economics 🇺🇸 🇩🇪 4e Ⓟ 07.90.03 Sheep Husbandry 🇺🇸 🇩🇪 🇳🇱 6e	Ⓢ 04.46.03 Fodder Conservation 🇺🇸 🇩🇪 🇳🇱 6e Ⓢ 06.10.05 B.Sc. Final Assignment – Thesis 🇺🇸 🇩🇪 10e Ⓢ 06.51.03 Entrepreneurship 🇺🇸 🇩🇪 🇳🇱 6e Ⓟ 08.89.03 Cattle Husbandry 🇺🇸 🇩🇪 🇳🇱 6e

Year of study unspecified	
Fall	Spring
<ul style="list-style-type: none"> ⓑ 07.80.03 Fur animals, pigs and poultry 6e ⓓ 07.95.01 Sheep breeding – judgement training 2e ⓓ 03.52.01 ARCHITECTURE AND NATURE - The positive impact of design on nature 2e ⓓ 05.76.03 Grazing ecology and management 6e ⓓ 01.24.02 Environmental Ethics 4e ⓓ 06.90.02 Geographical Information Systems III (Environmental modelling with GIS) 4e ⓓ 05.33.02 Organic Agriculture 4e ⓓ 05.45.02 Quality and Processing of Animal Derived Foods 4e ⓓ 01.49.03 Forest science I - Introduction to forest science and forestry 6e ⓓ 05.69.03 Pollution and Waste Management 6e ⓓ 05.92.02 Behaviour and Welfare of Domestic Animals 4e ⓓ 03.53.03 Ecological Restoration and Sustainable Land Management 6e ⓓ 07.92.03 Horse Breeding and Nutrition 6e 	<ul style="list-style-type: none"> ⓐ 02.12.01 Field Botany - Summer Course 2e ⓓ 07.91.02 Breeding horse judgement 4e ⓓ 04.73.03 Geographical Information Systems II - GIS 6e ⓓ 02.24.03 Geographical Information Systems I (Cartography) 6e ⓓ 05.85.02 Communication in environmental and natural resource issues 4e ⓓ 06.40.02 Sustainable Development 4e
<p>Elective courses are only for students who have completed compulsory courses in the 1st year. Courses marked with B - students has to take two of three courses.</p>	









































The BS in Equine Sciences is closely related to the BS in Agriculture Sciences. For example, the programmes have for many years shared the same Programme Coordinator and most if not all discussions within FAS about teaching and programme structure are managed in an integrated way for both programmes simultaneously. The BS programme in Equine Sciences aims to give students the basic understanding of agriculture in Iceland with emphasis on the Icelandic horse. The study concerns the perspectives of the economic, biological, and technical conditions for livestock and land utilisation and various aspects of agricultural sciences, such as feeds and feeding, breeding, housing and animal well-being. Natural resources are addressed, emphasising ecology, biology, livestock science, soil science, chemistry, etc. Insights are provided into the technology of utilising natural resources, for instance work procedures, machines, tools and the environment’s natural processes, on a broad, multi-disciplinary basis in biological, geological and environmental sciences. Emphasis is placed on the Icelandic horse training, management and breeding. After completing their studies, students should have a deep understanding of agriculture with emphasis on the Icelandic horse, fundamentals of living systems and their interactions with the physical environment and sustainable use of natural resources.

The BS programme in Equine Sciences is a 180-ECTS programme that is offered both in person and as a distance-learning programme. To be admitted into the programme, students need to have completed secondary education, with an Icelandic matriculation examination. There are 152 ECTS of mandatory courses and 18 ECTS of optional courses. Courses are most often between 4 and 6 ECTS (range 2–8 ECTS) and are offered in four short semesters per year (7 weeks each). The official language of instruction is Icelandic, although some mandatory courses are taught in English.

On completing their studies from the Equine Sciences Programme, the students should have acquired learning outcomes that are thoroughly described on the programme web page https://ugla.lbhi.is/kennsluskra/index.php?tab=nam&chapter=namsleid&id=600013_20216&ken\nsluar=2021g&lang=en

Table 14. Structure of the Study Programme in Equine Science

600013 Equine Science, B.Sc (Courses in 2021-2022)

First year	
Fall	Spring
Ⓢ 01.21.01 General Chemistry – practical  1e Ⓢ 01.41.03 Introduction to Agricultural and Equine Sciences  6e Ⓢ 03.11.02 Introduction to academic methodology  4e Ⓢ 02.50.02 History of the Horse, perception and behavior  4e Ⓢ 01.20.03 General Chemistry – theoretical  5e Ⓢ 02.51.02 Riding I  4e Ⓢ 02.33.02 Basic Practical Statistics  4e	Ⓢ 02.26.02 Organic Chemistry  4e Ⓢ 02.02.02 Botany  4e Ⓢ 02.06.04 Basic Ecology  8e Ⓢ 05.52.02 Riding II  4e Ⓢ 02.29.03 Biochemistry  6e Ⓢ 04.59.02 Cell Biology  4e
Elective courses are only for students who have completed compulsory courses in the 1st year.	
Second year	
Fall	Spring
Ⓢ 03.26.03 Genetics  6e Ⓢ 06.55.02 Management and Health of the Horse  4e Ⓢ 03.39.04 Statistics & Experimental Design  8e Ⓢ 03.55.02 Preparation of the young horse  4e Ⓢ 03.21.03 Crop Science I  6e	Ⓢ 06.45.02 Farm Buildings  4e Ⓢ 05.42.03 Animal Nutrition  6e Ⓢ 04.41.04 Anatomy and Physiology of the Domestic Animals  8e Ⓢ 05.43.03 Animal Breeding  6e Ⓢ 06.54.03 Riding III  6e
Third year	
Fall	Spring
Ⓢ 07.92.03 Horse Breeding and Nutrition  6e Ⓢ 05.57.02 Horse Exercise Physiology  4e Ⓢ 05.54.02 Hoof Care and Shoeing  4e Ⓢ 06.56.02 Structure and Movement of the Horse  4e Ⓢ 05.76.03 Grazing ecology and management  6e	Ⓢ 04.46.03 Fodder Conservation  6e Ⓢ 07.91.02 Breeding horse judgement  4e Ⓢ 06.51.03 Entrepreneurship  6e Ⓢ 06.10.05 B.Sc. Final Assignment - Thesis  10e
Year of study unspecified	
Fall	Spring
Ⓢ 05.45.02 Quality and Processing of Animal Derived Foods  4e Ⓢ 05.69.03 Pollution and Waste Management  6e Ⓢ 03.44.02 Introduction to Farm Mechanisation  4e Ⓢ 05.34.02 Resource and Environmental Economics  4e Ⓢ 05.92.02 Behaviour and Welfare of Domestic Animals  4e	1) Ⓢ 02.12.01 Field Botany - Summer Course  2e Ⓢ 06.40.02 Sustainable Development  4e Ⓢ 04.36.02 Meteorology  4e
1) Taught late June	

Workload

The teachers responsible for individual courses are asked to evaluate the workload for the different course components and aim for 25–30 hrs work for one ECTS credit. Students have the opportunity in the standard course evaluation session in the end of each term to comment if workload was appropriate with reference to the assigned number of ECTS for the course.

Teaching methods

Lectures are the principal method of delivery of knowledge and understanding skills for most courses in Agricultural Sciences. Most courses rely on textbooks, and reviews and research papers are used as supplementary material, especially in Years 2 and 3. In subjects specially related to Icelandic agricultural conditions, teaching relies on scientific material published in local journals and reports. The communication between teachers and students is organised on special Canvas web pages for each course. Canvas is a comprehensive teaching system that gives teachers and students an effortless way to communicate about everything related to learning. Students can download all the material that teachers share with the student in the same area. Teachers can submit assignments that students can then submit; the teacher then reviews and publishes a grade for the project. Teachers can also post lectures, slides, notes and more material related to courses. Teachers can communicate with students through mailboxes and either choose to send to everyone in the course or to individual students. Teachers can also create discussion threads and follow students' discussions. Teachers can enrol students in groups in which they can then work together. Students can see on the front page an overview of the courses they are enrolled in, the projects that are next on the agenda and the projects that have recently received a grade. Inside each course, the student can see an overview of assignments, course topics, syllabus, lectures and more. The student can choose individual projects and submit a solution which the teacher can then review and give a grade for. Students can also join groups, have discussions within the group and submit assignments together.

At AUI, distance-learning solutions are offered in all study programmes except Landscape Architecture. This includes recording lectures in on-site learning. Distance students can listen to these recordings through AUI's teaching system (Canvas) as often as needed. The distance students work on the same projects as local students and must meet all the same requirements as local students.

Compulsory attendance for distance students takes place during practical weeks when the students, for example, present projects and take part in practical exercises and field trips. All practical exercises are compressed into two to three compulsory visits every seven weeks of the semester. The third and sixth teaching weeks of each short term are reserved as such compulsory attendance weeks. Students who take advantage of distance learning solutions can, however, take final exams in their home area or close to their home area.

Practical training under the supervision of teachers is used in many subjects, especially in the basic courses in Years 1 and 2, where students acquire knowledge on methods used in the field of study, in the laboratory, farm stables and fields. Short field trips are in many courses, and summer field courses give an opportunity for demonstration and training of practical skills on site. Student projects form a part of almost all courses in the programme, where methods and the understanding of the subject is trained. The projects are either carried out by small groups of students or by individuals with increased demand for autonomy as the programme advances. The result is given in a written form as a short report or presented orally in class. A final assignment in year 3 trains the student to work in an autonomous manner to carry out a literature survey, gather data, analyse it and present it in an orderly manner.

Assessment

Unseen written exams (2–3 hours) are the principal method of assessment for knowledge and understanding in most courses in the BS Programmes. Outcome of the written exam counts most commonly for 50–80% of the final mark, and the outcome from practical training and projects makes up the remainder. Short reports and logbooks are an important part of the assessment in some courses. The final assignment is assessed solely from the written thesis. Grades for BS theses are made by the supervisor according to protocol from the Office of Teaching and Learning. Also, an appointed examiner reviews all BS theses to avoid discrimination between students. In the spring of 2021, a new electronic exam system (Inspira) was introduced at AUI, which enables the students to take the exams on a computer either at home or at an exam location. This system facilitates easy and secure submission of exams that are often held at home or at exam locations around the country. The student's anonymity in this system facilitates teachers' complete neutrality in marking the exams.

Specialised teaching facilities

University farm units, dairy cows, sheep, horses, greenhouses, laboratories, experimental stations and experimental fields, extensive grazing areas, etc. have been mentioned earlier, see also 2.2.2 Teaching and Learning. Students have 24/7 access to central spaces in the main building where you find library facilities and a reading and group work rooms. Students have personal electronic access to this facility. Furthermore, students have access to laboratories and other specialised spaces including university farm facilities according to their needs and projects, which may mean evenings nights and weekends if needed.

2.2.4 Actions – Teaching and Learning

	Action	Deliverable	Deadline	Responsible party
Ch. 2.1.2	Teaching and Learning			
1	Results of course evaluations are accessible to the Programme Coordinator.	Access of results to the Programme Coordinator.	June 2021.	Office of Teaching and Learning
2	More diversity in teaching methods and increase practical studies.	Annual workshops in teaching methods.	August 2021.	Office of Teaching and Learning
3	Ensure access to specialised teaching equipment.	Internal arrangements that ensure access to specialised teaching equipment.	August 2021.	Head of Faculty, Office of Teaching and Learning
4	Ensure good collaboration between AUI and the Agricultural Advisory Centre and other stakeholders.	Bilateral agreements and adjunct positions renewed.	August 2021.	Rector, Head of Faculty.

5	Develop protocol for Study Programmes approval and modification.	Protocol for Study Programmes approval and modification.	August 2022.	Programme Coordinator, Undergraduate Study Committee
6	Develop a protocol for review of results of course evaluations to ensure that the results of course evaluations are considered and actions taken where needed.	Protocol for reviews of results of course evaluations.	December 2022.	Undergraduate Study Committee, Office of Teaching and Learning, teachers

2.2.5 Coordination between Teaching and Research

See 1.3.1 Strategy for Teaching and Learning, 1.3.2 Research Impact of the Faculty, 2.2.2 Teaching and Learning. A strong tradition has been established within FAS in linking student projects (BS, MS and PhD) with ongoing research within the faculty or by cooperating institutions. This can be seen on the database webpage Skemman (<https://skemman.is/handle/1946/3515>), which is a cooperation project of all Icelandic universities. In the years 2005–2016 there were 113 BS, 17 MS and 4 doctoral theses in the Agricultural Sciences. In the years 2017–2019, AUI had only one Faculty and the theses (71 BS, 19 MS 1, PhD respectively) are not broken down into programmes. From 2020, 7 BS and 2 MS theses in Agricultural Sciences have been published in the Skemman database. In most cases, the supervision is in the hands of teachers who are active in research in AUI or in cooperative institutions.

2.4.1 Actions - Coordination between Teaching and Research

	Action	Deliverable	Deadline	Responsible party
Ch. 2.1.3	Coordination between Teaching and Research			
1	Encourage students to participate in scientific conferences.	Advertisement on webpage, social media, and AUI Calendar.	August 2021.	Public Relations Manager, Head of International Relations and Research
2	Presentation of research projects to students.	Annual seminars.	December 2021.	Head of Faculty, Head of International Relations and Research

3	Increase utilisation of research facilities for educational purposes.	More visibility in course curricula.	December 2021.	Head of Faculty, teachers
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2.2.6 Conclusions

The programme in Agricultural Sciences at AUI is one of its kind in Iceland and thus plays a key role. The results of the opinion polls among students in studies and among graduates in the labour market indicate that the studies are professionally sound. It is a matter of concern, however, that the proportion of men in the study programme has become low (around 20%), in addition to which the high demand in the labour market for graduated BS students decreases the number of applicants for graduate studies in these subjects.

The Equine Sciences Programme is a kind of by-product of Agricultural Sciences and is the only one of its kind in the school system in the south and west of Iceland, but Hólar University located in north of Iceland also has equine studies in its field. AUI, on the other hand, is in close vicinity to the largest market in the south and west of the country.

The main conclusion of this review is that these Study Programmes should continue in their current form but that their development and review should be given a more formal path.

2.3 MS & PhD Study Programmes

2.3.1 MS in Agricultural Sciences (600005 120 ECTS) / Equine Sciences (600014 120 ECTS)

MS degrees in Agricultural Sciences and Equine Sciences are offered as individual research-based studies, with students normally carrying out a 30- or 60-ECTS independent research project, 14 ECTS in mandatory graduate-level courses and 76 or 46 ECTS in courses which are selected around each individual project, either at AUI, another Icelandic university or abroad. Individuals enrolled in a research-based MS get at least one supervisor for a 30-ECTS project or two for a 60-ECTS project. Two additional specialists can be appointed to the MS Committee, who supervise the student's research work and help with selection of appropriate courses that support the individual studies. Of those MS committee members, one must belong to the Faculty, but others are often linked to industry, institutions, NGOs, etc. The AUI MS programmes are operated at the present according to rules confirmed by the AUI University Council on 16 December 2020 (http://www.lbhi.is/rules_regulations).

2.3.2 Students

The number of students enrolling in the individual research-based MS programmes has increased slightly over the last years (**Table 15**). On average, 1.75 students have graduated each year in the period 2017–2020, and the average time for completion of the programme was 2.9 years.

Table 15. No. of new entrants, number of students graduating, completion rate¹, total number of registered students 20 October (all study years for individual MS programmes in

Agricultural and Equine Sciences), of which no. of active students², sex ratio of registered students and age group for the years 2014–2017

	2020	2019	2018	2017	Mean
No. of new entrants	15	6	10	5	9
No. students graduating	2	2	0	3	1.75
Completion rate (%)	100%	100%	0%	33%	78%
Total no. of students	8	11	8	3	7.5
No. of active students	5	9	8	3	6
% Male	38%	27%	25%	0%	22.5%
Mean age	27.6	27.9	28.3	23.0	26.55
Age range	24–32	24–33	23–39	22–24	

¹ 3-year completion rate.

² Students with registered ECTS units.

One student representative appointed by graduate students at the MS level actively participates in the Graduate Studies Committee of AUI.

Teaching and course evaluations, as for the undergraduate courses, are taken online at the end of each course. The general attitude of students towards the courses offered in the MS programmes is in general positive, although students do complain about the lack of elective courses.

As part of the Graduate Studies Programme, two whole-day seminars are organised each year with mandatory attendance of all MS students, in situ or on-line. Each MS student must present his/her thesis topic twice during their studies at this seminar series. During those seminars, various other practical information sessions are organised for the students, and each time, some general discussions about issues that can be improved in respect to the Graduate Studies Programmes are taken up. This venue has proven to be important for creating an encouraging academic environment for the individual, research-based graduate students, as they are otherwise quite spread among different campuses of AUI.

As the curriculum of the individual, research-based MS programmes is mostly selected around each individual student (except 14 mandatory ECTS for all), the Student Associations do not formally take part in the quality assurance of those programmes. However, all students can have direct inputs to various aspects of those programmes at the two annual Graduate Student Seminars, described earlier.

At the onset of each academic year, the Graduate Studies Coordinator has organised an orientation for all new MS students at the Hvanneyri campus. Other orientation activities for the students are part of the Graduate Student Seminars, as described earlier.

Recruitment of research-based MS students has two main venues. First, when Faculty members have received research grants which support work of a graduate student(s), they advertise those positions nationally through different media. Including work of graduate students has become the norm for most successful grant proposals in recent years. The two graduate programmes are also presented at different student recruitment activities organised centrally by the AUI Public Relation Manager, both in situ and on-line. There, some of the current MS students are often involved for presenting the Study Programmes.

2.3.2 Actions – MS students

	Action	Deliverable	Deadline	Responsible party
Ch 2.1.1	Students			
1	Promote interactions between FAS students conducting individual research projects.	Informal online meetings for graduate students.	October 2021.	Graduate Studies Committee.
2	Encourage graduate students to establish a student association.	Include presentation by the Student Association at the graduate student seminars.	October 2021.	Graduate Studies Committee.
3	Increase student participation in course evaluations.	Reach at least 60% participation of students in course evaluation across courses.	May 2022.	Programme Coordinator, Office of Teaching and Learning, teachers.

2.3.4 Teaching and Learning

The aim of this programme is to provide individual scientific education and training in any of the defined areas of Agricultural and Equine Sciences.

Most of what has been said about teaching and learning at the BS level also applies to studies and teaching at the MS level, except that further demands are made on the quality and performance of students in courses and independence in working methods in accordance with what is assumed in the definition of study levels in the Icelandic education system.

Table. 16. Structure of the Study Programme MS in Agricultural Sciences and Equine Science 600005 Agricultural Science, M.Sc (Courses in 2021-2022)

First year	
Fall	Spring
07.07.03 Research Methodology and Scientific Writing 🇫🇮 🇩🇩 🇮🇸 🇮🇸 🇮🇸 🇮🇸 6e	07.06.03 Ethics and Philosophy of Science 🇫🇮 🇮🇸 6e
Second year	
Fall	Spring
07.12.01 Graduate student seminars I 🇫🇮 🇮🇸 1e	08.12.01 Graduate student seminars II 🇫🇮 🇮🇸 1e 10.10.30 Master Thesis 🇫🇮 🇮🇸 60e

600014 Equine Science, M.Sc (Courses in 2021-2022)

First year	
Fall	Spring
07.07.03 Research Methodology and Scientific Writing 🇫🇮 🇩🇩 🇮🇸 🇮🇸 6e	07.06.03 Ethics and Philosophy of Science 🇫🇮 🇮🇸 6e
Second year	
Fall	Spring
07.12.01 Graduate student seminars I 🇫🇮 🇮🇸 1e	08.12.01 Graduate student seminars II 🇫🇮 🇮🇸 1e 10.10.30 Master Thesis 🇫🇮 🇮🇸 60e

The courses offered to MS students use a variety of teaching methods. For instance, in the mandatory courses, students actively participate in classes presenting their work orally or in written form, attend lectures and have individual assignments. Assessment of the courses is also diverse. At AUI, most courses at the graduate level do not have a final exam but rely on assignments and active participation in class as a main tool for assessment. Written assignments and presentations, as individual or group work, are also common.

2.3.5 Actions - Teaching and Learning

	Action	Deliverable	Deadline	Responsible Party
Ch. 2.1.2	Teaching and Learning			
1	Increase variability in courses at the graduate level.	Ensure cooperation between universities and AUI Faculties.	June 2021.	Rector and Head of Faculty.

2	Results of course evaluations are accessible to the Programme Coordinator.	Access of results to the Programme Coordinator.	June 2021.	Office of Teaching and Learning
3	Develop a protocol for review of the results of course evaluations to ensure that the results of course evaluations are considered and actions taken where needed.	Protocol for review of the results of course evaluations.	December 2022.	Undergraduate Study Committee, Office of Teaching and Learning, teachers.

2.3.6 Coordination between Teaching and Research

The research projects done by MS students at FAS are most often conducted as parts of ongoing projects led by supervisors, of which one must belong to AUI. These projects are therefore most often of importance for furthering the overall goal of the Faculty. The large size (60 ECTS) of the individual, research-based MS projects makes them heavily research oriented, and with FAS being the only institution in Iceland actively carrying out research in agricultural studies, these projects become an important part of research and development in Icelandic agriculture.

Now there is no formal requirement for publication of the results of MS theses as scientific papers, but this should be encouraged, when possible, as it is beneficial for the student, the supervisor(s), and the Faculty as a whole.

2.5.7 Actions – Coordination between Teaching and Research

	Action	Deliverable	Deadline	Responsible party
Ch. 2.1.3	Coordination between Teaching and Research			
1	Encourage students to write MS thesis in English to promote their research.	MS thesis in English	October 2021.	Graduate Studies Committee, MS supervisors
2	Encourage publication of results of MS studies as peer-reviewed articles.	At least one published paper from each MS thesis.	Within one year after graduation.	Graduate Studies Committee, MS supervisors

2.4 PhD in Agricultural Sciences and Equine Sciences (600025 180 ECTS)

2.4.1 Students

There are four students enrolled in PhD Programmes in Agricultural Sciences and Equine Science, two of them started in 2020. The last PhD student who graduated in Agricultural Sciences was in 2014.

One student representative from graduate students at the PhD level actively participates in the Graduate Studies Committee of AUI. Some of the PhD students are staff members at the Faculty and can attend and have voting rights at the Faculty meetings, but currently, there is no specific student representative for PhD studies at the faculty meetings.

Teaching and course evaluations, as for the undergraduate courses, are taken online at the end of each course. PhD student participation in these surveys is understandably low. There is no formal orientation for new PhD students at AUI. The level of orientation depends on the project at hand and the associated advisor. In general, PhD students at AUI work on independent research projects. The main communication platform for graduate students is the 2-ECTS mandatory graduate student seminar, where students meet either in person or online once per semester and present their research and progress. The seminar is also a venue to bring forward information on programme structure, available courses, study exchange programmes, funding opportunities, student counselling and other services available within the university.

Currently, there is no student association for graduate students available within AUI. A new student-led initiative, in the format of weekly informal online meetings, where all PhD students are invited, started in early 2021. The AUI PhD Programmes are operated according to rules confirmed by the AUI University Council (http://www.lbhi.is/rules_regulations).

2.4.2 Actions – PhD students

	Action	Deliverable	Deadline	Responsible party
Ch 2.1.1	PhD students			
1	Formalise orientation programme for new PhD students.	Organised orientation schedule.	August 2021.	Graduate Studies Committee, PhD supervisors
2	Participation of PhD students in Faculty and committee meetings.	At least one student	December 2021.	Head of Faculty, Graduate Studies Committee.







		representative present.		
3	Increase funding applications involving PhD students.	Research projects including PhD students.	December 2021.	The academic Faculty.
4	Establish support for a graduate student association.	Graduate student association.	October 2022.	Graduate Studies Committee, graduate students.

2.4.3 Teaching and Learning

The PhD programme is primarily based on the independent research of the doctoral candidate, culminating in the dissertation. Entrance requirements are a research-based MS degree or a comparable qualification, or alternatively a BS degree, usually completed with a minimum average grade of 7.0. The scope of the research project shall be 150 ECTS units and 30 ECTS in courses (**Table 17**). Doctoral studies are governed by special Faculty regulations which are currently under review. The thesis must be defended openly for the public and can cover a wide variety of research topics linked to the programme in question. The official language of instruction for graduate-level courses is English.

A new system, PhD portal, for monitoring the progress of PhD studies was implemented in the fall of 2020.

Table 17. Structure of the PhD Programme in Agricultural Sciences and Equine Sciences

600025 PhD studies Agricultural Science and Equine Science, Ph.D. (Courses in 2021-2022)	
First year	
Fall	Spring
	07.12.01 Graduate student seminars I   1e
Second year	
Fall	Spring
	08.12.01 Graduate student seminars II   1e
Third year	
Fall	Spring
	09.12.01 Graduate student seminars III (PhD)   1e

The courses offered to graduate students use a variety of teaching methods. For instance, in the mandatory courses, students actively participate in classes presenting their work orally or in written form, attend lectures and have individual assignments. Assessment of the courses is also diverse. At AUI, most courses at the graduate level do not have a final exam but rely on assignments and active participation in class as a main tool for assessment. Written assignments and presentations, as individual or group work, are also common.

2.4.4 Actions – Teaching and Learning

	Action	Deliverable	Deadline	Responsible party
Ch. 2.1.2	Teaching and Learning			
1	Review regulations for PhD studies at AUI.	Updated regulations for PhD studies.	May 2022.	Graduate Studies Coordinator.
2	Clarify better obligations and limits for supervision work of academic staff.	Update of the AUI rules for supervision of graduate students.	May 2023.	Graduate Studies Committee.
3	Start supervisor training at AUI and make it mandatory for all academic positions.	Set up a formal training course.	August 2023.	Head of Faculty, Human Resources and Quality Manager

2.4.5 Coordination between Teaching and Research

The research projects developed by PhD students are conducted in close collaboration with supervisors at AUI and from other institutions. Students are trained in research topics that are being developed within FAS. Currently, the requirement for PhD theses to be eligible for defence is to have one paper published, one submitted to a scientific journal and one in manuscript form. Ideally, this should be followed up by the supervisors and students to ensure that at least three scientific articles are published after completion of the programme.

2.4.6 Actions – Coordination between Teaching and Research

	Action	Deliverable	Deadline	Responsible party
Ch. 2.1.3	Coordination between Teaching and Research			
1	Encourage publication of results of PhD studies as peer-reviewed articles.	At least three published papers one year after finishing PhD.	October 2021.	PhD supervisors, PhD students

2.4.6 Conclusions

The number of PhD students has been low ever since the PhD Programme was initiated at AUI. It is important for FAS to strengthen its PhD programmes and to increase the student numbers, but this must go hand in hand with an increase in the number of academic positions and funding. The new 25% administrative position at the Office of Teaching and Learning for the graduate students in 2021 was a timely step in that direction.

3 Summary and Main Conclusions for the Faculty

3.1 Lessons Learned from QEF1

This report is the first evaluation of the FAS since it was established in January 2020. The QEF1, although it was conducted for a different organisational unit, provides a solid starting point for this assessment. Many of the points raised in the QEF1 for the whole university have been addressed within FAS, for example in terms of research productivity and internationalisation.

The present assessment has provided a good exercise of self-reflection and will serve as a reference point for the development of FAS in the future. FAS has in its first year of existence almost completed a coherent strategy and priorities for teaching and research, as well as a recruitment policy that allows the Faculty to grow and develop. This self-review has made evident some areas that need improvement and others of which we can be proud.

3.2 Teaching and Learning

Teaching and learning within FAS provide good opportunities for students, as indicated by the exceptionally high retention rates of undergraduate programmes (students who continue after first year of study), 100% for the last four years for the Agricultural Sciences BS, and 95% for the Equine Sciences BS, despite the high intake rate (proportion of applications accepted), which is between 82% and 94%. Although the completion rates are low, only 42% on average over a four-year period, this is partly explained by a considerable part of the students taking the programmes as part-time occupation and many through distance learning, which poses several challenges for students. Students are generally satisfied, but the system for evaluation of courses should be improved, both to increase student participation and to ensure follow-up measures. The number of students in the Agricultural Sciences BS is reasonable, at least considering the number of full-time staff at the faculty. The emphasis should rather be on increased completion rates.

3.3 Management of Research

The research productivity in FAS is low measured in peer-reviewed papers, despite the faculty being responsible for research in important fields not attended to by any other institute in Iceland. This problem is best explained by the lack of full-time academic employees, but since the formation of AUI in 2005, the number of full-time academic staff has steadily decreased, leading to erosion of expertise in disciplines within agricultural sciences. A lot of Faculties' time is spent on a variety of information services for industry and the government in addition to carrying out various applied research projects. FAS urgently needs to develop its recruitment and research strategy as well as priorities for research with a forward-looking plan to prioritise areas of special importance for the unique aspects of Icelandic agriculture. Setting some specific targets and goals that are measurable will help in tracking progress and measuring the impact of FAS (e.g., number and quality of publications, research points in the

University evaluation system, graduated MS and PhD students, post-docs employed). The Faculty needs to develop measures to track impact on societal needs.

3.3.1 Action Plan for Management of Research

	Action	Deliverable	Deadline	Responsible party
Ch. 3.2	Management of Research			
1	Compile a forward-looking plan to prioritise areas of special importance for the unique aspects of Icelandic agriculture.	Research strategy for FAS.	November 2021.	Head of Faculty and the Faculty Board.
2	Analyse the lack of human resources within FAS based on the developed researched strategy for FAS.	Recruitment plan for FAS.	November 2021.	Head of Faculty and the Faculty Board.

3.4 Follow-up Processes

The implementation of the Action Plan will be a standing item on Faculty meetings. As well, the Head of the Faculty will report formally to the rector on the status of the implementation and plans for the following year, no later than December 1 of each year. This will be followed up at the Executive Board of AUI. The Heads of faculties will submit their reports to the Quality Committee of AUI no later than March 15. The Quality Committee will draft a short report to the rector no later than April 1, which will subsequently be discussed in a meeting between the Quality Committee, the Rector, and the Heads of the faculties.

