Royal Agricultural University

Programme Specification

MSc Sustainable Agriculture and Food Security

1) Programme Information

Quercus code	SAFS
Valid entry routes	MSc Sustainable Agriculture and Food Security MSc Sustainable Agriculture and Food Security with Placement Year
Additional exit routes	A Pg Diploma can be obtained by accumulating 120 credits through successful completion of 8 taught modules without the dissertation. A Pg Certificate can be obtained by accumulating 60 credits through successful completion of any 4 taught core modules.
Location(s) of Study	Royal Agricultural University, Cirencester Campus with some visits or case study demonstrations off site.
School	Agriculture, Food and Environment
Programme Manager	Nicola Cannon
Awarding Body	The Royal Agricultural University
Teaching Institution	The Royal Agricultural University
Academic level on Framework for Higher Education Qualifications (FHEQ)	Level 7
Admissions Body	The Royal Agricultural University
UCAS code(s)	

Students who enrol on the variant of the Programme with Placement Year follow the same programme as other student but there is an additional requirement to complete the 60 credit PGPPY, information specifically for those students is included within this document but annotated with: **'PY'**

Entry Criteria (include IELTS if relevant)	Honours degree at upper second level. Mature candidates with significant relevant work experience and lower academic qualifications may also be considered for entry, following interview with the course manager. IELTS: For students whose first language is not English, the University will accept International English Language Test (IELTS) with a minimum score of 6.5 average with no element below 5.5. Students with other qualifications, including overseas awards and alternative English language qualifications, are advised to contact Admissions to discuss the suitability of their award.
Relevant QAA Subject Benchmark Statement(s) and other reference points, e.g. FD qualification benchmark	Detail which reference points have been used to inform programme development Subject Benchmark Statement Agriculture, Horticulture, Forestry, Food, Nutrition and Consumer Sciences October 2019 Characteristics Statement Master's Degree February 2020
Details of accreditation by a Professional, Statutory and Regulatory Body (PSRB)	Name of PSRB and give details of accreditation period. none
Mode of delivery	Full-time, part-time ~~and distance learning/online~~
Language of study	English
Programme Start Month(s)	September and January
Academic Board approval date	30 July 2021
Valid from	September 2021-August 2028

For Registry use only

Valid to	August 2028
Version	V.1

2) What are the aims and objectives of the programme?

Introduction:

Food security has risen-up the global agenda since the COVID-19 pandemic as many people experienced the fragility of food supply chains and the devastating environmental, social and economic impacts of the crisis. The FAO[1] (2020)

highlighted the interconnected nature of agriculture, people, animals, plants and their shared environment and highlight the necessary strengthening required to improve the resilience of food systems to withstand other disease outbreaks and shocks.

This Master's programme specifically addresses sustainable agriculture and food security globally and is equally relevant to UK and overseas graduates; to those looking for intensive solutions or local, low tech solutions to food production. It is also of relevance to public administrations, international aid/funding agencies, and business sectors. The programme attracts students from a wide range of nationalities, backgrounds, previous experiences and age ranges. The diversity of the participants is an important dynamic in this programme and will play a key role in discussing and addressing the Sustainable Development Goals (SDG) related to food and farming globally with the aim or rethinking agricultural and food systems to improve livelihoods and protect the environment.

The aims and objectives of the programme are to support the RAU's: **Vision**, *A world where all communities thrive in harmony with nature*; **Mission**, *Equipping a new generation to thrive through change*; and **Purpose**, *To cultivate care for the land and all who depend on it*. The MSc Sustainable Agriculture and Food Security (SAFS) programme benefits from research-led teaching from key members of the following RAU's research groups: S*ustainable and regenerative agriculture, Livestock health and welfare, Food safety, quality and security, Environment and soil health.*

Programme Aim:

The aim of the programme is-

'To enable participants to gain the specialised knowledge, understanding, skills and attitudes necessary to contribute effectively and ethically to strategic decision making, opinion forming and operational management for the development of sustainable agriculture and food supply systems in both developed and developing regions'

With specific themes in:

- Human exploitation of the Earth's resources for food production and the global and local implications of human development.
- The ecological basis for resource utilisation allied to wider environmental and landscape considerations of food production and supply
- The role and function of institutional structures in relation to development, resource exploitation, social, cultural, ethical and inter-generation considerations.
- The application of development paradigms models and tools to build capacity within communities, institutions and individuals.

The programme explores five key challenges, namely:

1. Balancing future demand and supply sustainably.

2. Ensuring that there is adequate stability in food supplies – and protecting the most vulnerable from the volatility that does occur.

3. Achieving global access to food and ending hunger. This recognises that producing enough food in the world so that everyone can *potentially* be fed is not the same thing as ensuring food security for all.

4. Managing the contribution of the food production to the mitigation of climate change.

5. Maintaining biodiversity and ecosystem services while feeding the world.

By focusing on sustainable resource management within the agricultural sector, students will explore a series of food-producing strategies, including large-scale conventional agriculture, organic farming, small-scale production and linkage with policy and development. The programme allows students to specialise through electives in innovative and technological solutions or methods that are more traditional.

Outline of how core and elective modules address the Sustainable Development Goals (solid ticks mean fully met, grey shaded tick is partially met)

		Core						Either/or		**3 of these electives**									
		4038a	4727	4201	4409	4250	4413	4414	4415	4723	4203	4230	4278	4236	4234	4235	4262	4236	Overall
	Sustainable Development Goals	Integrated agricultural systems	Managing global soils in a changing climate	Poverty and food security	Facing the global challenges in food and agriculture	International rural development	Research skills	Dissertation	Applied project	Climate change and sustainability	Small scale farming and local food supply	Environmental science in agriculture	Organic systems	Crop production technology and innovation	Livestock production technology and innovation	Environmental technology and innovation	Sustainable Business Strategies	Entrepreneurship and business planning	Box ticked if SDG met
SDG1	No poverty	✓		✓	✓	✓		Depends on choice of research topic			✓				✓		✓		✓
SDG2	Zero hunger	✓	✓	✓	✓	✓				✓	✓	✓		✓	✓	✓			✓
SDG3	Good health and well-being	✓	✓	✓	✓					✓	✓	✓	✓		✓				✓
SDG4	Quality education	✓		✓	✓												✓		✓
SDG5	Gender equality	✓		✓	✓	✓								✓	✓		✓		✓
SDG6	Clean water and sanitation	✓	✓	✓	✓					✓		✓			✓	✓			✓
SDG7	Affordable and clean energy			✓	✓						✓			✓	✓	✓			✓
SDG8	Decent work and economic growth	✓		✓	✓	✓					✓		✓	✓	✓	✓	✓	✓	✓
SDG9	Industry, innovation and infrastructure			✓	✓	✓							✓	✓	✓	✓	✓	✓	✓
SDG10	Reduced inequalities				✓						✓			✓	✓	✓	✓		✓
SDG11	Sustainable cities and communities		✓		✓					✓	✓	✓	✓	✓		✓	✓		✓

SDG12	Responsible consumption and production	✔	✔		✔	✔			✔	✔	✔	✔		✔	✔	✔	✔	✔
SDG13	Climate action		✔	✔	✔				✔	✔	✔	✔	✔	✔	✔			✔
SDG14	Life below water	✔		✔	✔								✔		✔			✔
SDG15	Life on land	✔	✔	✔	✔				✔	✔	✔	✔	✔	✔	✔	✔		✔
SDG16	Peace, justice and strong institutions			✔	✔							✔						✔
SDG17	Partnerships for the goals	✔		✔	✔					✔				✔		✔		✔

3) What opportunities are graduates likely to have on completing the programme?

The global focus of this programme addresses the United Nations SDG and thereby leaves the graduates prepared for a wide range of careers in the private sector or for national Governments or Non-Governmental Organisations (NGOs) including trade associations. The graduates will be equipped to work in international, national, regional or local based roles. The skills gained throughout the programme will equip graduates for working in policy, advisory, food chain, management, retail, production, research, educational services or for further study in the higher education sector.

4) What should students expect to achieve in completing the programme?

Programme Intended Learning Outcomes

A. Knowledge and understanding

1. The ability to critically evaluate the principles of agricultural production for both large- and small-scale systems.
2. Critically evaluate issues of sustainable development considering people, place and planet.
3. Appraising the complex issues of sustainable management of natural resources.
4. Decipher and evaluate the impacts of climate science and change on agricultural systems and food supply.
5. Determine factors influencing the provision of food quality, supply and security.
6. Ascertain and evaluate the processes of policy formulation in agriculture and food production.

B. Intellectual, Professional, Key skills

7. To lead and manage time and resources appropriately in both individual and team situations to enable successful project delivery.
8. Develop lifelong skills which enable the synthesise and analyse of data and information from a wide range of sources to support and evaluate solutions to complex practical problems and policy challenges.
9. Evaluating, citing and referencing sources of data and information with academic integrity in an appropriate manner whilst ensuring the avoidance of plagiarism.
10. Ability to critically and creatively think, design and analyse an investigation to test a hypothesis. collect appropriate results, analyse data and present conclusions using a variety of methods.
11. To develop and recognise leadership skills to critically analyse situations for addressing diverse organisational, business and social issues.

C. Programme Specific Skills

12. Appreciate the role of self-reflection and critical analysis in one's own and others personal attributes for a range of situations including resilience, open-mindedness, reflection, ethical consideration, motivation, professional behaviours, and employability.
13. To understand and evaluate complex information analysis to influence decisions and policy within a range of political, economic, and social systems and institutions for strategic decision making.
14. To appraise and develop project management solutions for sustainable agricultural and food assessments by effectively and creatively analysing and reporting of results and findings.
15. To effectively communicate through a variety of mediums on food and agricultural topics to a wide range of audiences.

5) How is the Teaching and Learning delivered in this programme?

The format of the programme is a mixture of residential learning and blended learning approaches supported by a range of learning materials and activities presented on the RAU VLE. The programme is available over 1-year full time or 2 years part-time. There are two entry point, the start of semester 1 (September) and the start of semester 2 (January).

A Pg Diploma can be obtained by accumulating 120 credits through successful completion of 8 taught modules without the dissertation.

A Pg Certificate can be obtained by accumulating 60 credits through successful completion of any 4 taught core modules.

The delivery is through a combination of lectures, seminars, speakers, case studies, workshops and with activities presented through the Virtual Learning Environment (VLE) which is also used to host other supporting material including videos, webinars, quizzes, podcasts and other relevant presentations.

Teaching will include group discussions, tutorials, facilitated discussions, workshops, guided independent study and a research project. Assessment will be a balance between individual and group work and will consist of a range of critical reports, written examinations, poster presentations, sustainability plans, policy summaries, oral presentations, critical reflections and dissertation / applied project.

Each module is supported by a comprehensive resource list that is maintained through the RAU Library Talis system.

Study support for overseas students and those who have been out of education for a while:

The Induction Week programmes for both September and January starters provide sessions focusing on what to expect and what is expected from the student when

studying at Masters level at the Royal Agricultural University. Students are also inducted to IT services, the library, health care, Student Support Services and the Students Union during this time and introduced to key figures so they know where and how they can gain extra support if required. Student Support Services provide a series of study skills sessions to support international students in transitioning to the UK and the conventions of UK HE. This provision continues throughout the duration of their study at the RAU: students may request support such as proofreading, module brief interpretation, help with academic writing skills, dyslexia and disability support as well as any kind of pastoral support. Additionally, the International Orientation takes place immediately prior to Induction Week every September for students who feel they would benefit from learning more about the country, it traditions, heritage and culture prior to commencing their study. This ten-day residential programme is open to all UG and PG international students arriving to study at the RAU for the first time, and focuses on integrating students from across the globe joining a variety of programmes, in order to build community and enhance Inclusivity, Equality and Diversity in this small, specialist institution.

SAFS starting dates:

The MSc SAFS offers two starting date options which both lead to the same outcome. The pathways are defined below:

September starter SAFS pathway:

Time Line	Sem 1	September starters	Sem	Mod leader
Sept to Jan	4038a	Integrated agricultural systems	1	NC
	4201	Poverty and food security	1	PH
	4250	International rural development	1	TBC
	4413	Research skills	1	TBC
		Plus ONE from:		
	4724	Environmental science in agriculture	1	PS
	44728	Organic systems	1	JS
	4723	Crop production technology and innovation	1	AH
	4724	Environmental technology and innovation	1	HW
	4263	Entrepreneurship and business planning	1	MD
	4262	Sustainable Business Strategy	1	IH

	Sem 2			
Jan to May	4727	Managing global soils in a changing climate	2	PS
	4409	Facing the global challenges in food and agriculture	2	PH
		Plus TWO from:		
	4723	Climate change and sustainability	2	PS
	4203	Small scale farming and local food supply	2	JC
	4726	Livestock production technology and innovation	2	CB
Hand in 30 Sept	4414	Dissertation (45 credits)		
	4415	Applied project (45 credits)		

January starter SAFS pathway:

Time Line	**Sem 2**	**January starters**	**Sem**	**Mod leader**
Jan to May	4038b	Integrated agricultural systems	1	NC
	4727	Managing global soils in a changing climate	2	PS
	4409	Facing the global challenges in food and agriculture	2	PH
	4413	Research skills	1	TBC
		Plus ONE from:		
	4723	Climate change and sustainability	2	PS
	4203	Small scale farming and local food supply	2	JC
	4726	Livestock production technology and innovation	2	CB
		BREAK		
	Sem 1			
Sept to Jan	4201	Poverty and food security	1	PH
	4250	International rural development	1	TBC
		Plus TWO from:		
	4724	Environmental science in agriculture	1	PS
	4728	Organic systems	1	JS
	4723	Crop production technology and innovation*	1	AH
	4724	Environmental technology and innovation	1	HW
	4263	Entrepreneurship and business planning	1	MD
	4262	Sustainable Business Strategy	1	IH
Hand in 31 March	4414	Dissertation (45 credits)		
	4415	Applied project (45 credits)		
Time Line	**Sem 2**	**January starters**	**em**	**Mod leader**
Jan to May	4038b	Integrated agricultural systems	1	NC
	4727	Managing global soils in a changing climate	2	PS
	4409	Facing the global challenges in food and agriculture	2	PH
	4413	Research skills	1	TBC

		Plus ONE from:		
	4723	Climate change and sustainability	2	PS
	4203	Small scale farming and local food supply	2	JC
	4726	Livestock production technology and innovation	2	CB
		BREAK		
	Sem 1			
Sept to Jan	4201	Poverty and food security	1	PH
	4250	International rural development	1	TBC
		Plus TWO from:		
	4724	Environmental science in agriculture	1	PS
	4278	Organic systems	1	JS
	4723	Crop production technology and innovation*	1	AH
	4724	Environmental technology and innovation	1	HW
	4263	Entrepreneurship and business planning	1	MD
	4262	Sustainable Business Strategy	1	IH
Hand in 31 March	4414	Dissertation (45 credits)		
	4415	Applied project (45 credits)		

To ensure that students enrolling in both January and September can benefit from the same diversity of electives, students will be given the opportunity to study, but not be assessed in, an extra elective during either semester if they choose to.

6) What is the Programme Assessment Strategy[1]?

The programme has been designed to offer a range of assessment methods which consist of individual and group work, exams and coursework. There is a diversity in the range of assessments to be completed from reports, policy briefs, critical appraisals,

	Module code	Assessment 1	%	Assessment 2	%
Integrated Ag Systems	4038a	Group case study	50	2 hour unseen exam	50
Managing global soils in a changing climate	4727	Individual report	100		
Poverty and food security	4201	Written policy brief	50	Presentation	50
Facing the global challenges in food and agriculture	4409	Critical policy analysis	100		
International rural development	4250	Competitive Tender Part 1 (individual)	30	Competitive Tender Part 2 (group)	70

[1] Details of the implementation of the Assessment Strategy are found in Annual Programme Overview [Annex A].

Research skills	4413	Research proposal	50	Reflective piece	50
Dissertation (45 credits)	Either 4414	Dissertation	100		
Applied project (45 credits)	Or 4415	Applied project	100		
Postgraduate Professional Placement Year PY	PGPPY	Portfolio	100		
Electives					
Plus 3 from:					
Climate change and sustainability	4722	Coursework report	100		
Small scale farming and local food supply	4203	Report on policy development	60	2 hour unseen exam	40
Environmental science in agriculture	4724	Report	100		
Organic systems	4278	Critical review essay	60	Product review poster	40
Crop production technology and innovation	4723	Critical evaluation report	70	Presentation	30
Livestock production technology and innovation	4726	Technical report	80	Exam	20
Environmental technology and innovation	4725	Technical report	70	Academic poster	30
Sustainable business strategy	4262	Critical essay	100		
Entrepreneurship and business planning	4263	Individual pitch	40	Business plan	60

7) What do students need to achieve in order to graduate?

Notwithstanding University Regulations and the authorities and powers exercised by examiners, students will normally need to demonstrate achievement in the elements of the programme, as laid out in Section 7. Programmes are structured through the accumulation of credit, where 1 credit represents 10 notional learning hours.

In brief, students will normally need to achieve the following in order to be awarded the qualifications:

MSc Sustainable Agriculture and Food Security

The accumulation of 180 credits (or more) to include a minimum of 150 at level 7 (of which at least 60 must be achieved from research focused modules: either a Masters dissertation or agreed equivalent research-based project or a combination of a research methods module and a Masters dissertation or agreed equivalent research-based project) and a maximum of 30 at level 6, through the assessment of programme elements as detailed below:

	Description	Credits
	Core	
4038a	Integrated agricultural systems	15
4727	Managing global soils in a changing climate	15
4201	Poverty and food security	15
4409	Facing the global challenges in food and agriculture	15
4250	International rural development	15
4413	Research skills	15
Either 4414	Dissertation (45 credits)	45
Or 4415	Applied project (45 credits)	45
	Plus 3 electives from:	
4722	Climate change and sustainability	15
4203	Small scale farming and local food supply	15
4230	Environmental science in agriculture	15
4278	Organic systems	15
4723	Crop production technology and innovation	15
4726	Livestock production technology and innovation	15
4725	Environmental technology and innovation	15
4262	Sustainable management strategy	15
4263	Entrepreneurship and business planning	15
	Total credits	**180**

MSc Sustainable Agriculture and Food Security with Placement Year

The accumulation of 240 credits (or more) to include a minimum of 150 at level 7 (of which at least 60 must be achieved from research focused modules: either Masters dissertation or agreed equivalent research-based project or a combination of a research methods module and a Masters dissertation or agreed relevant research-based project).

	Description	Credits
	Core	
4038a	Integrated agricultural systems	15
4727	Managing global soils in a changing climate	15
4201	Poverty and food security	15
4409	Facing the global challenges in food and agriculture	15
4250	International rural development	15
4413	Research skills	15
Either 4414	Dissertation (45 credits)	45
Or 4415	Applied project (45 credits)	45
PGPPY	*Postgraduate Professional Placement Year*	60
	Plus 3 electives from:	
4722	Climate change and sustainability	15
4203	Small scale farming and local food supply	15
4724	Environmental science in agriculture	15
44278	Organic systems	15

4723	Crop production technology and innovation	15
4726	Livestock production technology and innovation	15
4725	Environmental technology and innovation	15
4262	Sustainable business strategy	15
4263	Entrepreneurship and business planning	15
	Total credits	**180**

If a student does not meet the required standards for the award, the examiners for the programme may decide to offer a lower award associated with the programme, providing that a lower exit award exists and the student meets the requirements of that lower award.

Pass Criteria

The University operates standard pass criteria which can be found in the RAU Academic Regulations; (paragraphs 137 – 153).

Programme Intended Learning Outcomes (ILO) Chart MSc Sustainable Agriculture and Food Security

Title of Award: MSc Sustainable Agriculture and Food Security

		Knowledge and understanding							Intellectual/Professional/Key Skills					Programme Specific Skills			
	Module code	**1**	**2**	**3**	**4**	**5**	**6**	**SDG**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Integrated Ag Systems	4038a/b	GCW						CW/EX	EX		GCW		GCW		GCW		
Managing global soils in a changing climate	4727			CW	CW			CW		CW						CW	
Poverty and food security	4201					CW		CW						CW			CW
Facing the global challenges in food and agriculture	4409						CW	CW				CW		CW	CW		
International rural development	4250		GCW					CW	GCW							GCW	GCW
Research skills	4413							*		CW	CW	CW			CW	CW	
Dissertation (45 credits)	Either 4414							*		CW	CW	CW			CW	CW	
Applied project (45 credits)	Or 4415							*		CW	CW	CW			CW	CW	
Electives																	
Plus 3 from:																	
Climate change and sustainability	4722		CW		CW			CW	CW		CW			CW			
Small scale farming and local food supply	4203		CW					CW			CW			CW			
Environmental science in agriculture	4724			CW				CW									
Organic systems	4278	CW				CW		CW		CW	CW						CW
Crop production technology and innovation	4723	CW						CW		CW							CW
Livestock production technology and innovation	4726	CW						CW, EX	EX		CW				CW		
Environmental technology and innovation	4725			CW			CW	CW									CW

Sustainable business strategy	4262		CW					CW	CW	CW	CW			CW			CW
Entrepreneurship and business planning	4263		CW					CW	CW	CW			CW		CW	CW	

KEY:

CW- Coursework

GCW- Group coursework

*- Dependant on research topic selected

8) Work-based Learning

Those who enrol on the Placement Year variant of the programme are required to undertake the 60 credit, Level 7, Postgraduate Professional Placement Year module. This is designed to enable students to complete a relevant enhanced work placement experience to help form future career choices and to provide the opportunity to acquire relevant skills sets sought by employers through engaging in various aspects of the chosen industry from an operational to practical working setting. The module spans an entire academic year and is taken after completing the taught element of the programme at L7, before embarking on the dissertation.

9) How will the University assure the quality of the provision?

New programme proposals are reviewed by a Validation Panel, comprising at least the following membership: normally one subject matter expert external to the School or University, at least 3 academic staff not associated with the proposal. The Panel may include 1 member of professional staff. Panels are supported by an appropriately trained Secretary who acts as advisor to the Panel. Proposals are reviewed in line with the QAA's UK Quality Code, Advice and Guidance: Course Design And Development and in the case of partnership arrangements in accordance with QAA's Advice And Guidance: Partnerships. All programmes are ultimately approved by Academic Board for a period of up to 6 years.

Programme changes within a validation period are approved by the Academic Quality and Standards Committee (AQSC) on behalf of Academic Board. No more than 1/3 of a programme's core modules may be changed within the validation period before early programme revalidation is instigated.

The University has in place regular monitoring procedures for quality assurance including an Annual Programme Managers Report for each programme.

Each programme has at least one External Examiner who monitors all aspects of the assessment process. This is in line with the advice and guidance provided by the QAA regarding External Expertise which emphasises that external examining is one of the principles means for maintaining UK threshold academic standards within autonomous higher education institutions.

Each programme has a formally constituted Programme Board, which includes the External Examiner(s), and which is responsible for ensuring that awards are made within the Regulations of the University and that students are made awards on the basis of meeting the specified Learning Outcomes of a programme at the appropriate standard.

Each programme has a Programme Committee which meets at least twice a year to discuss, inter alia, programme design and planning, the student experience (including feedback) and student progress.

Each School has a School Advisory Group (or similar) which meets at least once a year to engage with external stakeholders on curriculum design and currency of the School programme portfolio content.

Student feedback both qualitative and quantitative is collected for each module studied. In addition, the University's holds Staff Student Liaison Committees and a Student Engagement Committee where students have the opportunity to discuss issues, give, and receive feedback. Students are also invited to participate in the University's New Student Survey and Student Satisfaction Survey along with the annual National Student Survey. The results of all feedback are considered by the Programme Committee and additionally, in respect of the University and national surveys, issues of quality are considered by and acted on where appropriate by AQSC, Academic Board, School and University Executives.