



**SOUTH EASTERN KENYA UNIVERSITY**

**SCHOOL OF AGRICULTURE ENVIRONMENT WATER AND NATURAL  
RESOURCES**

**DEPARTMENT OF AGRICULTURAL SCIENCES**

**REGULATIONS FOR THE DEGREE OF MASTER OF SCIENCE IN FOOD VALUE  
CHAIN MANAGEMENT**

**AUGUST 2024**

**Approved:**

**Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Vice Chancellor**

**Date:** \_\_\_\_\_

## TABLE OF CONTENTS

1.0	GENERAL INFORMATION .....	5
1.1	Vision and Mission .....	5
1.2	Philosophy.....	5
1.3	University Admission Requirements .....	5
1.3.1	<b>Minimum Entry Requirements for a Master of Science degree</b> .....	5
1.3.2	<b>Other admission requirements</b> .....	6
1.3.3	Procedure of Application for Admission to the University.....	6
1.4	Academic Resources .....	6
1.4.1	Facilities and equipment .....	6
1.4.2	Reference materials.....	<b>Error! Bookmark not defined.</b>
1.4.3	Academic staff .....	10
1.5	Programs .....	<b>Error! Bookmark not defined.</b>
1.5.1	Programs offered in South Eastern Kenya University .....	<b>Error! Bookmark not defined.</b>
1.5.2	Duration of programs offered .....	<b>Error! Bookmark not defined.</b>
1.5.3	Definitions of Terms in the Units .....	16
1.5.4	Academic Organization of the Programs .....	<b>Error! Bookmark not defined.</b>
2.0	The Curriculum .....	17
2.1	Title of the Program .....	17
2.2	Philosophy of Program .....	17
2.3	Rationale and justification of the proposed Program.....	17
2.3.1	Needs assessment/market survey/situational analysis.....	17
2.3.2	Stakeholder involvement.....	18
2.3.3	Justification for the program .....	18
2.4	Goal of the Program.....	19
2.5	Expected Learning Outcomes .....	19
2.6	Mode of delivery of the program .....	19
2.7	Academic Regulation for Masters of Science in Food Value Chain.....	19
2.7.1	Admission requirements for the program .....	19
2.7.2	Regulation on credit transfer .....	20
2.7.3	Course requirements .....	20
2.7.4	Student Assessment Policy/Criteria .....	21

<b>2.7.5</b>	<b>Grading System</b> .....	21
<b>2.7.6</b>	<b>Examination Regulations</b> .....	21
<b>2.7.6.1</b>	<b>Written examinations (Part I)</b> .....	21
<b>2.7.6.2</b>	<b>Thesis or research project Examination (Part II)</b> .....	23
<b>2.7.6.3</b>	<b>Award of degree</b> .....	23
<b>2.7.6.4</b>	<b>Examination Irregularities</b> .....	23
2.7.6.5	Conduct of studies and supervision .....	23
2.7.6.5.1	Students Rights responsibilities and Obligations .....	23
2.7.6.5.2	Appointment of Supervisors .....	24
2.7.6.5.3	Role and responsibilities of Supervisors .....	24
2.7.6.5.4	Role and responsibilities of Dean .....	25
2.7.6.5.5	Role and responsibilities of the Director of the Board of Postgraduate Studies .....	25
2.7.6.5.6	Conditions for Change of Registration Status .....	25
<b>2.7.6.5.7</b>	<b>Submission and evaluation of candidates' progress reports</b> .....	26
2.7.6.5.8	Conditions for change of Supervisors .....	26
2.7.7	Moderation of Examinations .....	26
2.7.8	Graduation requirements .....	27
2.7.9	Classification of degree .....	27
2.7.10	Description of Thesis. ....	27
2.7.10.1	Definition, rationale, and facets .....	27
2.7.10.2	Regulation for Thesis .....	28
2.7.10.2.1	Allocation and selection of supervisors .....	29
2.7.10.2.2	Submission of Thesis .....	29
2.7.10.2.3	Selection of viva-voce panel .....	29
2.7.10.2.4	Conduct of thesis defense and Oral Examinations .....	29
2.7.10. 2.5	Re-examination of revised thesis .....	30
2.8.	Course Evaluation .....	30
2.9	Management and Administration of the Program .....	31
2.10	Courses/ Units offered for the Program. ....	31
2.11.1	A distribution table of course units' summary for the MSc program .....	31
2.11.2	A matrix of links between the course units and the programme learning outcomes .....	31
2.10.3	A list of the courses of the program .....	33
<b>2.11.</b>	<b>Duration and Structure of the Program</b> .....	34

3.0	COURSE DESCRIPTIONS.....	35
4.0	APPENDICES .....	55
4.1	Appendix I: Physical facilities .....	55
<b>4.2</b>	<b>Appendix II: Equipment and Teaching Materials.....</b>	<b>55</b>
4.3.	Appendix III: Core Textbooks .....	55
4.4	Appendix IV: Academic staff .....	55
<b>4.5</b>	<b>Appendix V: Technical/support staff.....</b>	<b>56</b>
<b>4.6</b>	<b>Appendix VI: SEKU/MR/OP/033: Procedure for programme development and review .....</b>	<b>57</b>
<b>4.7</b>	<b>Appendix VII: SEKU/MR/OP/ 082. Procedures for credit transfer .....</b>	<b>60</b>
<b>4.8</b>	<b>Appendix VIII: SEKU/MR/OP/ 083 Procedures for appeals on examination results 62</b>	
4.9	Appendix IX: Master of Science in Food Value Chain Situational Analysis.....	63
	Appendix V: SEKU/MR/OP/ 082. Procedures for credit transfer.....	64
	Appendix VI: Thesis marking Schedule .....	66

## **1.0 GENERAL INFORMATION OF SOUTH EASTERN KENYA UNIVERSITY**

### **1.1 Vision and Mission**

#### **Vision**

To be a globally competitive center of excellence in teaching, research, innovation and service

#### **Mission**

To provide quality education through teaching, research, extension, innovation and entrepreneurship with emphasis on agriculture, natural resources and environmental management.

### **1.2 Philosophy**

South Eastern Kenya University is transforming lives and improving the environment from arid to green through innovative teaching, research and community service.

### **1.3 University Admission Requirements**

#### **1.3.1 Minimum Entry Requirements for a Master of Science degree**

1. The following shall be eligible for registration for the master's degrees in the University:
  - a) Holder of a Bachelor's degree of the South Eastern Kenya University;
  - b) A candidate who has obtained a degree or an equivalent qualification from other institutions recognized by Senate as of comparable academic status;
  - c) Relevant academic Bachelor's degree holders from institutions recognized by SEKU Senate:
    - i. Upper second class honours or a cumulative Grade Point Average (GPA) of 3.00 on scale of 4.00;
    - ii. Lower second class honours or a cumulative Grade Point Average GPA) of 2.50 on scale of 4.00 with additional evidence of research capability either through research, paper presentation or peer reviewed publications and relevant two (2) years working experience.
  - d) Relevant postgraduate diploma.
2. In addition to producing evidence of eligibility for registration, candidates for the Masters degree may be required to appear for interview by the School concerned to determine their suitability for registration.

### **1.3.2 Other admission requirements**

3. Subject to the approval of Senate, Schools may formulate regulations requiring applicants to have attained such academic or equivalent qualifications as may be consistent with the goals of their masters programmes.

### **1.3.3 Procedure for application to the University**

The following steps are followed when admitting students for an academic programme:

- a. The Academic Registrar requests for programmes to be advertised from the Deans of schools and Directors.
- b. Upon approval by the Vice Chancellor, the Academic Registrar advertises the respective programmes.
- c. Interested applicants are issued with student application form – **SEKU/ARI/REG/005** upon payment of the required application fee.
- d. The completed application forms are submitted to the Academic Registrar.
- e. Applications are forwarded to respective schools for evaluation and short-listing.
- f. The recommendations of the schools are considered and approved by Dean's committee.
- g. The Admissions office prepares and issues letters of offer and Joining Instructions to applicants.
- h. Applications must be accompanied with a letter of recommendation
- i. The University Senate determines opening and closing dates for receiving applications.

## **1.4 Academic Resources**

These resources will be shared among other programmes in the University.

### **1.4.1 Facilities and equipment**

#### **a) Lecture Rooms**

The university has adequate lecture rooms and Laboratories which are well equipped with chairs, white boards, and are well-lit, ventilated and accessible by people living with disabilities. The lecturers use white board markers, erasers and projectors in lecturing. Podiums are provided for the lecturers.

#### **b) Library**

##### **i. Mandate and Policy**

The university has well-established library whose core mandate is to provide quality information resources and services that cater for various needs of all academic programme offered at the University. These resources are easily accessible to all the students and staff within the main and satellite campuses. The University Library operations and

management are guided by an approved Library Policy that incorporates the provisions of the Commission of University (CUE) Standards and Guidelines of 2014.

**ii. Staff**

All the libraries in the University are operated and managed by a team of highly skilled and experienced staff members who are knowledgeable in all aspects of Library Science and Information Technology. The academic qualifications of library staff range from Certificate to Master's Degrees. The staff are adequately deployed in all the service points. These dedicated professionals provide excellent support to all library users, ensuring that the diverse information needs of the users are met efficiently and effectively.

**iii. Resources and services**

The Library is fully automated and provides a range of information resources and services to cater to academic and research needs. It boasts a large collection of physical books covering all the courses taught at the University, and users have the privilege of borrowing them for a specified duration. To facilitate efficient resource discovery, the Library provides an Online Public Access Catalogue (OPAC) that allows users to search and locate information materials stocked in the library. Furthermore, the Library subscribes to a diverse range of electronic books and journals from reputable databases. These resources are accessible both on-campus and remotely through off-campus access, eliminating geographical barriers to knowledge acquisition and learning.

In line with the commitment to preserving and disseminating scholarly work, the library provides users access to archived scholarly publications generated by SEKU staff and students. Archived publications include journal articles, theses, and dissertations. To ensure originality in research and academic work, all research proposals, projects, theses, dissertations, and other research works are subjected to anti-plagiarism checks before acceptance.

For those in need of research facilities, the Library houses a Digital Library section which is equipped with internet-enabled computers for research and access to online library resources. Additionally, the Wi-Fi connectivity allows library users to stay connected using their personal devices such as laptops and smartphones. Moreover, the Library conducts regular information literacy training, covering topics like e-resources access, institutional repository usage, catalog search, and citation tools, as a way of empowering lifelong learning among users.

In addition to academic resources, the Library provides access to e-Newspapers from major newspaper publishers in Kenya, ensuring that users are up-to-date with the latest news and current events. Lastly, the Library extends personalized assistance through the "Ask a Librarian" service. Users can easily reach out the library for inquiries or guidance on research and information needs.

The current subscriptions of electronic resources are as shown in the table 1 below.

**Table 1. Current university subscriptions of electronic resources.**

No.	Database	E-Journal Articles	E-Books	Book Chapter	Total
<b>Electronic Journal Databases</b>					
1.	AGORA	61,000,000	106,000	1,300,000	62,406,000
2.	<u>American Physical Society</u>	461,511			461,511
3.	<u>Cambridge University Press Journals</u>	1,800,000	46,347		1,846,347
4.	Duke University Press	81,717			81,717
5.	<u>EBSCOHOST</u>	14,339,066			14,339,066
6.	Emerald Journals	374,945		50,162	425,107
7.	European Respiratory Journal	60,711			60,711
8.	Geological Society	33,989			33,989
9.	Henry Stewart Talks Ltd	5,937 (lectures)			5,937
10.	<u>HINARI</u>	13,817,975	106,000	1,300,000	15,223,975
11.	IEEE	228,813	7,888		236,701
12.	International Water Association	41,572	785	2,909	45,266
13.	<u>JSTOR</u>	2,781,949		25,797	2,807,746
14.	<u>Mary Ann Liebert</u>	16,4591			164,591
15.	Mathematical Sciences Publishers	254, 987			254, 987
16.	<u>Online Access to Research in the Environment (OARE)</u>	61,000,000	106,000	1,300,000	62,406,000
17.	OpenEdition	72,609			72,609
18.	Organisation for Economic Co-operation and Development (OECD)	18,843	720	92,211	111,774
19.	<u>Oxford University Press Journals</u>	1,834,761			1,834,761
20.	<u>Project MUSE Journals</u>	195,271			195,271



21.	Royal Society	872,431			872,431
22.	<u>Sage Journals</u>	1,308,784			1,308,784
23.	<u>Taylor &amp; Francis Journals</u>	3,869,729			3,869,729
24.	The Company of Biologists' Journals	72,375			72,375
25.	University of Chicago Press Journals	1,267,331			1,267,331
26.	Wiley Online Library	2,143,788			2,143,788
27.	Wolters Kluwer's Basic Sciences Collection	25,328			
<b>Electronic Book Databases</b>					
1.	<u>Ebrary/ProQuest</u>		211,089		211,089
2.	Taylor and Francis eBooks		5,000		5,000
<b>Open Access Databases</b>					
3.	Academic Journals	1,500,000			1,500,000
4.	African Journals Online (AJOL)	192,709			192,709
5.	Biomed central	515,355			515,355
6.	MDPI	450,000			450,000
7.	<u>National Academies Press</u>		14,530		14,530
8.	<u>National Center for Biotechnology Information</u>		96,865		96,865
9.	Nepal Journals Online (NEPJOL)	26,848			26,848
10.	PubMed	22,272			22,272
11.	SCIRP (Scientific Research)	1,500,000			1,500,000
12.	Directory of Open Access Journals		58,376		58,376
13.	The World Bank Open Knowledge Repository (OKR)	34,276			34,276

### **c) Information and Communication Technology**

The University has an ICT directorate headed by a director. The directorate ensures that the University has access to research databases and can share information in real time. The University is connected to internet with capacity of 295 mbps. Average usage of this internet is at about 260 mbps. The staff and students have access to both cabled and secure Wi-Fi in the compound. Staff and students also have access to over 400 computers that are available for use.

### **d) Laboratories**

The University has modern science laboratories with adequate modern equipment. These laboratories include Biology, Chemistry, Physics, Agriculture, Environmental, Biochemistry and Biotechnology Research laboratories. The University also has a computer laboratory furnished with adequate computers for students to conduct their research work as well as learn various programming languages. The School of Science and Computing and ICT have computer software like R, MATLAB, STATA, and SPSS that enable students to perform numerical computation with large sets of data as well as writing reports on their findings.

## **1.4.2 Reference materials**

### **a) Core textbooks**

There are 22 core textbooks and journals required for the course (Appendix III)

### **b) E-books**

The University has current subscriptions shown earlier in Table 1

### **c) Print journals**

Main subscriptions are in electronic resources and physical materials.

### **d) E-journals**

The University has current subscriptions shown earlier in Table 1

## **1.4.3 Academic staff**

### **a) Academic Staff**

The Department of Agricultural Sciences has adequate number of qualified and experienced staff to mount the programme (Appendix IV).

### **b). Technical staff**

The university has employed, on permanent basis, a team of technical staff who have the necessary professional qualifications as shown in Appendix V.

## 1.5 Programmes offered by the university

### 1.5.1 List of programmes offered by South Eastern Kenya University

South Eastern Kenya University offers a range of programmes from undergraduate to postgraduate levels, which are domiciled in different schools as shown in table 2 below. This list can also be accessed in the University website, [www.seku.ac.ke](http://www.seku.ac.ke).

**Table 2: Academic programmes offered by South Eastern Kenya University**

Programme	Academic organization	Total lecture hours required for graduation
<b>School of Agriculture, Environment, Water and Natural Resources</b>		
Bachelor of Science (Agriculture)	Semester	2240
Bachelor of Science (Dryland Agriculture)	Semester	2240
Bachelor of Science (Dryland Animal Science)	Semester	2240
Bachelor of Science (Animal health and Entrepreneurship))	Semester	2240
Bachelor of Science (Horticulture)	Semester	2240
Bachelor of Science (Range Management)	Semester	2240
Bachelor of Science (Agribusiness Management and Entrepreneurship)	Semester	2240
Bachelor of Science (Agricultural Education and Extension)	Semester	2240
Bachelor of Science (Hydrology and Water Resources Management)	Semester	2240
Bachelor of Science (Fisheries Management and Aquatic Technology)	Semester	2240
Bachelor of Science (Aquatic Science)	Semester	2240
Bachelor of Science (Geology)	Semester	2240
Bachelor of Science (Meteorology)	Semester	2240
Bachelor of Science in Forestry	Semester	2240

Bachelor of Science (Environmental Conservation and Natural Resources Management)	Semester	2240
Bachelor of Science (Environmental Planning and Management)	Semester	2240
Bachelor of Science (Land Resources Management)	Semester	2240
Bachelor of Science (Agro-Ecosystems and Environmental Management)	Semester	2240
Bachelor of Science (Forestry and Community Development)	Semester	2240
Bachelor of science in Climate Change	Semester	2240
Bachelor of Science (Environmental Management)	Semester	2240
Master of Science (Agricultural Resources Management)	Semester	1125
Master of Science (Livestock Production Systems)	Semester	1125
Master of Science (Agronomy)	Semester	1125
Master of Science (Agrometeorology)	Semester	1125
Master of Science (Agricultural Economics)	Semester	1125
Master of Science (Range resources Management)	Semester	1125
Master of Science in Comparative Mammalian Physiology	Semester	1125
Master of Science in Reproductive Biology	Semester	1125
Master of Science (Aquaculture)	Semester	810
Master of Science in Integrated Water Resources Management	Semester	810
Master of Science (Integrated Water Resource and Watershed Management)	Semester	810
Master of Science (Mineral Exportation and Mining)	Semester	810
Master of Science (Exploration Geo-Physics)	Semester	810
Master of Science (Climate Change and Agroforestry)	Semester	810
Master of Science in Environmental Management	Semester	810
Master of Science (Environmental planning and management)	Semester	810

Master of Science (Biodiversity conservation and Management)	Semester	810
Doctor of Philosophy (Agricultural Resources Management)	Semester	1125
Doctor of Philosophy (Animal Science)	Semester	1125
Doctor of Philosophy (Agricultural Economics)	Semester	1125
Doctor of Philosophy (Water Resources Management)	Semester	810
Doctor of Philosophy (Climate Change and Agroforestry)	Semester	810
Doctor of Philosophy (Environmental Management)	Semester	810
<b>School of Business and Economics</b>		
Bachelor of Business and Information Technology	Semester	1680
Bachelor of Project Planning and Management	Semester	1680
Bachelor of Commerce	Semester	1680
Bachelor of Procurement and Supply Chain Management	Semester	1680
Bachelor of Economics	Semester	1680
Bachelor of Economics and Statistics	Semester	1680
Bachelor of Freight & Logistics Management	Semester	1680
Bachelor of Entrepreneurship, Technology & Innovation Management	Semester	1680
Master of Business Administration	Semester	810
Master of Arts in Economics	Semester	810
Master of Entrepreneurship & Innovation Management	Semester	810
Master of Science in Supply Chain management	Semester	810
Doctor of Philosophy in Business Administration	Semester	810
<b>School of Education</b>		
Bachelor of Education (Arts)	Semester	2240
Bachelor of Education (Science)	Semester	2240
Bachelor of Education (Early Childhood)	Semester	2240
Master of Education in Kiswahili Methods	Semester	810

Master of Education	Semester	810
Master of Education (Early Childhood Education)	Semester	810
Master of Education (Guidance and Counselling)	Semester	810
Master of Education (Educational Psychology)	Semester	810
Doctor of Philosophy in Educational Administration and Planning	Semester	810
<b>School of Humanities and Social Sciences</b>		
Bachelor of Arts (Social Work)	Semester	2240
Bachelor of Criminology & Social Justice	Semester	2240
Bachelor of Arts (Gender and Development studies)	Semester	2240
Bachelor of Arts	Semester	2240
Bachelor of Arts, Hospitality & Tourism	Semester	2240
Master of Arts (Sociology)	Semester	810
Master of Arts in Religious Studies	Semester	810
Master of Arts (Gender and Development Studies)	Semester	810
Master of Arts (Kiswahili)	Semester	810
Master of Arts (Linguistics)	Semester	810
Master of Arts (Geography)	Semester	810
Doctor of Philosophy in Kiswahili	Semester	810
<b>School of Engineering and Technology</b>		
Bachelor of Science (Textile Technology & Applied Design)	Semester	2700
Bachelor of Science in Electrical & Electronics Engineering	Semester	3600
Bachelor of Science in Mechanical Engineering	Semester	3600
Bachelor of Science in Agricultural Engineering	Semester	3600
<b>School of Health Sciences</b>		
Bachelor of Science (Public Health)	Semester	2240
Bachelor of Science (Population Health)	Semester	2240
Bachelor of Science (Medical Microbiology)	Semester	2240

Bachelor of Science (Nursing)	Trimester	6495
Bachelor of Science in Food Science, Nutrition and Dietetics	Semester	3160
Bachelor of Science in Food Safety and Quality Assurance	Semester	2520
Bachelor of Science in Medical Laboratory sciences	Semester	3960
Bachelor of Science in Health Records and Information technology	Semester	2240
Bachelor of Science in Food Science and Technology	Semester	2240
Master of Science (Epidemiology)	Semester	1125
Master of Science (International Health)	Semester	1125
Master of Science in Public Health	Semester	885
Master of Science (Food Science and Nutrition)	Semester	1125
Master of Science (Infectious Disease Diagnosis)	Semester	1125
<b>School of Science and computing</b>		
Bachelor of Science (Mathematics)	Semester	2240
Bachelor of Science (Actuarial Science)	Semester	2240
Bachelor of Science (Statistics)	Semester	2240
Bachelor of Science (Biology)	Semester	2240
Bachelor of Science (Biochemistry and Molecular Biology)	Semester	2240
Bachelor of Science (Chemistry)	Semester	2240
Bachelor of Science in Physics	Semester	2240
Bachelor of Science (Electronics)	Semester	2240
Bachelor of Science (Medical Botany)	Semester	2240
Bachelor of Science (BSc)	Semester	2250
Bachelor of Science in Computer Science	Semester	2240
Bachelor of Information Technology	Semester	2240
Master of Science in Biodiversity Conservation and Management	Semester	1125
Master of Science in Biotechnology	Semester	1125

Master of Science in Biochemistry	Semester	1125
Master of Science in Entomology	Semester	1125
Master of Science in Applied Physics	Semester	1125
Master of Science in Information Sciences	Semester	810
Doctor of Philosophy in Physics	Semester	1125
Doctor of Philosophy in Molecular Forensic Technology	Semester	1125
Doctor of Philosophy in Entomology	semester	1500

### **1.5.2 Duration of each programme indicating total lecture/instructional hour requirements for graduation**

The duration for regular programmes is 4, 2 and 3 years respectively for bachelor's, master's and doctorate degrees. These translates to 8, 4 and 6 semesters for bachelor's, master's and doctorate degrees. The total lecture hours requirements for graduation are indicated against the programmes in table 2 above.

### **1.5.3 Definitions of Terms in the Units**

- Credit hour*: a credit hour is equivalent to one lecture hour per week for a minimum of fifteen weeks of teaching.
- Lecture /instructional hour*: this is equivalent to one (1) contact hour or three (3) hours of practical work or two (2) hours of tutorials.
- Contact hour*: this is similar to lecture hours and is equivalent to one (1) contact hour or three (3) hours of practical work or two (2) hours of tutorials.
- Course unit hours*: this is three (3) credit hours per week which is equivalent to forty-five (45) lecture hours in a semester.

*One instructional hour* is equivalent to:

- One contact hour in a lecture designed session.
- Two contact hours in a tutorial designed session.
- Three contact hours in a laboratory designed or practicum session.
- Five contact hours in a farm or field practice.



#### **1.5.4 Academic organization**

The programmes are organized in semesters or trimesters as indicates in table 2.

## **2.0 THE CURRICULUM**

### **2.1 The title of the proposed Programme**

The proposed programme title shall be **Master of Science in Food Value Chain Management**

### **2.2 Philosophy of the proposed Programme**

The philosophy of Master of Science in Food Value Chain Management is to develop skills and innovative solutions through research and commercialization of the agrifood sector.

### **2.3 Rationale and justification of the proposed Program**

#### **2.3.1 Needs assessment/market survey/situational analysis**

A needs assessment survey was conducted with a goal to determine whether the academic programme sufficiently addresses the needs of the market. A curriculum development committee was constituted (Annex 1) to spearhead the process. In developing the curriculum, consideration was given to the requirements of the Commission for University Education (CUE) as per the University Guidelines and Standards (2014), SEKU Academic Programme Development Policy, and SEKU ISO 9001 2015 Standards.

The methodological approach employed in conducting the needs assessment was based on a number of considerations. The team appreciated that a study of this nature and magnitude required the use of a mixture of methods of data collection and analysis. There would be no single method that would meet all the necessary requirements for the study. Thus, the following methods were utilized:

1. Online survey: The Committee conducted an online survey between 26th March 2024 and 2nd April 2024 using a questionnaire (Annex 2) with respondents drawn from different demographic, geographic, academic and occupational backgrounds from around Kenya.
2. Benchmarking: Through consultative meeting and discussions among 6 Higher Education Institutions in Africa namely SEKU, Jaramogi Oginga Odinga University of Science and Technology (JOOUST), Federal University Ndufu Alike Ikwo - AE-FUNAI, Federal University of Technology, Minna – FUTMINNA, University of Kara

- UK, University of Lome - UL and European partners the in Cooperation for Holistic Agriculture Innovation Nests in Sub-Saharan Africa (CHAIN) Project.
- 3. Desktop literature review of relevant documents and studies: A review of available literature including the CUE, MoE guidelines, standards and policies as well as legal and administrative frameworks governing Higher Education.

The committee received views from a wide range of stakeholders spanning a spectrum of specializations. They included Social Sciences, Life Sciences, Health Sciences, Natural Sciences, Business, Agricultural Sciences, staff and students. The survey overwhelmingly supported the development and mounting of MSc. Food Value Chain Management at School of Agriculture, Environment, Water and Natural Resources at South Eastern Kenya University (Appendix X). The proposed programme will enhance the quality of graduates to better handle current and emerging issues in food safety and quality through the value chain and at the regulatory level.

### **2.3.2 Stakeholder involvement**

During the process of the development of this programme staff from academia and research organizations, namely Kenya Medical Research Institute (KEMRI), International Livestock Research Institute (ILRI), International Primate Research, Kenya Agricultural & Livestock Research Organization (KALRO), National Biosafety Authority (NBA) and International Service for the Acquisition of Agri-biotech Applications (ISAAA) – *AfriCenter*; Mahyco grow® and the Kenya Seed Company; Nestle Kenya, National Environment Management Authority (NEMA); AstraZeneca and GlaxoSmithKline were consulted. These persons work in some of the main institutions associated with the PhD biotechnology course. They agreed on the suitability of the PhD course in biotechnology and expressed their support for its mounting in SEKU (Appendix XI).

### **2.3.3 Justification for the program**

In Kenya, the agricultural sector is the backbone of the economy, contributing up to 33 percent of the country's Gross Domestic Product (GDP). The sector employs more than 40 percent of the total population and 70 percent of the rural population. SDG2 focuses on ending hunger, achieving food security and improved nutrition and promoting sustainable agriculture. Fortification is an evidence-informed intervention that contributes to the prevention, reduction and control of micronutrient deficiencies. It can be used to correct a demonstrated micronutrient deficiency in the general population (mass or large-scale fortification) or in specific population groups (targeted fortification) such as children, pregnant women and the beneficiaries of social protection programmes. When the vitamins and minerals are not added to the foods during the processing but just before consumption at home or at schools or child-care facilities, it is called point-of-use fortification. In addition to the micronutrient deficiencies, policies and implementation programmes for fortification need to consider an alignment with policies for the reduction of diet-related noncommunicable diseases. Such is the case of salt iodization, which builds on sodium consumption and, as result, needs to consider strategies for sodium intake reduction.

The government's policy concerning agricultural transformation, coupled with the world's complex and competitive business environment, necessitates the need for highly qualified and capable professionals in the fields of agribusiness and value chain management. A significant disparity exists between the capabilities demanded by the intricate and dynamic business processes within agribusiness organizations. Universities seek to close the gap between the demands of the agri-food chain and their research and teaching operations. The proposed programme is intended to enhance the quality of graduates to better handle current and emerging issues in food safety and quality through the value chain and at the regulatory level.

## **2.4 Goal of the Programme**

The programme aims to develop skilled, highly competent, and creative professionals who can spearhead the nation's agricultural commercialization in response to the ever-changing demands of customers.

## **2.5 Expected Learning Outcomes**

By the end of the programme learners should be able to:

- a) Evaluate advances of approaches and practices in food value chain management.
- b) Apply acquired skills and knowledge in agri-preneurship and food processing
- c) Design and carry out research on food value chains.
- d) Design / or manage food value chain programs

## **2.6 Mode of delivery of the program**

The mode of delivery shall be face to face and blended learning.

## **2.7 Academic Regulation for Masters of Science in Food Value Chain**

### **2.7.1 Admission requirements for the program**

The candidate must satisfy the minimum University admission requirements according to Universities Standards and Guidelines, 2014 (PROG/STD/09) and University statutes. The common regulations applicable to the Masters' degree of the South Eastern Kenya University (SEKU) and the School of Agriculture, Environment, Water and Natural Resources shall apply. The following shall be eligible for admission for the degree Master of Science in Food Value Chain Management.

- (a) A holder of a Bachelor's degree in Agriculture or related Agricultural discipline with at least Second Class Honours (Upper Division) of South Eastern Kenya University, or equivalent qualification from an institution recognized by Senate.

OR

- (b) A holder of a Postgraduate Diploma in Agricultural Science of at least Credit or equivalent qualification from an institution recognized by Senate.

OR

A holder of a Bachelor's degree in Agriculture or related Agricultural discipline with at least Second Class Honours (Lower Division) of South Eastern Kenya University, or equivalent qualification from an institution recognized by Senate with additional relevant training, evidence of research capability either through research, paper presentations or peer reviewed publications and work experience since graduation with a Bachelor's degree.

OR

- (c) Any alternative qualifications recognized by the South Eastern Kenya University.

### **2.7.2 Regulation on credit transfer**

Credit transfers shall be accepted for the purpose of student mobility and recognition of prior learning according to the Universities Standards and Guidelines, 2014 (PROG/STD/10). In line with the existing qualification frameworks, credit transfers shall only be accepted from accredited institutions and programs. Candidates from other universities recognized by the South Eastern Kenya University senate applying for Credit Transfer to the MSc degree programme in Food Value Chain shall be permitted up to a maximum of 49% of the core course units for similar programs at the same level. The minimum grade required for credit transfer shall be Grade B.

### **2.7.3 Course requirements**

#### **a) Student Class Attendance**

Student registered for the degree programme shall be required to regularly attend lectures, tutorials, group discussions, seminar, among others. A candidate must have attended an equivalent of 2/3 of the lectures to be allowed to sit for the end of semester examinations.

#### **b) Obligation of the lecturer**

The lecturers responsible for the delivery of the programme shall have the following obligations:

- (i) Conduct research to obtain the most current knowledge, ideas, tools, methodologies, processes, to be shared with the students.
- (ii) Facilitate critical thinking and development of analytical capabilities of the students.
- (iii) Introduce students to key topics and guide students in problem-solving assignments.
- (iv) Monitor the progress of each student and advice on the corrective action where progress of the students is unsatisfactory.
- (v) Regularly review the progress of each of the candidate and provide feedbacks on the research carried out by the students.

- (vi) Ensure teaching meets the highest academic standards possible.
- (vii) Set and mark continuous assessment tests and the final examinations.
- (viii) Guide students on group discussions and seminar presentations.

#### **2.7.4 Student Assessment Policy/Criteria**

The University's Common Regulations regarding students' assessment shall apply. The assessments shall be carried in the form of:

- (i) Continuous Assessment Tests (including practical's, assignments, research papers and or project reports) that shall be done throughout the first and second semester during year 1 of study.
- (ii) End of the Semester Examinations that shall be given at the end of every semester for each of the course units taught during the semester.
- (iii) Supplementary examinations that shall be given to candidates who fail the end of semester examinations.
- (iv) Special examinations that shall be given to students who fail to sit for ordinary end of semester examination due to reasons that are acceptable to the Schools' Academic Board and the University Senate, and
- (v) Thesis that shall be examined at the end of the two (2) year study period.

Each end-of-the semester examinations and special examinations shall constitute sixty percent (60%) of all the total marks in each course unit, while continuous assessment tests shall constitute forty percent (40%). In every course unit taken, the pass mark in the final examination shall be fifty percent (50%).

#### **2.7.5 Grading System**

The final university examinations for the Master of Science degree programme shall be given at the end of every semester for each of the course units taught during the semester. Each final examination shall be in the form of a three (3) hour written examination paper.

Each end-of-the semester examination shall constitute sixty percent (60%) of all the total marks in each course unit, while continuous assessment tests shall constitute forty percent (40%). In every course unit taken, the pass mark shall be fifty percent (50%).

The grading of the course units shall be as follows as shown in 2.7.6.1 (c) below.

#### **2.7.6 Examination Regulations**

##### **2.7.6.1 Written examinations (Part I)**

- a) No candidate shall be permitted to sit an examination unless he/she has satisfactorily attended at least two thirds of the prescribed course of study.
- b) Each course shall be examined out of a total of one hundred percent (100%).

- c) The pass mark its each course examination shall be fifty percent (50%) and graded as follows: -

70	100%	A
60	69%	B
50	59%	C
49% and below		FAIL

- d) Written examination in each course shall be by a 3-hour examination and shall constitute sixty percent (60%). The Continuous Assessment Tests (CATs) shall constitute the remaining forty percent (40%).
- e) Candidates shall be required to take semester examinations and pass all courses.
- f) Candidates shall not be allowed to proceed to part II of study until they pass all coursework examinations.
- g) A candidate may, on the recommendation of the School Board of Examiners and approval by Senate, be permitted to take Special Examinations, in the course(s) for which the candidate failed to sit Ordinary Examinations at the prescribed time. The reasons MUST be acceptable to the School Board. Special Examinations shall be graded as Ordinary Examinations.
- h) A candidate who fails in not more than two course unit(s) may, on the recommendation of the Board of Examiners and approval by the Senate, be allowed to take a supplementary examination in the failed paper(s) after paying the appropriate fees.
- i) Supplementary examinations shall be marked out of one hundred percent (100%) but the pass grade shall be recorded as fifty percent (50%).
- j) A candidate who fails to sit for end of semester examination(s) for unit(s) registered will be awarded zero (0) mark, provided the reasons do not fall under regulation g.
- k) A candidate, on the recommendation of Faculty Board of Examiners and approval by the Senate, shall be discontinued if he/she
- Fails in more than two course units in ordinary examination, OR
  - Fails in the supplementary examination, OR
  - Fails to complete the courses within the prescribed time.

#### **2.7.6.2 Thesis or research project Examination (Part II)**

- a) The Thesis or Research Project will be examined in accordance with the common regulations of the South Eastern Kenya University (refer to Board of Postgraduate Studies).
- b) Thesis or Research Project shall be marked out of 100 marks.
- c) The pass mark shall be fifty percent (50%).
- d) A candidate who fails in the thesis or research project examination may, on the recommendation of the School Board of examiners and Board of Postgraduate Studies, be allowed to resubmit the thesis or research project for re-examination in a revised form once only within twelve months.
- e) The pass mark obtained after resubmission shall be recorded as fifty percent (50%).
- f) A candidate who fails in the thesis or research project after resubmission shall, on the recommendation of the Board of Examiners or School Board, respectively, and approval by Senate, be discontinued.
- g) The postgraduate degrees are not classified.

#### **2.7.6.3 Award of degree**

Candidates who satisfy the examiners in all written and thesis/ research project examinations shall be awarded the respective Masters degree.

#### **2.7.6.4 Examination Irregularities**

- a) A student who is found guilty of any irregularities during any continuous assessment or University examinations shall be subject to the appropriate penalties as detailed in the University Examination Regulations.
- b) The Senate Examination Disciplinary Committee regulations shall apply in all examination disciplinary cases.
  - i. A student who is suspected to have committed examination malpractices shall be required to defend her/himself in the Student Disciplinary Committee where evidence on the examination malpractice committed by the student shall be tabled.
  - ii. Any candidate who is found guilty of examination malpractices shall be expelled from the University.
  - iii. A student expelled from the university due to examination malpractices may appeal to the Vice Chancellor within a period of one month after the expulsion. The Vice Chancellor shall subsequently appoint an ad hoc committee to hear the appeal and make recommendations to the University Senate.

#### **2.7.6.5 Conduct of studies and supervision**

##### **2.7.6.5.1 Students Rights responsibilities and Obligations**

A candidate registered in accordance with the university rules and regulations shall be required to pursue the programme of study under the supervision of academic staff appointed in that capacity

by the Senate on the recommendation of the Academic Board of the School of Agriculture Environment Water and Natural Resources and the Board of Postgraduate Studies.

The candidates shall be required to consult their supervisors at least once every month, and to submit a termly written progress report to the Dean of the School of Agriculture Environment Water and Natural Resources through the Supervisors and Chairman of the Department of Agricultural Sciences with copies to the Director, Board of Postgraduate Studies.

Each candidate shall be required to attend and participate in seminars organized at the school once every 3 months to enable the Schools' Academic Board and the supervisors to assess the candidate's progress more effectively and to keep candidates in constant touch with the School.

#### **2.7.6.5.2 Appointment of Supervisors**

The appointment of supervisors shall be according to university statutes 19 (15-18), on the conduct of studies and supervision. Recommendations of the appointment of supervisors shall be processed in the first instance by the Department of Agricultural Sciences through the School's Postgraduate Studies Committee. The recommendation shall then be forwarded to the School Academic Board for approval and onward transmission to the University Senate through the Board of Postgraduate Studies.

Before recommending the appointment of any supervisor, the Schools' Academic Board shall satisfy itself that the proposed supervisor is competent in the subject area and field of research in which the candidate proposes to work.

Where a supervisor is appointed from outside the university, such a supervisor should show evidence of competence around study through publications made since obtaining his/her higher degree, and as indicated in a curriculum vitae. Such evidence shall be requested only once from respective external supervisors.

Normally, two supervisors will be appointed for each candidate, one of whom must be among the academic staff in the Department of Agricultural Sciences. However, the Schools' Academic Board may appoint additional supervisors as it may deem necessary in each individual cases.

#### **2.7.6.5.3 Role and responsibilities of Supervisors**

It shall be the duty of each of the supervisors to direct and supervise the work of the student in so far as it relates to the programme of study. In particular, the supervisor shall be required to adhere to the guidelines of the university Statutes 19 (19) that requires supervisors to:

- i. Maintain constant and effective contact with candidates assigned to him/her.
- ii. Submit individually or jointly with other supervisors, academic reports through the Chairman of Department of Agricultural Sciences to the Dean of the School of Agriculture



Environment, Water and Natural Resources, on the progress of each candidate at the end of every semester.

- iii. Certify at the end of every semester that the candidate has received adequate supervision.
- iv. Inform the Dean of the School of Agriculture, Environment, Water and Natural Resources through the Department and School Postgraduate Studies Committee at once if in his/her opinion, a given candidate's work is unsatisfactory and unlikely to reach the standard required for the award of the MSc degree.

The performance of a candidate is considered unsatisfactory as shown by: either failure to consult the supervisors or the receipt of an unsatisfactory report from the supervisors.

A candidate whose performance is unsatisfactory shall be given a written warning by the Dean of the School of Agriculture, Environment, Water and Natural Resources to the effect that unless he/she shows signs of improvement within three months, he/she would be considered for deregistration according to Statute 20(20).

A recommendation for deregistration shall be made by the Board of Postgraduate Studies to the University Senate only after receipt of two consecutive negative reports following the warning as per the Statute 20(21).

#### **2.7.6.5.4 Role and responsibilities of Dean**

The Dean of the School of Agriculture, Environment, Water and Natural Resources shall have the following responsibilities in as far as the supervision of candidates:

- i) Ensure that competent lecturers are appointed as supervisors to provide effective supervision to the candidates.
- ii) Provide written warning to candidates whose progress is considered unsatisfactory.
- iii) Advise the Board of Postgraduate Studies and the Senate on the registration or deregistration of candidates.
- iv) Chair the candidates Board of Examiners.
- v) Ensure the programme is delivered as per the highest standards.

#### **2.7.6.5.5 Role and responsibilities of the Director of the Board of Postgraduate Studies**

The Director of the Board of Postgraduate Studies shall have the following responsibilities:

- i) Processing of the registration of candidates.
- ii) Formalization of appointment of supervisors.
- iii) Coordination of the process for examination of candidate's thesis.
- iv) Communication of the award of the masters' degree to the successful candidates.

The role of the Board of Postgraduate Studies is stated in the University Statutes 41.

#### **2.7.6.5.6 Conditions for Change of Registration Status**

Recommendations of the change of registration status from full time and vice versa, shall be processed in the first instance by the Department of Agricultural Sciences through the School's

Postgraduate Studies Committee. The recommendation shall then be forwarded to the School's Academic Board for approval and onward transmission to the Senate through the Board of Postgraduate Studies.

#### **2.7.6.5.7 Conditions for change of Supervisors**

Recommendations of the change of supervisors made by a candidate shall be processed in the first instance by the Department of Agricultural Sciences through the Schools' Postgraduate Studies Committee. The recommendation of the committee shall then be forwarded to the Schools' Academic Board for approval and onward transmission to the University Senate through the Board of Postgraduate Studies.

Before recommending the change of any supervisor, the School's Postgraduate Studies Committee (SPSC) shall satisfy itself that the change is necessary on the grounds of non-availability of the supervisors or incompetency in the subject area and field of research in which the candidate is working.

#### **2.7.6.5.8 Submission and evaluation of candidates' progress reports**

The main supervisor of the candidate shall at the end of every semester, submit progress reports in prescribed form on candidate's progress to the Director of the Board of Postgraduate Studies through the Chairman of the Department of Agricultural Sciences with copies to the Dean of the School of Agriculture, Environment, Water and Natural Resources. Student and supervisor interaction will be evaluated using the post graduate student tracking form.

The Department through the School's Postgraduate Studies Committee shall process the evaluation of candidate's progress in the first instance. The recommendation shall then be forwarded to the Board of Postgraduate Studies for onward transmission to the University Senate.

#### **2.7.7 Moderation of Examinations**

The moderation of the setting of the end of semester examination papers during the year 1 of study shall be as follows:

- a) The Department shall establish a moderation committee that shall be chaired by the Chairman of the Department. The moderation committee shall consist of all academic members of staff in the Department including the internal examiners.
- b) The moderation committee shall undertake initial moderation of each of the end of semester examination papers. The recommendations of the committee shall be integrated in the final versions of the examination papers that shall be transmitted by the School's Examination Coordinator at least six (6) weeks before the examination date, to an external examiner who shall provide recommendations for their improvement.

- c) The external examiner shall moderate the setting of each end of semester examination papers and shall submit a report to the Chairman of Department within a period of one (1) week on receipt of the draft examination papers.
- d) The Chairman of the Department shall direct the internal examiners to consider taking on board the recommendations of the external examiner, as may be appropriate.
- e) The moderation of the marking of the end of semester examination papers during the year 1 of study shall be as follows:
  - i. The internal examiner shall mark the end of semester examination papers and forward the marked scripts to the Chairman of the Department who shall subsequently forward them to an external examiner appointed by the University Senate.
  - ii. The external examiner shall moderate end of semester examination papers, evaluate marking, grading and performance of candidates and shall submit a consolidated report to the Vice-Chancellor within a period of four (4) weeks on receipt of the draft examination papers.
  - iii. Departmental Academic Board shall consider the report of the external examiner and make recommendations to the Schools' Academic Board on each end of semester examination papers.
  - iv. School's Academic Board shall consider the recommendations of the Departmental Academic Board and the External Examiner and make appropriate recommendations to the University Senate.

### **2.7.8 Graduation requirements**

For the award of the degree, a student must have passed in all the course units of the programme and a thesis with a pass mark of 50%. Before award of a Masters' degree, a candidate shall be required to have published at least one (1) paper in refereed scientific journals according to the requirements of the Commission for University Education Standards and Guidelines (2014) and university statutes, rules and regulations. The publications shall be based on the research carried out by the candidate and must form part of the MSc Thesis submitted for examination. The student shall also be expected to be compliant to all other University requirements as demanded by the University statutes and the Board of Post Graduate studies. Total number of credit hours for the program is 945.

### **2.7.9 Classification of degree**

The Master of Science degree in Food Value Chain Management shall not be classified.

### **2.7.10 Description of Thesis**

#### **2.7.10.1 Definition, rationale, and facets**

A candidate who is pursuing the programme and successfully completes the coursework and written examinations in the year 1 of study shall proceed to prepare and present a research proposal

in a Departmental seminar during the second semester of year 1 of study according to University Statutes 20(7)

A candidate who successfully defends his/her proposal in the Departmental seminar and undertakes all the necessary corrections, shall be supervised by least two (2) academic members of staff who have appropriate qualifications in the subject area in focus and its methodology.

A candidate shall undertake supervised research, write and submit a thesis for examination as partial fulfilment of the postgraduate degree.

The Thesis shall be presented in sections that represent various components that include but are not limited to the abstract, introduction, literature review, methodology, presentation of results, discussions, conclusions, references and appendices.

#### **2.7.10.2 Regulation for Thesis**

- a) The Thesis shall be examined according to the university statutes 19 parts 27-39 on the submission and examination of Thesis. A candidate who successfully defends his or her proposal in the Departmental seminar and undertakes all the necessary corrections will be supervised by at least two (2) academic members of staff who shall have appropriate qualifications in the subject area in focus and its methodology.
- b) A candidate shall undertake supervised research, write and submit a thesis for examination within a minimum of one (1) academic semester and a maximum of two (2) academic semesters. The Thesis shall be an original research document submitted in support of the candidature for the MSc degree and must present the candidate's original research and findings.
- c) The Thesis shall be presented in sections that represent various components that include but are not limited to the abstract, introduction, literature review, and methodology, presentation of results, discussion, conclusion, references and Appendices.
- d) With approval of the supervisor, each candidate will submit a written thesis report for examination.
- e) The thesis shall be examined in accordance with the common regulations of the Board of postgraduate studies of South Eastern Kenya University.
- f) The thesis shall be expected to demonstrate acquisition of the relevant research skills and their effective application to an investigation of substance and significance in the area of study.
- g) The thesis shall be marked out of 70%.
- h) The candidate shall also present the thesis orally before a panel of examiners. The oral presentation shall be marked out of 30%.
- i) The pass mark for the thesis shall be 50%.
- j) A candidate who fails to satisfy the examiners in the thesis shall be allowed up to two resubmissions of the thesis.

- k) A candidate, who fails to submit the thesis report or fails in the second resubmission of the thesis, on the recommendation of the School Board of Examiners and approval by senate, shall be discontinued.

#### **2.7.10.2.1 Allocation and selection of supervisors**

- a) Supervisors shall be allocated to the candidate who successfully defends his or her research proposal in the Departmental seminar and undertakes all the necessary corrections.
- b) The selection of supervisors shall be according to the university Statutes 20(17-21). Before selecting any supervisor, the Departmental or School Academic Board shall satisfy itself that the proposed supervisor is competent in the subject area and field of research in which the candidate proposes to work.
- c) Where a supervisor is selected from outside the university, such a supervisor shall be required to demonstrate evidence of competence in the area of study through publications produced.

#### **2.7.10.2.2 Submission of Thesis**

- a) The submission of thesis for examination shall be according to University Statute 20(23-24).
- b) At least three months before a thesis is submitted, a candidate shall give notice in a prescribed form to the Director of the Board of Postgraduate Studies through the Dean of the School Agriculture, Environment, Water and Natural Resources and Chairman of the Department of Agricultural Sciences and an abstract outlining the general scope of work.
- c) A candidate shall submit to the Board of Postgraduate Studies, a thesis that fully adheres to the requirements stipulated in the University Statute 20(23-24).

#### **2.7.10.2.3 Selection of *viva-voce* panel**

- a) The University Senate shall on the recommendation of the Board of the School of Agriculture, Environment, Water and Natural Sciences appoint in respect of each candidate presenting a thesis, a Board of Examiners according to university Statute 20(25) on the submission of the thesis and examination of the candidate. The Board of Examiners shall consist of the following:
  - i. Dean of the School or his representative as the Chairman.
  - ii. An external examiner.
  - iii. Two internal examiners one of whom must have not supervised the candidate.
  - iv. Two other persons competent in the candidate's area of research and at least one external to the Department.
  - v. A representative of the Board of Postgraduate Studies.

#### **2.7.10.2.4 Conduct of thesis defense and Oral Examinations**

- a) Conduct of thesis defense and Oral Examinations shall be according to University Statute 20(27).

- b) Within a month of the receipt of all examiner's reports, the Board of Postgraduate Studies in consultation with the Dean of the School of Agriculture, Environment, Water and Natural Resources shall convene a meeting of the Board of Examiners at which the Examiners reports, other academic matters arising from the thesis, and the candidates defense shall be considered. A consolidated report and appropriate recommendations shall be prepared for submission to the University Senate through the Board of Postgraduate Studies within two weeks. Provisional results shall be released to the candidate after the meeting only where the recommendation of the Board of Examiners is unanimous.
  - c) Candidates shall be required to present themselves for oral examination and the Dean School of Agriculture, Environment, Water and Natural Resources shall inform them of the time and place of the meeting of the Board of Examiners.
  - d) The external and the internal examiners shall each be required to submit to the Board of Postgraduate Studies within two (2) months, an independent written assessment report of the thesis indicating:
    - i. Whether or not the thesis is adequate in form and content.
    - ii. Whether or not the thesis reflects an adequate understanding of the subject and show display of original thought and significant contribution to knowledge.
    - iii. Whether or not the thesis makes significant contribution in the existing knowledge.
    - iv. Whether or not the Master of Science degree should be awarded.
  - e) Where the recommendation of the Board of Examiners is unanimous for or against the award of the MSc degree, and where such unanimous recommendation is consistent in all aspects with the reports of the external examiner and the results of the oral examination, the Director of the Board of Postgraduate Studies shall forward such recommendation to the Vice-Chancellor for approval on behalf of the University Senate.
- Procedure for

#### **2.7.10. 2.5 Re-examination of revised thesis**

- a) Where recommendation of the Board of Examiners is not unanimous, or the recommendation is not consistent with recommendations from the board of examiners, it shall be referred to the full Board of Postgraduate Studies for an appropriate recommendation to the University Senate.
- b) The University Senate may, on the advice of the Board of Examiners and Board of Postgraduate Studies permit a candidate to resubmit a thesis for re-examination in a revised form only once provided that a candidate whose thesis is referred under this sub-section shall be required to re-submit it within twelve months.

#### **2.8. Course Evaluation**

The evaluation of the Programme shall be according to the academic quality assurance policy of the university and such evaluation shall include all aspects of the academic programme such as:

(a) course contents, (b) instructional process, (c) infrastructure and equipment for delivery, (d) instructional and reference materials and (e) assessments.

The programme shall be evaluated at the end of every three (3) year cycle to establish strengths and weaknesses in the delivery of the programme and subsequently undertake revision of the programme, where necessary.

The evaluation of the programme shall be undertaken by an evaluation committee appointed by the University Senate according to the requirements of the Academic Quality Assurance Policy. The evaluation report with recommendations shall be submitted to the University Senate for deliberations.

Feedback on course evaluation shall be utilized in decision-making regarding the delivery of the programme.

Also, at the end of every semester during year 1 of study, the Department shall ensure that students' evaluation of the courses taught in the semester is conducted and results of the evaluation shall be used to improve the delivery of the course units.

## **2.9 Management and Administration of the Program**

The management of the programme shall be vested with the relevant senior lecturer with at least a PhD within the Department of Agricultural Sciences. The lecturer shall be expected to provide the chairman of the department with regular updates on the delivery of the program, including progress of students admitted into the programme. The chair shall in turn brief the dean of the school. Subsequently, the Departmental and School's Academic Boards shall monitor the delivery of the program based on attainment of its intended goals and objectives and approve examination results.

The internal quality assurance of the programme shall be as per the existing Academic Quality Assurance Policy and procedures of South Eastern Kenya University.

## **2.10 Courses/ Units offered for the Programme**

### **2.10.1 A distribution table of course units' summary**

	<b>Number</b>	<b>Lecture hours</b>
Common university units	0	0
Core units (Include thesis)	13	945
<b>TOTAL</b>	<b>13</b>	<b>945</b>

### **2.11.2 A matrix of links between the course units and the programme learning outcomes**

Table 3: The link between the course units and the programme learning outcomes (PLOs) per academic year.

<b>ELO 1: Evaluate advances of approaches and practices in food value chain management.</b>			
<b>Year One</b>		<b>Year Two</b>	
Units	Credit Hours	Units	Credit Hours
Food Value Chain Management	45		
Research methods in Agribusiness and Value chains	45		
Gender and Value Chain Management	45		
Sustainability of commodity and food value chains	45		
<b>ELO 2: Apply acquired skills and knowledge in agri-preneurship and food processing</b>			
<b>Year One</b>		<b>Year Two</b>	
Units	Credit Hours	Units	Credit Hours
Agripreneurship and Product Development	45	Thesis	180
Digital Technologies for Agri-food systems	45		
Food Quality Management	45		
Project Planning and Management	45		
Food Economics	45		
Food Processing Technology	45		
<b>ELO 3: Design and carry out research on food value chains.</b>			
<b>Year One</b>		<b>Year Two</b>	
Units	Credit Hours	Units	Credit Hours
Project Planning and Management	45	Thesis	180
Research methods in Agribusiness and Value chains	45		



Seminar in Agribusiness and Value Chain Management	45		
Crop, Livestock and Fish Value Chain Management	45		
Food Economics	45		
<b>ELO 4: Design / or manage food value chain programs</b>			
<b>Year One</b>		<b>Year Two</b>	
Units	Credit Hours	Units	Credit Hours
Project Planning and Management	45	Thesis	180
Gender and Value Chain Management	45		
Sustainability of commodity and food value chains	45		
Food Quality Management	45		
Digital Technologies for Agri-food systems	45		

### 2.10.3 A list of the courses of the programme

The following Table 4 shows the course units, which shall be offered to fulfil the learning outcomes of the programme. They are arranged in order of the academic years. The unit codes are indicative of the level of study. The core and unique units of the Master Science in Food Value Chain Management are shown with the code AFVC.

#### Year One Semester one

<b>YEAR 1, SEMESTER ONE</b>				
<b>UNIT CODE</b>	<b>TITLE</b>	<b>Lecture Hours</b>	<b>Practical Hours</b>	<b>Total</b>
AFVC 600	Food value chain management	45	0	45
AFVC 601	Food processing technology	30	15	45
AFVC 602	Research methods in agribusiness and value chains	45	0	45
AFVC 603	Agripreneurship and product development	45	0	45
AFVC 604	Food quality management	30	15	45

AFVC 605	Gender and value chain management	45	0	45
<b>YEAR 1 SEMESTER TWO</b>				
AFVC 606	Food economics	45	0	45
AFVC 607	Project planning and management	45	0	45
AFVC 608	Digital technologies for agri-food systems	30	15	45
AFVC 609	Sustainability of commodity and food value chains	45	0	45
AFVC 610	Crop, livestock and fish value chain management	45	0	45
AFVC 611	Seminars in agribusiness and value chain management	45	0	45
<b>YEAR TWO</b>				
AFVC 612	Thesis			315
<b>TOTAL</b>				

**2.10.4** A list of the programme's courses to be taken by the students by quarter/trimester/semester per subject /discipline Courses will be taken in semesters as shown in table 4. above. A student will be expected to take 12 taught units in two semesters and thereafter utilize the remaining two (2) to carry out research and write a thesis. One lecturer can teach a maximum of two units in this program in the semester.

**2.10.5** Total credit hours, lecture hours, contact hours and course units required for graduation. The minimum total credit hours required for graduation are 945.

## **2.11. Duration and Structure of the Program**

The course units for the programme are listed under 2.10.3. All the courses are equivalent to one unit unless otherwise specified. A unit is defined as the equivalent of 45 one-hour lectures spread over four semesters. For this purpose, three hours of practical sessions or two hours of tutorials are equivalent to one-hour lecture. Therefore, the total credit hours of the programme are 915 taken in two academic years.

### **3.0 COURSE DESCRIPTION**

#### **YEAR ONE SEMESTER ONE**

##### **1. Food Value Chain Management**

**Purpose:** To provide skills and knowledge required to manage food value chains

##### **Expected Learning Outcomes**

By the end of the course, the learner should be able to:

- a) Demonstrate an understanding of the process of value chain analysis
- b) Analyze the influence of market structure on value chain development
- c) Discuss the common issues in value chain governance
- d) Describe the models for value chain financing development

##### **Course content**

Concepts, principles and relevance of value chain approach. Value chain cycle. Value Chain Analysis: Introduction to value chain development; Key concepts in value chain analysis; Value chain analysis process; Mapping a value chain; Tools and techniques in value chain analysis; Case study: Value chain analysis. Market Analysis and Development: Introduction to market analysis; Supply, demand and price setting; Standards and certification; Analyzing competition. Market Linkages: Introduction to market linkages; Types of market linkages; Factors affecting success of linkages; Enabling environment in market linkages. Value Chain Governance: Introduction to value chain governance; Importance of value chain governance; Types of value chain governance; Analyzing value chain governance. Value Chain Financing: Introduction to Value Chain Financing; Type of Value Chain Finance; Instruments to promote agricultural value chain finance.

##### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

##### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

##### **Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

##### **Core reading materials**

1. Gokhan Egilmez (Ed.) (2018). Agricultural Value Chain. IntechOpen ISBN-10 : 1789230063
2. Swati Malhotra, Alan de Brauw, Erwin Bulte, and Evgeniya Anisimova. (2021). Improving African agricultural value chains to boost production and revenue.
3. Alan de Brauw , Erwin Bulte. (2021). African Farmers, Value Chains and Agricultural Development.
4. John Stanton, Rosa Caiazza, Usha Iyer-Raniga, (Eds.) (2023). Agricultural Value Chains - Some Selected Issues ISBN978-1-83768-513-4.
5. Sapna A. Narula, S. P. Raj. (Eds.) (2023). Sustainable Food Value Chain Development: Perspectives from Developing and Emerging Economies.

### **Recommended reference materials**

1. Konstadinos Mattas, George Baourakis, Constantin Zopounidis, Christos Staboulis. (Eds) (2024). Value Chain Dynamics in a Biodiverse Environment: Advances in Biodiversity, Sustainability, and Agri-food Supply Chain Development.
2. C. Sekhar and P. Muthupandi. (2023). Food Value Chain and Traceability
3. By Sander de Leeuw, Renzo Akkerman, Rodrigo Romero Silva (Eds.) (2024). Frontiers in agri-food supply chains: Frameworks and case studies.
4. Calvin Miller, Linda Jones. Calvin Miller, Linda Jones (2010). Agricultural Value Chain Finance: Tools and Lessons. Food and Agriculture Organization of the United Nations
5. Agribusiness Supply Chain Management. N. Chandrasekaran, G. Raghuram CRC Press, 2014.
6. . MA Bourlakis, PWH Weightman (2008). Food supply chain management.

### **Journals**

1. Journal of Food Science
2. Food Microbiology journal
3. International Journal of Food Microbiology
4. Foods
5. Food policy
6. Journal of Arid Environments
7. Marine Policy
8. International Journal of Advanced Scientific Research and Innovation
9. Sustainability

## **2. Agripreneurship and Product Development**

**Purpose:** To equip learners with skills and knowledge in product development and marketing

### **Expected learning outcomes**

By the end of the course, the learner should be able to:

1. Generate a business idea
2. Develop business plan/business canvas model
3. Demonstrate understanding of the process of setting up an enterprise
4. Evaluate organizational behaviour
5. Analyze Consumer behaviour
6. Conduct business analysis

### **Course Description**

Introduction to agripreneurship: Definition and importance of entrepreneurship; Types of entrepreneurship (intrepreneurship, entrepreneurship): Forms of agri-enterprises for running agribusiness organizations (small, medium, large); Qualities/skills needed for running the business. How to identify and generate business ideas: Sources of new ideas (research, emerging enterprises; Ideation process (brain storming, random association, etc); Enterprise selection. Process of setting up an enterprise: Legal requirements; Financial and economic requirements; Personnel requirements; Infrastructural requirements; Business location. Enterprise Management: Financial Management; Man-power/Personnel- HRM, change mgt, partner management; Machinery/Production; Materials; Resource mobilization in an enterprise. Product development:

Impetus to product innovation; New product development process. Marketing and Consumer behaviour: Marketing functions; Marketing institutions; Market research (Types of market information; Marketing mix; Marketing strategies; Market segmentation; Consumer needs; Types of consumers; Exogenous and endogenous influences on the buyer behaviour; Consumer purchasing process. Business law: laws and regulations governing agri-enterprise. Business Plan/Business Canvass model (proposal)

### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

### **Core Reading Materials**

1. Arumugam, U., & Manida, M. (2023). Agripreneurship for Sustainable Economic Development in India. *ComFin Research*, 11(4), 15-23.
2. Ranjan, M. S., Tandon, J. K., & Convener, M. B. A. (2022). Agripreneurship Advancement Creating Living for Indigenous Youth| Restrictions And Solutions.
3. Sriya, V., Dhanalakshmi, V., Sravani, V., & Deepak, G. S. Agribusiness Development and Entrepreneurship Training. *Advances in Agriculture Extension*, 176.
4. Usanga, U. J. (2021). Introduction to Agripreneurship. *Agricultural Technology for Colleges*, 638.

### **Recommended Reading Materials**

1. Anozie, R. O., Okoye, F. U., & Usanga, U. J. (2021). Teaching, Mentoring & Developing Agripreneurs. *Agricultural Technology for Colleges*, 656.
2. Choudhary, B. B., Sharma, P., Phand, S., Gupta, G., & Sharma, R. K. (2021). Agripreneurship Development on Value Added Fodder Products [E-book]. Hyderabad: National Institute of Agricultural Extension Management & ICAR-Indian Grassland and Fodder Research Institute, Jhansi (UP).
3. Garima, Dhingra, A., Contumely, P., & Cerchione, R. (2023). Factors and activities considered by first generation Agripreneurs for Agri-business sustainable development: a study of Haryana, India. *Sustainability*, 15(9), 7109.
4. Sudharani, V. (2012). Entrepreneurship development. Hyderabad: College of Agriculture.(Study material AEXT 391).

### **Journals**

1. International Journal of Scientific and Research Publications
2. Journal of Management Research and Development
3. Global Journal of Advanced Research
4. Journal of Agricultural Extension and Rural Development
5. Indian Journal of Agricultural Sciences

### **3. Research methods in Agribusiness and Value chains**

**Purpose:** To familiarize students with concepts and principles of agribusiness and value chain research to enable them to conduct research in food value chain management

#### **Expected Learning Outcomes**

By the end of this course, the learner should be able to:

1. Apply essential elements of research process in agribusiness and value chains
2. Evaluate various types of research designs
3. Demonstrate competence in writing of research proposals
4. Undertake a research in value chains development.

Overview of Research Methods: Problem Identification and Research Design; Methods of Data Collection and Analysis; Developing Research Proposal; Scientific Communication and Writing. Research in Value Chains: The Point of Entry for Value Chain Analysis; Mapping Value Chains and Adding Critical Information to the Map; Product Segmentation; Benchmarking Production Efficiency; Governance of Value Chains as research Component; Gender Disaggregated Research in Value Chain. Value Chain Modeling: Equilibrium Model; Value Chain Optimization and Simulation; Game Theory Analysis/ Experimental Economics.

#### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

#### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

#### **Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

#### **Core reading materials**

1. Creswell, J. W. (2002). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* Second Edition. New Delhi: Sage Publications Inc.
2. Hugos, M. H. (2024). *Essentials of supply chain management*. John Wiley & Sons.
3. Kombo, D. K. & Tromp, D. L. A. (2006). *Proposal and Thesis Writing*. Nairobi: Pauline Publications.
4. Legesse, B. (2014). Research Methods in Agribusiness and Value Chains. *School of Agricultural Economics and Agribusiness, Haramaya University*.
5. Masters, W. A., & Finaret, A. B. (2024). *Food Economics: Agriculture, Nutrition, and Health* (p. 476). Springer Nature.
6. Thakur, S., Wasnik, S. B., Sharma, P., Kush, B., & Nelson, R. (2024). *Agribusiness Management*. Taylor & Francis.

#### **Recommended reference materials**

1. Corallo, A., De Giovanni, M., Latino, M. E., & Menegoli, M. (2024). Leveraging on technology and sustainability to innovate the supply chain: a proposal of agri-food value chain model. *Supply Chain Management: An International Journal*, 29(3), 661-683.

2. Finizola e Silva, M., Van Schoubroeck, S., Cools, J., Aboge, D. O., Ouma, M., Olweny, C., & Van Passel, S. (2024). Local actors' perspectives on sustainable food value chains: evidence from a Q-methodology study in Kenya. *Journal of Environmental Studies and Sciences*, 14(1), 36-51.
3. Mutai, B. K. (2001). *How to Write Standard Dissertation: A systematic and simplified Approach*, First Edition. New York: Thelley Publications.
4. Petelin, R. & Durham, M. (2004). *The Professional Writing Guide: Writing well and knowing why*. Warriewood: Robert Coco.
5. Peter, C. B. (1994). *A Guide to Academic Writing*. Eldoret: Zapf Chancery.
6. Rudestam, K. E. & Newton, R. A. (2001). *Surviving your Dissertation: A Comprehensive Guide*

#### **Journals**

1. British Food Journal
2. Journal of Agribusiness in Developing and Emerging Economies
3. Supply Chain Management
4. Journal of Agribusiness in Developing and Emerging Economies

#### **4. Food Processing Technology**

**Purpose:** To provide advanced knowledge and practical skills in food processing technologies

#### **Expected Learning Outcomes**

By the end of this course, the learner should be able to:

1. Analyse challenges in the field of food processing in order to propose appropriate solutions.
2. Develop new and improved food products for the general consumers and specialized groups.
3. Utilize knowledge and skills to manage food processing businesses.
4. Demonstrate understanding of safety and quality in food processing
5. Apply innovative skills in food processing technologies for sustainable development

#### **Course content**

Raw material processing and food preservation: Introduction to science of raw materials; Post harvesting physiology; Processing of plants and animal-based foods; Food preservation techniques. Product development and sensory evaluation: Introduction to food product development; Types of new food products; Stages in new foods product development; Sensory evaluation of food products. Food quality and safety: Biochemical and nutritional constituents of foods; Food microbiology; Food toxicology; Food additives; Functional foods; Food quality management. Food packaging: Introduction; Types and functions of packaging materials; Packaging requirements for different foods (environment, spoilage....)

#### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

#### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

#### **Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

### **Core reading materials**

1. Ali, S. A., & Fan, X. (Eds.). (2023). Handbook of food processing: Food preservation and shelf life. Wiley.
2. Bhandari, B., & Ziegler, G. R. (Eds.). (2023). Innovations in food processing technology. Wiley.
3. Clark, S., Partch, T., & Stewart, G. (2022). Food processing: Principles and applications. Wiley.
4. Fellows, P. J. (2023). Food processing technology: Principles and practice (4th ed.). Woodhead Publishing.
5. Galanakis, C. M. (Ed.). (2023). Sustainable food processing. Elsevier.
6. Varzakas, T., & Labropoulou, C. (Eds.). (2023). Handbook of food processing: Food processing and food engineering. CRC Press

### **Recommended reference materials**

1. Hartmann, R., & Evans, S. (2024). Modern food processing: Trends and developments. Elsevier.
2. Hui, Y. H. (Ed.). (2022). Handbook of food safety engineering. Wiley-Blackwell.
3. Karwe, R. M., & Pan, N. S. (Eds.). (2024). Advances in food processing and preservation. Wiley.
4. Kumar, P., & Jain, S. (Eds.). (2023). Food processing and technology: Advances and trends. CRC Press.
5. Kumar, S., & Sharma, N. (Eds.). (2024). Emerging technologies in food processing. Academic Press.
6. Lee, J., & Kumar, P. (Eds.). (2023). Food processing and biotechnology: Trends and innovations. Springer.
7. Raheja, K. D., & Gupta, M. K. (2023). Food quality assurance: Principles and practices. Springer.
8. Yanniotis, S. G., & Kulkarni, M. A. G. (Eds.). (2022). Food engineering: Innovations and technologies. CRC Press.
9. Zhang, H., & Zhao, Y. (Eds.). (2024). Food processing and engineering: Applications and innovations. Academic Press.

### **Journals**

1. International Journal of Food Science and Technology
2. African Journal of Food Science
3. Introduction to Food Engineering
4. Journal of Food Processing and Preservation
5. Journal of Nutrition & Food Sciences Open Access
6. Journal of Agricultural and Food Chemistry
7. Food Research International

## **5. Food Economics**

**Purpose:** To expose learners to the theory and practice of fundamental issues impacting food security.



**Expected Learning outcomes:**

By the end of this course, the learner should be able to:

- a) Apply the knowledge in the supply and demand dynamics of the food value chain
- b) Demonstrate an understanding of business decisions and consumer behaviour that affect a country's food system.
- c) Develop alternative economic policies relating to food security.
- d) Analyze the effect of fiscal and monetary policies on access to food.

**Course content**

Food supply and food demand: price, trade, technological progress; Market failure and foodborne risks, asymmetric information and moral hazard; Information economics and policy: the market for news; Elements of behavioural economics: risk perception, risk attitudes and consumer behaviour under uncertainty. A taxonomy of food policies: market vs. information measures: Information policies and social marketing; Fiscal policies: taxes and subsidies; Monetary Policies; Inflation; Interest and exchange rates; Regulations and food standards; Trade measures and non-tariff barriers. Quantitative policy analysis and empirical case studies: economic models for policy analysis.

**Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

**Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

**Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

**Core Reading Materials**

1. A. Barkley, (2016): The Economics of Food and Agricultural Markets, 2nd Edition.
2. Ali, S. A., & Fan, X. (Eds.). (2023). Handbook of food processing: Food preservation and shelf life. Wiley.
3. Bhandari, B., & Ziegler, G. R. (Eds.). (2023). Innovations in food processing technology. Wiley.
4. Bourlakis, M. A., & Weightman, P. W. (2004). Food Supply Chain Management.
5. Bourlakis, M. A., & Weightman, P. W. (2004). Food Supply Chain Management.
6. Melika Husic, Slavo Kukic & Muric Cicic (2012): Consumer Behaviour.
7. W.A. Masters and Amelia B. Finaret (2024): Food Economics: Agriculture, Nutrition and Health.

**Recommended Reference Materials**

1. Feller, A., Shunk, D. & Callarman, T. (2006). Value chains vs. supply chains. BP Trends, March 2006 (available at <http://www.ceibs.edu/knowledge/papers/images/20060317/2847.pdf>).

2. Global Policy Report, (2024). The Economics of the Food System Transformation. Food System Economics Commission (FSEC).
3. Hobbs, J.E., Cooney, A. & Fulton, M. (2000). Value chains in the agri-food sector. Saskatoon, Saskatchewan, Canada, College of Agriculture, University of Saskatchewan.
4. Roosen, J. (2019): A Modern Guide to Food Economics.
5. Sanchez, A. (2024) World Food Policy, Vol. 10.

### **Journals**

1. Journal of Economic Perspectives (American Economic Association)
2. Journal of Economic Review (Elsevier Publishing)
3. Food security Journal
4. Journal of Food Measurement and Characterization
5. Journal of Food service Business Research

## **6. Food Quality Management**

**Purpose:** To provide learners with the skills and techniques for safeguarding product quality along the value chain

### **Expected Learning Outcomes**

By the end of the course the learner should be able to:

- (a) Demonstrate an understanding of key regulations governing food quality management.
- (b) Describe the various contaminants in products along the value chain.
- (c) Carry out laboratory studies for quality control measures.
- (d) Apply the techniques relevant to assessing product quality.

### **Course Content**

Total quality management principles & their application in ensuring product quality & safety. Development of food safety programs & auditing of these. International & national food regulatory systems. The development of & scientific basis for food regulations. Food Quality Management Systems with emphasis on Hazard Analysis Critical Control Point (HACCP) concept. Personal Hygiene. Cleaning. Water supply. Chemical and biological contaminants in food and water. Food poisoning. Infection Biology. Epidemiology. Investigation of food-borne outbreaks. Quality planning, quality control and quality assurance. Traceability and emergency preparedness. Deviations and corrective measures. Auditing and documentation. Certification and accreditation. Quality costs. Quality improvement. Environmental hygiene and management. Internal control. Current issues in food safety. Applied risk analysis.

### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

### **Core Reading Materials**

1. Alli, I. (2003). Food quality assurance: principles and practices. CRC Press.
2. Kafetzopoulos, D. P., & Gotzamani, K. D. (2014). Critical factors, food quality management and organizational performance. *Food control*, 40, 1-11.
3. Kumar, S. (2024). Food Quality Management: Textbook for UG & PG Students.
4. Luning, P. A., Marcelis, W. J., & Jongen, W. M. (2002). Food quality management: a techno-managerial approach (pp. 323pp).

### **Recommended Reading materials**

1. Barendsz, A. W. (1998). Food safety and total quality management. *Food control*, 9(2-3), 163-170.
2. Bilska, A., & Kowalski, R. (2014). Food Quality and Safety Management. *LogForum*, 10(3).
3. Early, R. (2012). *Guide to quality management systems for the food industry*. Springer Science & Business Media
4. Luning, P., & Marcelis, W. (2020). Food quality management: technological and managerial principles and practices. In *Food quality management*. Wageningen Academic.

### **Journals**

1. African Journal of Food, Agriculture, Nutrition and Development,
2. Journal of Small Business and Enterprise Development,
3. Slovak Journal of Food Sciences,
4. International Food Research Journal

## **7. Gender and Value Chain Management**

**Purpose:** To equip learners with skills and knowledge on role of gender equity in food value chain management

### **Expected Learning Outcomes**

By the end of the course, the learner should be able to:

- (a) Explain the policy related issues in gender mainstreaming systems
- (b) Analyze gender sensitive indicators in food value chain management
- (c) Demonstrate an understanding of gender equity in promoting food Value Chains
- (d) Demonstrate the ability to integrate the aspects of gender in food value chain management

### **Course content**

Gender and Value Chain Interventions: The Concept of Gender; Poverty and Gender Inequality in Agriculture; Gender Division of Labour; Practical and Strategic Gender Needs; Facilitating Gender Equitable Value Chain Development. Gender Analysis Framework / Tools: Harvard Analytical Framework; The Moser Framework; The Gender Analysis Matrix (GAM) Framework; Women's Equality and Empowerment Framework; The Capacities and Vulnerabilities Analysis (CVA) Framework; The Social Relations Approach Framework (SRA). Gender mainstreaming in value chain management: Gender Sensitive Indicators and Why They are Useful; Why Focus on Gender Equity in Agricultural Value Chains; Gender Mainstreaming Systems. Policy Issues Related with Gender: The Issue of Gender in International and National Policy Packages: Gender-

Related Sustainable Development Goals; Policy Briefs and Case Studies on Gender and Value Chain Development

### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

### **Core Reading Materials**

1. Coles, C., & Mitchell, J. (2011). Gender and agricultural value chains: A review of current knowledge and practice and their policy implications.
2. Laven, A., & Verhart, N. (2011). Addressing gender equality in agricultural value chains: Sharing work in progress. *Nijmegen, The Netherlands*. 17pp.
3. Quisumbing, A., Heckert, J., Faas, S., Ramani, G., Raghunathan, K., Malapit, H., & pro-WEAI for Market Inclusion Study Team Hazel Malapit Jessica Heckert Sarah Eissler Simone Faas Elena Martinez Emily Myers Audrey Pereira Agnes Quisumbing Catherine Ragasa Kalyani Raghunathan Deborah Rubin Greg Seymour. (2021). Women's empowerment and gender equality in agricultural value chains: evidence from four countries in Asia and Africa. *Food Security*, 13, 1101-1124.
4. Rubin, D., & Manfre, C. (2014). Promoting gender-equitable agricultural value chains: Issues, opportunities, and next steps. *Gender in agriculture: Closing the knowledge gap*, 287-313.

### **Recommended Reading materials**

1. Farnworth, C. R. (2011, September). Gender-aware value chain development. In *UN Women Expert Group Meeting: Enabling Rural Women's Economic Empowerment: Institutions, Opportunities and Participation, Accra, Ghana* (pp. 20-23).
2. Kini, J. (2022). Gender-aware inclusive value chain: A theoretical perspective. *Frontiers in Sustainable Food Systems*, 6, 1047190.
3. Olaomo, O. K., & Molnar, J. J. (2022). Building an Inclusive Value Chain: Gender Participation in Cassava Marketing and Processing in Nigeria. *Environ. Sci. Ecol. Curr. Res*, 3, 1078.
4. Pyburn, R., & Kruijssen, F. (2020). Gender dynamics in agricultural value chain development: Foundations and gaps. *Routledge handbook of gender and agriculture*, 32-45.

### **Journals**

1. Journal of Cleaner Production
2. Enterprise Development and Microfinance Journal.

3. Journal of rural studies
4. Frontiers in Sustainable Food Systems

## **8. Project Planning and Management**

**Purpose:** To equip learners with knowledge and skills to undertake Food Value Chain Project Planning Management, Monitoring, Evaluation and Learning.

### **Expected Learning Outcomes**

By the end of the course, the learner should be able to:

1. Apply logical framework approach to agricultural project planning
2. Conduct Cost Benefit Analysis of agricultural development projects
3. Demonstrate an understanding of how to monitor and evaluate food value chain projects
4. Demonstrate the use of appropriate project scheduling techniques.
5. Develop performance measurement framework for a project proposal.
6. Undertake impact assessment of VC and market linkages

### **Course content**

The Project Concept; Project Life Cycle; Agriculture Value Chain Project Design: Formulation of the project goal statement; Project causal pathway design; Development of a logical framework to Project Planning; Agricultural Research Planning; Strategic Planning; Economic Analysis of Agricultural Development Projects through CBA; Welfare Economics/Political Economy of Project Analysis and Appraisal; Project Scheduling Techniques; Monitoring and Evaluation of VC Development Projects: Selection of Key Indicators; Development of Performance Measurement Framework; Evaluation of VC and Market Linkages Projects; Impact Assessment of VC and Market Linkages Projects.

### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker and projector.

### **Core reading materials**

1. Bourlakis, M. A., & Weightman, P. W. (2004). Food Supply Chain Management.
2. Burke, R. (2013). Project management: planning and control techniques. John Wiley & Sons.
3. Hugos, M. H. (2024). *Essentials of supply chain management*. John Wiley & Sons.
4. Sapna A. Narula, S. P. Raj (2023). *Sustainable Food Value Chain Development: Perspectives from Developing and Emerging Economies*. Springer Singapore
5. Pullman, M., & Wu, Z. (2021). *Food supply chain management: building a sustainable future*. Routledge.

### **Recommended reference materials**

1. Akroyd, H. D. (2017). *Agriculture and rural development planning: A process in transition*. Routledge.
2. Akkerman, R., & Cruijssen, F. (2024). Food loss, food waste, and sustainability in food supply chains. In *Sustainable supply chains: a research-based textbook on operations and strategy* (pp. 219-239). Cham: Springer International Publishing.
3. Anandajayasekeram, P., Van Rooyen, C. J., & Liebenberg, F. (2004). *Agricultural project planning and analysis: a sourcebook*. University of Pretoria, South Africa
4. Graef, F., Sieber, S., Mutabazi, K., Asch, F., Biesalski, H. K., Bitegeko, J., & Uckert, G. (2014). Framework for participatory food security research in rural food value chains. *Global Food Security*, 3(1), 8-15.
5. Petit, G., Sablayrolles, C., & Yannou-Le Bris, G. (2018). Combining eco-social and environmental indicators to assess the sustainability performance of a food value chain: A case study. *Journal of Cleaner Production*, 191, 135-143.

### **Journals**

1. International Journal of Physical Distribution & Logistics Management
2. Sustainability
3. Journal of Cleaner Production
4. Global Food Security

## **9. Seminar in Agribusiness and Value Chain Management**

**Purpose:** To impart knowledge on contemporary issues in agribusiness and value chain management

### **Expected Learning Outcomes:**

By the end of the course, the learner should be able to:

- a) Demonstrate a clear understanding of value chain management
- b) Apply the skills acquired in addressing challenges faced in the management of value chains
- c) Evaluate the effectiveness of the current approaches in agribusiness management
- d) Analyze existing economic policies governing agribusiness and value chain management

### **Course Content**

The course is expected to cover topics related to current issues and advances in agribusiness and value chain management such as policies, technologies, economic, social and environmental feasibilities as well as challenges and opportunities at national and international levels.

### **Mode of Delivery**

Course delivery will be through lectures, group discussions, case studies, demonstrations and illustrations.

### **Course Assessment**

Assessment will include end of semester project examination (60%) and assignments, case studies or group presentations for assessment (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

### **Core Reading Materials**

1. Alan de Brauw, Erwin Bulte (2021): African Farmers, Value Chains and Agricultural Development.
2. Barnard, F. (2019): Agribusiness Management.
3. Beierlein, J. (2012): Introduction to Agribusiness Management. 4th Edition
4. Gokhan Egilmez (2018): Agricultural Value Chain Hardcover. Publisher: IntechOpen (April 26, 2018) ISBN-10 : 1789230063
5. John Stanton, Rosa Caiazza, Usha Iyer-Raniga (2023): Agricultural Value Chains - Some Selected Issues, ISBN978-1-83768-513-4.
6. Swati Malhotra, Alan de Brauw, Erwin Bulte, and Evgeniya Anisimova (2021): Improving African agricultural value chains to boost production and revenue.
7. Thakur N. (2023): Innovative Strategies in Agribusiness Management.

### **Recommended Reference Materials**

1. Collins, R., Dent, B. & Bonney, L. (2015): A Guide to Value Chain Analysis and Development for Overseas Development Assistance Projects.
2. Dent, B., Collins, R. (2021): A manual for agribusiness value chain analysis in developing countries.
3. Devaux, André, ed. Torero, Maximo, ed. Donovan, Jason, ed. Horton, Douglas E., ed. (2016): Innovation for inclusive value-chain development: Successes and challenges. International Food Policy Research Institute (IFPRI).
4. Hellin (2006): Guidelines for Value Chain Analysis.
5. Kaplinsky, R. (2000): A Handbook for Value Chain Research.

### **Journals**

1. Journal of Economic Perspectives (American Economic Association)
2. Journal of Economic Review (Elsevier Publishing)
3. Journal of Agricultural Economics
4. Journal of Value Chain Analysis
5. Sustainability

## **10. Crop, Livestock and Fish Value Chain Management**

**Purpose:** To impart skills and knowledge required to manage key food value chains

### **Expected Learning Outcomes**

By the end of the course, the learner should be able to:

- a. Demonstrate an understanding of the post-harvest changes taking place in crop products
- b. Describe the types of losses in key food value chains
- c. Describe the processing techniques for key food value chains
- d. Discuss quality assurance measures in key food value chains

Principles of crops, livestock and fisheries production and their supply chains; processing methods of agricultural products; post-harvest changes taking place in crop products; estimating the post-harvest losses in crop products; types of losses in livestock and fisheries products resulting from

poor processing and preservations; post-harvest and processing facilities for crops, livestock and fisheries products; estimating the viability of different agricultural products processing techniques; monitoring and evaluation of safety and quality assurance measures in harvesting, transporting, processing, storage, grading, packaging, standardization and marketing of agricultural products locally and abroad; agro-logistics requirements of crops, livestock, and fisheries products; political, environmental, social, technological, legal, and economic (PESTLE) analysis for crop, livestock and fisheries value chain management.

### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker and projector.

### **Core reading materials**

1. Gokhan Egilmez (Ed.) (2018). Agricultural Value Chain Hardcover. Publisher. IntechOpen ISBN-10: 1789230063
2. Swati Malhotra, Alan de Brauw, Erwin Bulte, and Evgeniya Anisimova (2021). Improving African agricultural value chains to boost production and revenue.
3. Alan de Brauw, Erwin Bulte (2021) African Farmers, Value Chains and Agricultural Development.
4. John Stanton, Rosa Caiazza, Usha Iyer-Raniga. (Eds.) (2023). Agricultural Value Chains - Some Selected Issues.
5. Krishna M. Singh, M. Meena, R. Singh (2012). Livestock Value Chains: Prospects, Challenges and Policy Implications for Eastern India.
6. Sapna A. Narula, S. P. Raj (Eds.) (2023). Sustainable Food Value Chain Development: Perspectives from Developing and Emerging Economies.

### **Recommended reference materials**

1. Calvin Miller, Linda Jones (2010). Agricultural Value Chain Finance - Tools and Lessons. . Publisher: Food and Agriculture Organization of the United Nations (FAO), Practical Action Publishing Ltd.
2. Benjamin Dent, Ray Collins (2021). A manual for agribusiness value chain analysis in developing countries.
3. Kurtz, Julie E.; Mitik, Lulit; and Zaki, Chahir. (2021). African trade in livestock products and value chains. In Africa agriculture trade monitor. Bouët, Antoine; Tadesse, Getaw; and Zaki, Chahir (Eds.). Chapter 4, Pp. 85-133. Kigali, Rwanda; and Washington, DC: AKADEMIYA2063; and International Food Policy Research Institute (IFPRI).
4. Kwame Oppong-Anane (2016). Review of the livestock/meat and milk value chains and policy influencing them in Ghana. Publisher FAO.



5. Devaux, André, ed. Torero, Maximo, ed. Donovan, Jason, ed. Horton, Douglas E., (Eds.). (2016). Innovation for inclusive value-chain development: Successes and challenges. International Food Policy Research Institute (IFPRI).
6. Mark Polycarp (2016). Analysis of Fish Value Chain Paperback. Publisher: LAP LAMBERT Academic Publishing. ISBN-10: 3330010398.
7. Trond Bjørndal, Anna Child, Audun Lem (2014). Value chain dynamics and the small-scale sector Policy recommendations for small-scale fisheries and aquaculture trade. ISBN 978-92-5-108178-5 E-ISBN 978-92-5-108179-2 (PDF) © FAO.

### **Journals**

1. Journal of Food Science
2. Food Microbiology journal
3. International Journal of Food Microbiology
4. Foods
5. Food policy
6. Journal of Arid Environments
7. Marine Policy
8. International Journal of Advanced Scientific Research and Innovation
9. Sustainability
10. Fishes

## **11. Digital Technologies for Agri-Food Systems**

**Purpose:** To equip students with cutting-edge knowledge and practical skills in applying digital technologies in the agri-food sector

### **Expected learning outcomes**

By the end of the course, the learner should be able to:

1. Demonstrate an understanding of the role of digital technologies within the agri-food value chain
2. Apply digital technologies for improving precision agriculture
3. Apply blockchain technology in enhancing food safety within the agri-food value chain
4. Apply digital platforms to enhance agricultural extension services
5. Analyze the role of digital marketplaces in the agri-food chain

### **Course content**

Introduction to Digital Technologies in Agri-food Value Chain Systems: Overview of digital technologies in agriculture; Digital transformation in agri-food systems: global vs *country* context; Challenges and opportunities in African agriculture. Data Science and Analytics for Agri-food Value Chain Systems: Principles of data science in agri-food value chain systems; Remote sensing and GIS for precision agriculture; Big data analytics and its application in crop forecasting and pest management. IoT and Sensor Technologies in Agri-food Value Chain Systems: Introduction to IoT and sensors in farming; Design and deployment of sensor networks for soil, climate, and crop monitoring; Data management and analysis for informed decision-making. Smart Farming and Precision Agriculture: Principles of precision agriculture; Digital tools and technologies for site-specific crop management; Case studies: Success stories of precision farming in *country*.

Agricultural Robotics and Automation: Overview of robotics in agriculture; Drones in crop monitoring and spraying; Autonomous tractors and robotic harvesters: Prospects for *country*. Blockchain for Traceability in the Agri-Food Chain: Introduction to blockchain technology; Applications of blockchain for food safety and traceability; Case studies on blockchain adoption in *country* agri-food systems. Digital Extension Services and Farmer Digital Literacy: Digital platforms for agricultural extension services; Strategies for enhancing digital literacy among farmers; Role of mobile technologies in reaching remote farmers. Digital Platforms for Market Access and Agri-Finance: Digital marketplaces for enhancing access to markets for smallholder farmers; Digital financial services (DFS) in agriculture: Opportunities and challenges; The role of mobile technology in providing agricultural advisory services. Innovation and Entrepreneurship in Agri-Tech: Ecosystem for agri-tech startups in *country*; Funding and scaling agri-tech solutions; Policy and regulatory environment for agri-tech innovation

### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker, Insect specimens, dissecting kit, computer and projector.

### **Core reading materials**

1. "Digital Agriculture: Concepts and Strategies" by Ali Gholami
2. "Digital Transformation in Agriculture" edited by Luiz Moutinho, Paulo Cortez, & Begoña Pino
3. "Data Science for Agriculture" by Katharina A. Schramm & Robert P. Shumway
4. "Big Data Analytics in Genomics" edited by Ka-Chun Wong, David Zhang, & Tao Jiang
5. "Internet of Things in Agriculture" edited by Jyotir Moy Chatterjee & Debanjan Das
6. "Wireless Sensor Networks for Agriculture" by Umesh Kumar Singh & Dharma P. Agrawal
7. "Precision Agriculture Technology for Crop Farming" edited by Qin Zhang & Heping Zhu

### **Recommended reference materials**

1. "Smart Farming Technologies for Sustainable Agricultural Development" edited by Ashok Kumar & Anupam Mishra
2. "Agricultural Automation: Fundamentals and Practices" by Qin Zhang & Heping Zhu
3. "Robotics in Agriculture and Forestry" edited by Dan Zhang, Yan Li, & Srikanta Patnaik
4. "Blockchain for Business Applications" by Vincenzo Morabito
5. "Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies is Changing the World" by Don Tapscott & Alex Tapscott
6. "Digital Technologies for Agricultural and Rural Development in the Global South" edited by Torbjörn Fredriksson

7. "Agricultural Extension Reforms in South Asia: Status, Challenges, and Policy Options" edited by David J. Spielman & Rajju R. Vyas
8. "Digital Finance: The New Frontier" edited by Douglas W. Arner, Janos Barberis, & Ross P. Buckley
9. "Digital Marketing in the Food Sector" by Monika Koller
10. "Innovative Business Models for Smallholder Farmers: A Case Study of Agricultural Entrepreneurs in Africa" by Catherine Mungai
11. "Startup Opportunities: Know When to Quit Your Day Job" by Sean Wise and Brad Feld

## **Journals**

- 1.
- 2.
- 3.
- 4.
- 5.

## **12. Sustainability of commodity and food value chains**

**Purpose:** To equip learners with skills to apply principles of sustainable food production and agro-ecosystems management in food value chains.

### **Expected Learning Outcomes**

By the end of the course, the learner should be able to:

- a. Apply skills and knowledge of sustainable food production practices
- b. Analyze the principles that guide sustainable food value chain development
- c. Demonstrate an understanding of sustainable energy use in food value chains
- d. Integrate socio-ethical considerations in food production

### **Course Content**

Introduction to Sustainability and Food Systems: Definition of sustainability; Overview of the food value chain; Importance of sustainable food production. Sustainable energy and Food value chain: Energy consumption in agriculture; Greenhouse gas emissions from food systems; Production (solar, wind, and biomass energy in agriculture); Energy-efficiency (production, processing and transportation). Sustainable Practices in food value chain: Agroecology; Organic farming techniques; Water usage and pollution in food production; Precision agriculture; Smart farming technologies; Cold chain management and food preservation; Sustainable packaging and distribution systems. Food Waste Reduction and Resource Management: Causes and consequences of food waste; Strategies for reducing food loss and waste; Resource recovery and circular economy approaches. Ethical and Social Considerations in Food Production: Fair trade and ethical sourcing; Labor rights and social justice in agriculture; Environmental Standards; Cost-benefit analysis of sustainable practices; Market incentives for sustainability. Case Studies and Best Practices. Project Work and Présentations

### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker and projector.

### **Core reading materials**

1. Altieri, M.A., Nicholls, C.I., Henao, A. & Lana, M.A. (2015). Agro ecology and the design of climate change-resilient farming systems. *Agronomy for Sustainable Development*, 35(3): 869-90.
2. Antle, J.M. & Capalbo, S.M. (2010). Adaptation of Agricultural and food systems to climate change: An economic and policy perspective. *Applied Economic Perspectives and Policies*, 32(3): 386-416.
3. Bockel, L. & Schiettecatte, L.S. (2017). Life Cycle analysis and the carbon footprint of coffee value chains. Rome.
4. Gokhan Egilmez (2018): Agricultural Value Chain Hardcover. Publisher: IntechOpen (April 26, 2018) ISBN-10 : 1789230063
5. John Stanton, Rosa Caiazza, Usha Iyer-Raniga (2023): Agricultural Value Chains - Some Selected Issues, ISBN978-1-83768-513-4.
6. Lipper, L., Thornton, P., Campbell, B.M., Baedeker, T., Braimoh, A., Bwalya, M., Caron, (2014). Climate-smart agriculture for food security. *Nature Climate Change*, 4(12): 1068–1072

### **Recommended reference materials**

1. Dent, B., Collins, R. (2021): A manual for agribusiness value chain analysis in developing countries.
2. Collins, R., Dent, B. & Bonney, L. (2015): A Guide to Value Chain Analysis and Development for Overseas Development Assistance Projects.
3. Feller, A., Shunk, D. & Callarman, T. 2006. Value chains vs. supply chains. BPTrends, March 2006 (available at <http://www.ceibs.edu/knowledge/papers/images/20060317/2847.pdf>).
4. Hobbs, J.E., Cooney, A. & Fulton, M. 2000. Value chains in the agri-food sector. Saskatoon, Saskatchewan, Canada, College of Agriculture, University of Saskatchewan.
5. "Precision Agriculture Technology for Crop Farming" edited by Qin Zhang & Heping Zhu
6. "Smart Farming Technologies for Sustainable Agricultural Development" edited by Ashok Kumar & Anupam Mishra

### **Journals**

1. African Journal of Food, Agriculture, Nutrition and Development
2. African Journal of Economic and Sustainable Development
3. International Journal of Agricultural Sustainability
4. British Food Journal
5. Global Environmental Change

### **Year 2**

### **13. Research and Thesis**

**Purpose:** To identify and innovatively solve societal problem related to food value chain management

### **Expected Learning Outcomes**

By the end of the course, the learner should be able to:

1. Apply acquired skills to write a scientific proposal
2. Conduct scientific research
3. Disseminate research findings
4. Defend research work during an oral examination

### **Course Content**

Each student, in consultation with supervisors, will choose a relevant topic in Food Value Chain Management. Before embarking on research, the student will be required to prepare a proposal, which will be approved by the department. At the end of the research, the candidate will write and submit a thesis for examination according to the regulations of the Board of Postgraduate Studies of South Eastern Kenya University.

### **Mode of Delivery**

Course delivery will be through lectures, class discussions, demonstrations and illustrations and laboratory sessions.

### **Course Assessment**

Assessment will include end of semester examination (60%) and continuous assessment tests (40%).

### **Instructional Materials**

Materials required include white-board, white-board marker, computer and projector.

### **Core reading materials**

1. Centria University of Applied Sciences (2016). Guide for Thesis and Academic Writing. Publisher: Centria University of Applied Sciences. ISBN: 978-952-7173-06-0.
2. Ndalawha, M. M (2019). Practical Handbook to Dissertation and Thesis Writing. NMM Printers. ISBN: 978-9976-59-470-6
3. Oliver P. (2014). Writing your thesis. SAGE Publications Ltd. ISBN: 9781446294994
4. Harman, E., Montagnes, I., McMenemy, S., & Bucci, C. (Eds.). (2003). The Thesis and the Book: A Guide for First-Time Academic Authors. University of Toronto Press. <http://www.jstor.org/stable/10.3138/9781442689350>

### **Recommended reference material**

1. Hiba Mohamed Elawad (2017). Writing a Scientific Research Proposal. <https://www.researchgate.net/publication/312534529> DOI: 10.13140/RG.2.2.14627.04642.
2. Ranjit Kumar (2011). Research Methodology: A step-by-step guide for beginners. 3<sup>rd</sup> Edition. SAGE Publishers. Los Angeles/London/New Delhi/Singapore/Washington DC.
3. Ridley, D. (2008). The literature Review; a step-by-step guide for students. Sage Publishers, London. Wolcott, H.F. (2001). Writing up qualitative research, 2<sup>nd</sup> Edition. Sage Publishers, London.

**Journals**

1. Supply Chain Management: An International Journal
2. British Food Journal
3. Journal of Agribusiness in Developing and Emerging Economies
4. Supply Chain Management
5. Journal of Agribusiness in Developing and Emerging Economies

## 4.0 APPENDICES

### 4.1 Appendix I: Physical facilities

Facility	Quantity	Capacity	Usage
Postgraduate ICT lab	1	50	Postgraduate students
Lecture rooms	Over 20	30 each	shared
Lecture offices	4	Each 4	Staff Computer
Internet access	Wireless	> 1500	All students
Other ICT Laboratory	3	100	Shared

### 4.2 Appendix II: Equipment and Teaching Materials

S/N0.	Item	Quantity	Description
1.	Desktops	200	Shared
2.	Projectors	>r 10	Epson, shared
3.	Public Address system 1 Shared	1	Shared
4.	Server Room	1	-
5.	Lecture Theatres	2	Capacity of over 200

### 4.3. Appendix III: Core Textbooks

### 4.4 Appendix IV: Academic staff

S/N	Staff Name	Discipline	Academic rank	Teaching Experience (Years)
1.				
2.				
3.				
4.				

<b>S/N</b>	<b>Staff Name</b>	<b>Discipline</b>	<b>Academic rank</b>	<b>Teaching Experience (Years)</b>
4.				
5.				
6.				
7.				
10.				
11.				

#### **4.5 Appendix V: Technical/support staff**

<b>S/N</b>	<b>Staff Name</b>	<b>Discipline</b>	<b>Academic rank</b>	<b>Work Experience (Years)</b>
1.				
2.				
3.				
4.				



#### **4.6 Appendix VI: SEKU/MR/OP/033: Procedure for programme development and review**

AUTHORIZATION: This procedure has been issued under the authority of: DVC- ARSA	
TITLE/POSITION:	DVC- ARSA
SIGNATURE:	
DATE OF ISSUE:	JANUARY 2017
DOCUMENT CONTROL	
ISSUE NO	03
REVISION NO	02
Controlled issue of this procedure will be final in case of dispute	
SEKU	DVC-ARSA

#### **1.0 PURPOSE**

To ensure that demand driven programs are developed in accordance with the University regulations and CUE academic programs quality assurance guidelines

#### **2.0 SCOPE**

The procedure covers all aspects of the development of academic programs from training needs assessment up to approval by the University.

#### **3.0 REFERENCES**

1. SEKU Quality Manual **SEKU/MR/QM/01**
2. SEKU Academic Programs Quality Assurance Policy **SEKU/ARSA/ACD/15**
3. CUE Academic Programs Quality Assurance Guidelines
4. SEKU Code of Conduct and Professional Ethics

#### **4.0 TERMS DEFINITIONS AND ABBREVIATIONS**

**VC** – VICE CHANCELLOR

**DVC** – DEPUTY VICE CHANCELLOR

**ARSA**- ACADEMIC RESEARCH AND STUDENT AFFAIRS

**ASA** – ACADEMIC AND STUDENT AFFAIRS

**CODS** – CHAIRMAN OF DEPARTMENTS

**CUE** – COMMISSION FOR UNIVERSITY EDUCATION

**ER** – EXTERNAL REVIEWER

## **5.0 RESPONSIBILITIES**

The Dean and the CODs shall have the principal responsibility of ensuring that the procedure is fully implemented.

## **6.0 PROCEDURE DETAILS**

### **6.1. Program development.**

- 6.1.1. The Departmental Board identifies training or academic need and discusses its relevance to the community.
- 6.1.2. The Departmental Board Constitutes a Drafting Committee headed by a member of staff from the Department with good knowledge and specialization in the area.
- 6.1.3. The Drafting Committee, develops the Programme with its Regulations and Syllabus in consultations with relevant stakeholders, specialists and other University Departments
- 6.1.4. The Drafting Committee tables the Draft Programme in the Departmental Board for discussion and identification of at least three (3) external peer reviewers, who are asked to forward their CVs.
- 6.1.5. The COD forwards the recommended CVs of at least two ER's to the DVC-ARSA for appointment.
- 6.1.6. The COD sends the Discussed Draft Programme to the ER's who makes recommendations and sends the programme back to the COD who forwards a copy to DVC -ARSA through the school Dean within one month.
- 6.1.7. The COD tables the ER report to the Departmental Academic Board for discussion and action and thereafter forwards to the School Academic Board for discussions and recommendations.
- 6.1.8. The Dean Forwards the Programme to DVC-ARSA for tabling in Deans Committee after which it is tabled through DVC- ARSA to the Senate for approval.

### **6.2. Program review**

- 6.2.1. The COD calls for a departmental Board meeting to discuss need to review a program.
- 6.2.2. The Departmental Board Constitutes a review Committee headed by a member of staff from the Department with good knowledge and specialization in the area.
- 6.2.3. The review Committee, consultants with relevant stakeholders, specialists, and other University Departments
- 6.2.4. The review Committee tables the Programme with comments in the Departmental Board for discussion and identification of at least three (3) external peer reviewers, who are asked to forward their CVs.

- 6.2.5. The COD forwards the recommended CVs of at least two ER's to the DVC-ARSA for appointment.
- 6.2.6. The COD sends the Discussed Programme to the ER's who makes recommendations and sends the programme back to the COD.
- 6.2.7. The COD forwards a copy to DVC – ARSA through the school Dean for tabling in Deans Committee.
- 6.2.8. The program is tabled in Senate for approval.

#### 4.7 Appendix VII: SEKU/MR/OP/ 082. Procedures for credit transfer

AUTHORIZATION: This procedure has been issued under the authority of: DVC - ARSA	
TITLE:	DVC- ARSA
SIGNATURE:	
DATE OF ISSUE:	JANUARY 2017
DOCUMENT CONTROL	
ISSUE NO	03
REVISION NO	02
Controlled issue of this procedure will be final in case of dispute	
SEKU	DVC-ARSA

##### 1.0 Purpose

To outline the steps undertaken in processing and awarding of credit transfer

##### 2.0 Scope

This includes; Internal and External Credit Transfer

##### 3.0References

SEKU ISO QMS Manual

SEKU Examination Rules and Regulations

SEKU Service Charter

SEKU Statutes

##### 4.0 Definition of terms

For the purpose of this procedure, the definition in SEKU ISO QMS will apply.

##### 5.0 Responsibilities

The DVC –ARSA shall ensure this procedure is implemented.

#### 6.0 PROCEDURE DETAILS

##### 6.1 Internal Credit Transfer

6.1.1 The Registrar (ASA) receives a written request by a student.

6.1.2 Examination Officer with guidance of Registrar (ASA) writes to the Dean of the School to provide the students marks.

6.1.3 Upon receiving the marks, the examination officer sends the marks to the Dean where the student has moved to requesting for recommendation on the credit transfer.

- 6.1.4 The Current Dean of School then writes to Registrar (ASA) giving the requested recommendation.
- 6.1.5 Based on the recommendation from the current School, the registrar writes to the Student informing him/her on the credits earned.
- 6.1.6 Registrar (ASA) writes to the Dean of School to incorporate the credits earned in the student's data base.

## **6.2 External Credit Transfer**

- 6.2.1 The Registrar (ASA) receives a written request by a student.
- 6.2.2 The Registrar (ASA) writes to the University where the student is transferring from requesting for the student Academic records.
- 6.2.3 Upon receiving the student's grades and marks the registrar (ASA) forwards to the Dean of School for credit transfer recommendation.
- 6.2.4 The Dean of the School on behalf of Deans Committee makes recommendation on the credits to be given.
- 6.2.5 The registrar (ASA) writes to the student on the approved credits.
- 6.2.6 Registrar (ASA) writes to the Dean of the School to incorporate the bought credits in the student Database/records.

#### **4.8 Appendix VIII: SEKU/MR/OP/ 083 Procedures for appeals on examination results**

AUTHORIZATION: This procedure has been issued under the authority of: DVC - ARSA	
TITLE:	DVC- ARSA
SIGNATURE:	
DATE OF ISSUE:	JANUARY 2017
DOCUMENT CONTROL	
ISSUE NO	03
REVISION NO	02
Controlled issue of this procedure will be final in case of dispute	
SEKU	DVC-ARSA

#### **1.0 Purpose**

To outline the steps undertaken in processing appeals mechanism on examination results

#### **2.0 Scope**

This includes Remarking, verification of results.

#### **3.0 References**

SEKU ISO QMS Manual  
SEKU Examination Rules and Regulations  
SEKU Service Charter  
SEKU Statutes

#### **4.0 Definition of terms**

For the purpose of this procedure, the definition in SEKU ISO QMS will apply.

#### **5.0 Responsibilities**

The DVC –ARSA shall ensure this procedure is implemented.

### **6.0 PROCEDURE DETAILS**

#### **6.1 Remarking**

- 6.1.1 Registrar (ASA) receives a written request from a student.
- 6.1.2 Once the remarking is approved, Registrar (ASA) writes to the student requesting for remarking fee for the remarking to be done.

- 6.1.3 After the student has paid the Remarking fee, Registrar (ASA) writes to the Chairman of the Department to appoint the examiner.
- 6.1.4 After remarking, the Chairman of the department forwards the marks to the Registrar (ASA).
- 6.1.5 Registrar (ASA) prepares a brief to Vice-Chancellor to approve the new marks on Behalf of the Senate.
- 6.1.6 Registrar (ASA) upon approval of the new marks writes to the Dean of School to implement the new student marks.
- 6.1.7 Registrar (ASA) writes to the student informing her/him of the new marks.

#### **6.2 Verification of results**

- 6.2.1 Registrar (ASA) receives a written request from a student.
- 6.2.7 Examination officer with guidance of Registrar (ASA) writes to the dean of School to verify the student's results status. Upon verification, Registrar (ASA) writes to the student on his/her examination results status on the student Database/records.

### **4.9 Appendix IX: Master of Science in Food Value Chain Situational Analysis**

**Appendix V: SEKU/MR/OP/ 082. Procedures for credit transfer**

AUTHORIZATION: This procedure has been issued under the authority of: DVC - ARSA	
TITLE:	DVC- ARSA
SIGNATURE:	
DATE OF ISSUE:	JANUARY 2017
DOCUMENT CONTROL	
ISSUE NO	03
REVISION NO	02
Controlled issue of this procedure will be final in case of dispute	
SEKU	DVC-ARSA

**3.0 Purpose**

To outline the steps undertaken in processing and awarding of credit transfer

**4.0 Scope**

This includes; Internal and External Credit Transfer

**3.0References**

SEKU ISO QMS Manual

SEKU Examination Rules and Regulations

SEKU Service Charter

SEKU Statutes

**7.0 Definition of terms**

For the purpose of this procedure, the definition in SEKU ISO QMS will apply.

**8.0 Responsibilities**

The DVC –ARSA shall ensure this procedure is implemented.

**9.0 PROCEDURE DETAILS****9.1 Internal Credit Transfer**

9.1.1 The Registrar (ASA) receives a written request by a student.

9.1.2 Examination Officer with guidance of Registrar (ASA) writes to the Dean of the School to provide the students marks.



- 9.1.3 Upon receiving the marks, the examination officer sends the marks to the Dean where the student has moved to requesting for recommendation on the credit transfer.
- 9.1.4 The Current Dean of School then writes to Registrar (ASA) giving the requested recommendation.
- 9.1.5 Based on the recommendation from the current School, the registrar writes to the Student informing him/her on the credits earned.
- 9.1.6 Registrar (ASA) writes to the Dean of School to incorporate the credits earned in the student's data base.
- 9.1.7

## **9.2 External Credit Transfer**

- 9.2.1 The Registrar (ASA) receives a written request by a student.
- 9.2.2 The Registrar (ASA) writes to the University where the student is transferring from requesting for the student Academic records.
- 9.2.3 Upon receiving the student's grades and marks the registrar (ASA) forwards to the Dean of School for credit transfer recommendation.
- 9.2.4 The Dean of the School on behalf of Deans Committee makes recommendation on the credits to be given.
- 9.2.5 The registrar (ASA) writes to the student on the approved credits.
- 9.2.6 Registrar (ASA) writes to the Dean of the School to incorporate the bought credits in the student Database/records.

## Appendix VI: Thesis marking Schedule

SEKU/ARSA/BPS/F-05



### SOUTH EASTERN KENYA UNIVERSITY BOARD OF POSTGRADUATE STUDIES

#### THESIS MARKING SCHEDULE

The marking schedule has been developed to provide guidelines for examiners about the features of thesis that are conventionally regarded as desirable. It also aims to increase consistency between examiners, enhance validity of the assessment process. The schedule is not intended to be totally prescriptive, particularly when the nature of a student's research, and the way in which it is reported, justifiably depart from the conventions that are reflected here.

STUDENT NAME

REGISTRATION NUMBER

TITLE OF THESIS

DEPARTMENT

SCHOOL

Item	DESCRIPTION	Maximum Mark	Marks Scored
Title and Scope	<ul style="list-style-type: none"><li>The title clearly reflects the topic, style, and thrust of the research.</li><li>Scope of the topic is achievable.</li></ul>	3.0	
Abstract	<ul style="list-style-type: none"><li>The abstract contains all of the key information.</li><li>The abstract is approximately 200 words long</li></ul>	5.0	
Introduction	<ul style="list-style-type: none"><li>The purpose of the project is very clear.</li><li>Clear statement of problem</li><li>There is excellent justification of the chosen topic.</li><li>SMART objectives</li></ul>	7.0	
Literature Review	<ul style="list-style-type: none"><li>There is an excellent coverage of relevant literature from a range of sources and journals.</li><li>There is a highly developed critique of existing literature and it is clearly linked back to the relevance of the chosen topic.</li></ul>	10.0	
Methods	<ul style="list-style-type: none"><li>Method is appropriate.</li><li>All aspects of the method are described in detail.</li><li>There is appropriate and relevant choice of data.</li></ul>	10.0	
Data Analysis	<ul style="list-style-type: none"><li>Appropriate and relevant choice of data analysis tools</li></ul>	10.0	

	<ul style="list-style-type: none"> <li>• Clear analysis procedures accompanied by justification for choices</li> </ul>		
Results	<ul style="list-style-type: none"> <li>• Presentation of the data / results is exceptionally clear.</li> <li>• Analysis is appropriate, thorough, and possibly innovative.</li> <li>• Analysis contains no inaccuracies or inconsistencies.</li> </ul>	20.0	
Discussion	<ul style="list-style-type: none"> <li>• There is excellent interpretation of results in relation to the study's objectives.</li> <li>• There are very good references to theory and literature.</li> <li>• There is appropriate reflection about the study and an excellent discussion of the issues raised.</li> <li>• There is excellent application of results to professional and personal practice and the community / society etc.</li> <li>• Limitations of the study are very well addressed.</li> <li>• There is excellent discussion of possibilities regarding future research.</li> </ul>	10.0	
Conclusions	<ul style="list-style-type: none"> <li>• Clear, appropriate and relevant conclusion</li> </ul>	2.5	
Recommendations	<ul style="list-style-type: none"> <li>• Clear, appropriate and relevant recommendations</li> </ul>	2.5	
Overall organization	<ul style="list-style-type: none"> <li>• The thesis is an exceptional piece of writing that has coherence, originality, and creativity.</li> <li>• Formatting is consistent, error free, and impressive.</li> </ul>	5.0	
References	<ul style="list-style-type: none"> <li>• A recommended referencing system is used correctly and consistently throughout the dissertation.</li> <li>• All references cited in the text are included in the reference list, and vice versa.</li> </ul>	10	
Skills in written English	<ul style="list-style-type: none"> <li>• Language, grammar, and spelling are correct and appropriate throughout the thesis.</li> </ul>	5.0	
• TOTAL MARKS		100.0	

Classification of thesis:  $\geq 50\%$  PASS

EXAMINERS NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED FOR ISSUE

DEPUTY VICE CHANCELLOR (ARSA)	<i>Prof. Z. Njirang's</i>	OFFICE OF THE DEPUTY VICE CHANCELLOR ACADEMIC, RESEARCH & STUDENT AFFAIRS SOUTH EASTERN KENYA UNIVERSITY P. O. Box 170-90200 KITUI - KENYA
SIGNATURE	<i>Zuugo</i>	
DATE:	<i>17th March 2016</i>	