



SOKOINE UNIVERSITY OF AGRICULTURE (SUA)
MSc. CURRICULA FOR FOREST VALUE CHAIN
AND BUSINESS DEVELOPMENT STUDIES

SUPPORTED BY FORESTRY AND VALUE CHAINS DEVELOPMENT PROGRAMME

2020



The United Republic of Tanzania
MINISTRY OF NATURAL RESOURCES
AND TOURISM



Ministry for Foreign
Affairs of Finland

SOKOINE UNIVERSITY OF AGRICULTURE



**COLLEGE OF FORESTRY, WILDLIFE AND TOURISM
DEPARTMENT OF FOREST AND ENVIRONMENTAL ECONOMICS**

**PROPOSED NEW AND UQF ALIGNED CURRICULUM
FOR
MASTERS OF SCIENCE IN FORESTRY BUSINESS DEVELOPMENT**

APRIL 2020

1.0 INSTITUTIONAL PROFILE

- 1.1 Name of institution:** Sokoine University of Agriculture
1.2 Cluster of institution: College of Forestry, Wildlife and Tourism
1.3 Nature of Provider: Public
1.4 Programme host department: Department of Forest and Environmental Economics
1.5 Head of Department and his contacts:

Jumanne M. Abdallah,
Box 3011 SUA, Morogoro,
Email: abdallah@sua.ac.tz,
Telephone: +255 23 2 604865/+255 23 2 604648,
Mobile: +255655255301/+255232604648

2.0 PROGRAMME DETAILS

- 2.1 Proposed Programme Title:** Master of Science in Forestry Business Development (MSc. FoBD)
2.2 Programme Cluster: Environmental Science or Studies and Forestry
2.3 Programme sub-field: Environmental Economics
2.4 UQF Level: 9
2.5 Duration:

<i>Years</i>	<i>No. of Semesters</i>	<i>Total Credits</i>
2	4	180

- 2.6 Programme Status:** Full time
2.7 Mode of delivery: Face to face
2.8 Location of the delivery: Main Campus, Sokoine University of Agriculture
2.9 Proposed intake numbers:

Enrolment Year	Year 1	Year 2	Year 3	Year 4
Number of Students	10	15	20	20

2.10 Entry Requirements/Qualification

The minimum admission requirements as per regulation and guidelines for Higher Degrees (6th Edition, 2018) at Sokoine University of Agriculture shall apply for applicants to the MSc. FoBD programme. A candidate for admission to the MSc. FoBD programme shall either hold an undergraduate degree with GPA of at least 2.7 of SUA or a qualification from an approved institution of higher learning, deemed to be equivalent to a GPA of 2.7 or an average of B grade for unclassified degree programmes or as may be prescribed in a given degree programme.

Candidates with Pass degree will also be considered for admission if their undergraduate performance in the proposed subject of study was a B grade average or above. However, such a candidate should satisfy the Department and the College of Forestry, Wildlife and Tourism that they have exhibited academic potential through extensive work/research experience of at least three years and/or additional professional business development courses of duration of at least

three months. Candidates who are non-degree holders but do hold Advanced or Postgraduate Diploma may be considered for admission provided that such Diploma is in the Upper Second/Distinction category and are from institution recognized by Tanzania Commission for Universities (TCU).

2.11 Nature of Practical Project/Training or Field Work Attached to Programme

This shall be as per regulation and guidelines for Higher Degree Programmes at Sokoine University of Agriculture. Students in this programme will acquire hands-on skills on business development, value chain development, entrepreneurship, marketing and business management. During course works in the first two semesters, field excursions and case studies will be conducted in forest related business firms to enhance students' experiences and practical skills. Also, field work will be done as part of the research that will lead into write up of the dissertation.

2.12 List of Other Approved Programmes in the Host Department

S/N	Programme Name	Date & Year Approved	Cluster	Student Enrolment	Number of Qualified Available Academic staff	
					Doctorate Degree	Total
1	MSc. Environmental and Natural Resources Economics	2011	Environmental and Forestry	Year 1: 10	12	12
				Year 2: 10		
2	MSc. Management of Natural Resources and Sustainable Agriculture	1998	Environmental and Forestry	Year 1: 10	12	12
				Year 2: 10		

3.0 RATIONALE FOR PROGRAMME DEVELOPMENT

3.1 Justification of the Programme Undertaken

The area of forest and woodlands of Tanzania mainland were estimated to be 48.1 million ha, which is 55% of the total land area of Tanzania mainland. Forests cover 3.4 million ha accounting 11.3 % of the growing stock. Woodlands cover 44.7 million ha which is 73.9% of the growing stock. The total area under forest plantation was estimated to be 554,500 ha (URT, 2015). The remaining area is under trees outside forests constituting 14.8% of the growing stock. The total wood volume of Tanzania mainland is 3.3 billion m³, whereby 97% of the total volume is from trees of natural origin and only 3% is from planted trees. The average volume of wood is 37.9 m³/ha across all land cover types, varying from 1 m³/ha in open grasslands to 171 m³/ha in humid montane forests. The standing volume of wood per capita is 74.4m³ (URT, 2015).

The forests in Tanzania mainland are high in biodiversity containing over 10,000 plant species, hundreds of which are nationally endemic. Of the plant species, 305 are identified as threatened in the IUCN Red List, with 276 species classified as Endangered (IUCN, 2013).

Investments in forest plantation are increasing rapidly. For example, Central Government plantations have increased from 83,695 ha in year 2013 to 117,267 ha in 2019 (¹TFS, 2019). Also, the area under large-scale private investment nationwide has increased from 43,054 ha in 2013 to 51,327 ha in 2016 while that under small-scale tree growers especially in Southern highlands has increased from 169,165 ha in year 2013 to about 174,143 ha in 2016. Community-based forests are also increasing and in some communities' natural forests are being harvested commercially.

Investment in forest industries is increasing with high demand of products for both local and export markets. Production of engineered wood products including flooring strips (shingles) and black woodcarvings is increasing. In addition, interest to produce non-wood forest products (NWFPs) include bees' products (include honey, beeswax, royal jelly, propolis and pollination service), gums, resins, bark, tannin, aromatics, latex, natural dyes, fruits, nuts, fibres, spices and traditional medicines is increasing. Investment is an important part to any serious theory of business cycles, as well as growth. This curriculum considers various theories of investment and also how imperfections in financial markets may affect real economic outcomes.

These enormous forest resources provide opportunities for business and value chains development. However, inadequate business culture in forestry is one of the challenges causing underutilization and or misuse of forest resources. Most forest investments suffer from inadequate information on raw material and its availability, narrow resource base innovations that depends on a few species. Utilizing technologies that are inefficient and unsuitable for mass production, poor innovative marketing skills, and prevailing market systems for the products have affected the forest business.

Inadequate appropriate innovative business skills also affect forestry and forest investments on the one hand, and graduates from existing forest science education are faced with numerous

¹ TFS, 2019. TFS Annual Performance Report for 2018/2019 Financial Year, 213p.

challenges on the other hand. For example, most graduates in forestry prefer office jobs over field-based jobs in rural areas; most do not adapt quickly to customer and community needs hence increasing the number of unemployed people in the country. In addition, the majority of the forest graduates do not respond quickly to emerging opportunities in forestry. Consequently, majority of the forest science based graduates end up into the pool of job seekers. Today, most graduates are not able to start their own businesses and employ others despite of enormous opportunities in the entire value chains of different products in the forest sector. Therefore, training of graduates who will see these opportunities for effective business and value chains development is a pre-requisite for sustainable, rational, efficient and profitable utilization of existing forest resources.

The aim of MSc. Forestry Business Development (MSc. FoBD) is therefore to produce experts who will address the current and emerging challenges specifically in forest related business and value chains development, to ensure that forestry resources are being used efficiently and effectively at the same time creating jobs for others and hence increasing solving the unemployment problem in the country. This MSc. FoBD will provide opportunities for the graduates to acquire relevant business knowledge and skills that will acquaint them with experiences and techniques to deliver high-quality services, improve economic efficiency, and compete in the self-employment sector. The aim is to create entrepreneurs with business development innovative skills necessary to increase quantity, quality and markets for forest resources in the country. The graduates in this programme will be able to make business decisions and improve market systems for private sector, community and at national levels business development in the forest sector.

This postgraduate programme is intended to enhance the students' capacity to holistically address issues related to business principles, business decision-making, entrepreneurship, supply and value chain development, interpretations and enforcement of rules and regulations in forestry. This MSc. FoBD programme is unique in the sense that it combines several disciplines including business administration, entrepreneurship and marketing skills which together gives a candidate a solid foundation in value chain development and commercialization of forest based products.

3.2 Consultation Process

MSc. FoBD is a new postgraduate programme in the College of Forestry, Wildlife and Tourism. As required by TCU, development and approval of this programme has undergone both internal and external stakeholders' consultation. Internal consultation was done through formal (Departmental meetings, College Postgraduate Committee Meeting and College Board) and informal meetings with students and academic staff at SUA. The external stakeholders were invited to a consultation workshop held on the 7th of November 2019 at the Eastern Africa Statistics Training Centre in Dar es Salaam. Participants included representatives from forest based value chain actors (producers, transporters, wholesalers and customers), private sectors dealing with forest resources and potential employers of the graduates, Government officials (Tanzania Forest Services, Forest and Beekeeping Division and Tanzania Forest Research Institute), forest based associations and non-government organizations. This stakeholders' consultation workshop confirmed the market demand of the programme and also secured inputs

that were used to strengthen and improve the programme. The Stakeholders' Workshop Report is attached as Appendix 1.

3.3 Programme Objectives and Philosophy

3.3.1 Programme Objective

Overall Objective:

The objective of the proposed MSc. FoBD programme is to impart knowledge and skills on forest business development that will enable graduates to realize and utilize business opportunities along value chains in the forest sector for wealth and job creation.

Specific objectives:

Specifically, programme is intended to:

1. Enable candidates to use principles and concepts of forestry, business development, value chain analysis, entrepreneurship to analyse business cases and make business decisions;
2. Enable candidates to acquire specialized business development skills to integrate business opportunities within outside forest sector;
3. Enable candidates to design, conduct research and appraise forest based businesses and communicate research findings to specialist and non-specialist audiences;

3.3.2 Philosophy of the MSc. FoBD Programme

Efficiency to establish and manage forest enterprises requires business and entrepreneurship skills for making informed decision that are based on economic, business, entrepreneurship, value chain development principles and interpretations of rules/regulations in forestry and other natural resources such as water, wildlife and eco-tourism. Therefore, it is essential to have forest professionals with these skills. The programme is designed to impart knowledge and skills to meet the demand of human resources in forest based business development.

3.4 Exit Levels Available

There shall be two exit awards for MSc. FoBD. First, a student who for some reasons decides to end studies and cannot proceed with the dissertation component after accumulating a minimum of 120 credits shall be awarded a Postgraduate Diploma in Forestry Business Development equivalent to UQF level 8. A candidate who successfully completes both the coursework and the dissertation (i.e. 180 credits) shall be awarded the MSc. Forest Business Development Degree.

3.5 Programme Expected Learning Outcomes and its Associated Teaching/Learning Activities and Assessment Criteria

Qualification Category		Postgraduate	Assessment Criteria
Qualification Type		Master degree	
Level		9	
Learning Outcomes	Knowledge	Graduate of MSc. FoBD) should be able to: <ol style="list-style-type: none"> Apply broad and comparative knowledge of the general scope of forest resources in Tanzania, develop business plans, apply economic principles; and its different areas and applications, and its interactions with related subjects; Use knowledge of business development in forest resources; Conduct feasibility studies, assess risks in forest resources, design and implement environmental and social impact assessment as well as performing project appraisal; Use principles and concepts of forest business development and skills, value chain analysis, entrepreneurship to analyse business cases and make business decisions; Use acquired knowledge in solving problems related to environment and forest resources considering various scenarios to inform decision making; and Plan and conduct forest based business. 	Class assessment
	Skills	Graduate of this Degree programme will have specialized business development skills, research skills for problem solving, skills to develop and operate new business, and skills to integrate business opportunities outside forest sector	Research (Dissertation) and seminar presentations
	Competencies	Graduate of this Degree programme will demonstrate ability to: <ol style="list-style-type: none"> Reflect critically and creatively on business, entrepreneurship and value chain development theories and be able to establish forest based businesses; Systematically and creatively conduct value chain analysis to identify business opportunities in the forest sector; Design, conduct research and appraise forest based businesses and make sound judgements; Clearly communicate business, marketing, entrepreneurship and value chain development research findings to specialist and non-specialist audiences; and Work independently with minimum supervision. 	Proposal development; dissertation/; seminar presentations ; and presentations in conferences

4.0 PROGRAMME MANAGEMENT

4.1 Entry Arrangement

The admission regulations for Masters Degrees as stipulated in "Regulations and guidelines for higher degrees" of Sokoine University of Agriculture shall apply.

4.2 Transfer and Progression

There shall be possibility to transfer credits within or outside the University. This process will be guided by Regulations and Guidelines stipulated by TCU. After successful completion of MSc FoBD, the candidates may join UQF level 10, particularly PhD Degree in any recognised university worldwide (vertical articulation). Similarly, those candidates with Postgraduate Diploma in FoBD may be considered for MSc. FoBD programme (horizontal articulation).

4.3 Arrangement for Recognition of Prior Learning

Not applicable

4.4 Learning Assumed to be in Place

For admission into MSc. FoBD at SUA a candidate needs to meet entry qualification as stipulated in section 2.10. It is assumed that any candidate who has met the entry requirements as stipulated in section 2.10 and 4.1 will have acquired knowledge needed to undertake the training.

4.5 Transfer Arrangement

There shall be possibility to transfer credits within or outside the University. This process will be guided by Regulations and Guidelines as stipulated by TCU.

4.6 Normal learning Matrix & Course Matrix

SEMESTER I

Course Ante	Course Title	Status	L*	T/S*	AS*	IS/R*	P*	CR
WLM 600	Applied Statistics	Core	30	20	20	20	10	10
WLM 601	Research Methods	Core	30	20	20	20	10	10
FEC 600	Forest Resources, Entrepreneurship and Business Development	Core	30	20	20	20	10	10
FEC 610	Forest Value Chain Analysis and Development	Core	40	20	10	20	10	10
FEC 610	Human Resources Management Skills	Core	30	20	20	20	10	10
			160	100	90	100	50	50

Course Ante	Course Title	Status	L*	T/S*	AS*	IS/R*	P*	CR
FEC 605	Ethics, Informal Rules, Culture and Norms in Forestry	Elective	30	10	10	10	10	7
FEC 608	Negotiation Skills	Elective	30	10	10	10	10	7
FEC 614	Business Corporate Management	Elective	30	10	10	10	10	7
FEC 616	International Trade	Elective	40	10	10	10	10	8
				40	40	40	40	29

SEMESTER II

Course Ante	Course Title	Status	L*	T/S*	AS*	IS/R*	P*	CR
FEC 606	Legal Frameworks and Operational Procedures in Forestry	Core	40	10	20	20	10	10
FEC 611	Products Grading, Branding and Certification	Core	40	20	10	20	10	10
FEC 604	Business Planning, Marketing and Financial Accounting	Core	30	20	20	20	10	10
FEC 615	Feasibility Studies and Investment Analysis	Core	30	20	20	20	10	10
FEC 609	Risk Assessment, Management and Insurance	Core	40	10	20	20	10	10
			180	80	90	100	50	50
FEC 614	Resource Mobilization and Fund Raising	Elective	40	10	10	10	10	8
FEC 612	Principles of Monitoring and Evaluation	Elective	40	10	10	10	10	8
FOE 611	Environmental and Social Impact Assessments	Elective	30	10	10	10	10	7
FEC 613	Strategic Plan and Goal Setting	Elective	30	10	10	10	10	7
FEC 616	Business Opportunities in Forest Ecosystem Services	Elective	20	10	10	20	10	7
			160	50	50	60	50	37

Course Ante	Course Title	Status	L*	T/S*	AS*	IS/R*	P*	TH*	CR
FO 633	MSc. Research Proposal Development	Core	0	60	0	0	90	150	15

Semester III – IV

Course Ante	Course Title	Status	L*	T/S*	AS*	IS/R*	P*	TH*	CR
LU 608	MSc. Dissertation	Core	0	50	0	0	400	450	45

L* = Lectures; S/T* = Seminars/Tutorials; AS* = Assignments; P* = Practical;

TH* = Total Hours, IS/R* = Independent Study/Research

4.7 Benchmarking and International Comparability

The MSc. FoBD programme is designed to accommodate major issues and challenges related to business development in the forest sector. It is a demand driven programme designed to be more competitive to meet community, private and public sectors need at local, regional and international levels. Lessons from other relevant Master degree programmes offered by other training institutions will be drawn to improve the implementation of this programme. The programme will learn from other institutions' programmes including MSc. Business Development and Entrepreneurship (Utrecht University, Netherlands), MSc. Business Analytics (Wake Forest University, USA) and MSc. Business Development (Budapest Metropolitan University, Hungary).

Collaboration with some of these universities will be established to strengthen learning through sharing experiences in running similar programmes. The quality of the programme in comparison to other related programmes in the region and international level will often be checked to ensure comparability and high international standard. The programme implementation will adhere to credible guidelines and other related international standards.

4.8 Programme Evaluation Procedures

The programme will be evaluated after at least every five years. During the evaluation, tracer study and stakeholder consultation will be conducted to assess the performance of the graduates. Feedback from students and examiners will be used to improve the delivery and the course contents of the programme. Feedbacks from employers from both private sector and the government will also be part and parcel of the MSc. FoBD programme implementation process with the aim of providing quality hands on skills to suit the existing market demand.

5.0 ASSESSMENT DETAILS

5.1 Programme Assessment Strategy

Assessment shall be as per regulation and guidelines for Higher Degree Programmes at Sokoine University of Agriculture. Formative, summative and integrated learning assessments will be used to evaluate knowledge and understanding of students in MSc. FoBD programme. Formative assessments shall include assignments, presentations, and Research. Summative evaluation shall include tests, final examination and final dissertation. Written class examinations (class tests and end of semester examinations) are the principle method of assessment for knowledge and understanding in most courses in all years.

5.2 Examination General Format and Examination Regulations

This shall be done as per regulation and guidelines for Higher Degree Programmes at Sokoine University of Agriculture. Examinations shall include continuous assessment tests, assignments, seminar presentations, oral tests and end of semester examinations.

5.3 Examination Moderations, Practical and Dissertation Assessment

Moderation will be done as per regulations and guidelines for Higher Degree Programmes at Sokoine University of Agriculture. In order to ensure quality there will be moderation in all courses offered under MSc. FoBD programme. There shall be internal and external (for dissertation) moderation for all examinations. The University Quality Assurance Promotion Bureau (UQAPB) shall oversee the moderation process.

5.4 Condition for Continuation and Discontinuation

This shall be as per regulations and guidelines for Higher Degree Programmes of Sokoine University of Agriculture. Among others, these regulations include:

- Failure to submit approved research proposals after 12 months from the date of registration shall lead to discontinuation from studies.
- Failure of a candidate to complete the master's study programme within the specified periods shall mean his/her discontinuation from study, unless application for an extension of registration has been approved by College/Directorate Academic Committee.
- Failure of a candidate to re-submit a corrected dissertation/thesis accompanied by an error-free certificate within two months after being allowed to incorporate corrections, shall mean discontinuation from studies, unless there are compelling reasons.

5.5 Weight of each Component in the Final Assessment of the Programme

This shall be as per regulations and guidelines for Higher Degree Programmes at Sokoine University of Agriculture. This programme shall have three main components which are coursework, research proposal and dissertation write-up. The coursework, research proposal and dissertation write-up shall account for 120, 15 and 45 credits, respectively. Assessment methods for the coursework of this programme will include assignments, tests and end of semester examinations. Coursework shall weigh 40% and final examination shall have a weight of 60%. Students shall be required to present a minimum of three referred seminars over a period of 18 or 24 months or 36 months if an extension of registered is requested and approved. One of the seminars will be on the research proposal which should be approved before embarking on research activities. The dissertation should be submitted within registration period and should be positively evaluated before being allowed to graduate.

6.0 COURSES DESCRIPTION

6.1 SEMESTER I

CORE COURSES

i. Subject Ante and Title: AEA 600: Applied Statistics

ii. Course Aim: To equip students with statistical skills and their application in forestry and other related disciplines

iii. Course Expected Learning Outcomes

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

1. Design and develop research protocols;
2. Carry out statistical analysis of data collected in the field or controlled environment;
3. Interpret outputs from statistical data analysis; and
4. Make sound-decisions based on scientific findings.

iv. Subject Status: Core

v. Credit Rating: 9

vi. Total Hours Spent: 90

vii. Course Contents

Review of statistical concepts and methods with emphasis on application in life sciences using various computer statistical packages; sampling techniques; analytical techniques in natural sciences; inferential statistics; covariance; regression analysis; general linear model – univariate, multivariate and repeated measure analysis; parametric and non-parametric techniques; contingency tables; factor analysis - principle component & exploratory factor analysis; confirmatory factor analysis; cluster analysis and discriminant analysis; mixed effects models; interpreting ecological research results; multiple linear regression; regression diagnostics; the analysis of ecological resource data.

viii. Teaching and Learning Activities:

Teaching and learning activities will include lectures, seminar presentations, practicals, tutorials, field visits, and excursions, take home group and individual assignments and independent reading assignments.

ix. Assessment Methods:

Assessment methods for this course will include assignments, tests and end of semester examinations.

Coursework:	40%
University examination:	60%

x. Readings list

1. Crawley, M. J. (2012). *The R book*. John Wiley & Sons, New York, 1076 pp.
2. Utts, J. M., and Heckard, R. F. (2002). *Mind on Statistics*. Duxbury Press, Boston, 770 pp.
3. Moore, D.S. and Freeman, W.H. (2005). *Statistics: Concepts and Controversies* (6th edition). W. H. Freeman, Hong Kong, 561 pp.
4. Tabachnick, R.G., and Fidell, L.S. (2012). *Using Multivariate Statistics* (6th edition). Pearson, New York, 1024 pp.

5. Cohen, J. Cohen, P, West, S. G., & Aiken, L.S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd edition). Routledge, Abingdon, 736 pp.
6. Kleinbaum, D.G., Kupper, L.L., Muller, K.E., Nizam, A. (1988). *Applied Regression Analysis and Other multivariate Models* (3rd Ed.). Duxbury Press, Boston, 798 pp.
7. Pedhazur, E.J. (1982). *Multiple Regression in Behavioral Research: Explanation and Prediction* (2nd edition). Harcourt Brace College Publishers, New York, 1058 pp.

i. Subject Ante and Title: WLM 601: Research Methods

ii. Course Aim: To equip students with research skills and their application in forestry and other related disciplines

iii. Course expected learning outcomes

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

1. Analyse and literature/information search and write research gaps;
2. Develop a research proposal;
3. Design both field and laboratory experiments as per the hypotheses to be tested;
4. Plan and execute data collection exercise using appropriate quantitative and qualitative methods; and
5. Prepare and undertake presentation of scientific works to various stakeholders.

iv. Subject Status: Core

v. Credit Rating: 10 Credits

vi. Total Hours Spent:100

vii. Course contents

Nature of scientific enquiry; the interdependence of “pure” and “applied” science; logic of scientific inquiry; characteristics of empirical research; the identification of researchable problems; selection of study subjects and sample size; data collection instruments; validity and reliability; research study designs; project designs in natural resources research; determination of priorities; formulation of a research proposal; characteristics of empirical research; data quality control; research proposal and management; hypothesis testing; interpreting research results; interpretation and presentation of data; indices of competition, variability, missing plot technique; the organization and writing of a research report and evaluation of research performance; referencing; research ethics; Search formulation; source of Scholarly information; search tools and techniques; Evaluating web-based information; Plagiarism; citation and referencing; Reading patent documents; value of patent information; business and legal applications of patent information; Scientist Writing and Publishing; Structure of Scientific Paper; Reviewing Literature; Deciding Journals for Submission; Dealing with Reviewers Comments.

viii. Teaching and learning activities

Teaching and learning activities will include lectures, seminar presentations, practicals, tutorials, field visits, and excursions, take home group and individual assignments and independent reading assignments.

ix. Assessment Methods:

Assessment methods for this course will include assignments, tests and end of semester examinations.

Coursework:	40%
University examination:	60%

x. Reading lists

1. Creswell, J. W. (2007). *Qualitative Research Methods: Choosing Among Five Approaches*. Sage, London, 472 pp.
2. Ford, E. D. (2000). *Scientific Method for Ecological Research*, Cambridge University Press, Cambridge, 588 pp.
3. Hunt, D., Nguyen, L. and Rodgers, M. (2012). *Patent Searching: Tools & Techniques*. John Wiley & Sons.
4. Croft, W.B.M. and Strohman, T. (2009). *Search Engines: Information Retrieval in Practices*. Upper Saddle River, Pearson Education.
5. Gitzen, R. A. and Millspaugh, J. J. (2012). [Design and Analysis of Long-term Ecological Monitoring Studies](#). Cambridge University Press, Cambridge, 590 pp.
6. Jolles, R. L. (2005). *How to Run Seminars and Workshops. Presentation Skills for Consultants, Trainers and Teacher (3rd Ed.)*. John Wiley & Sons, Inc. New Jersey, 300 pp.
7. Myers, J.L. and Well, A.D. (2002). *Research Design and Statistical Analysis (3rd edition)*. Routledge, New York, 832 pp.
8. Shiver, B. D. and Borders, B. E. (1996). *Sampling Techniques for Forest Resource Inventory*. John Wiley & Sons, New York, 368 pp.

i. Course Ante and Title: FEC 600: Forest Resources, Entrepreneurship and Business Development

ii. Course aim: To enable students acquire knowledge on forest resources available in Tanzania relevant for business development.

iii. Course expected learning outcome:

Upon successful completion of the course, the student should be able to:

1. Recognize existing forest resources for business development;
2. Link the available forest resources with potential business opportunities in the sector;
3. Develop doable business plans of different forest opportunities;
4. Establish new private forest based resources.
5. Apply entrepreneurship skills to turn opportunities in forestry into business; and
6. Apply marketing principles to attract customers.

iv. Subject Status: Core

v. Credit Rating: 10 Credits

vi. Total Hours Spent: 100

vii. Course content:

An overview of global forest resources; types of forest resources; status of forest resources in Tanzania; plantation forests in Tanzania and their potential for business development; Miombo woodlands and their potential for business; Montane forests and their potential for business; Mangrove forests and their potential for business; strengths and weaknesses of forest resources

based businesses in Tanzania; forest ecosystem goods and services; contribution of forest resources to Sustainable Development Goals. Theories and concepts of entrepreneurship and entrepreneurs; Personality traits; Entrepreneurship and the economy; Small businesses in Tanzania; Small businesses in the global market; Required skills and competencies; Role of entrepreneurship and intrapreneurship in business; Basics for formulation of business ideas and start-up; Entrepreneurial mind-sets and skills; Tools for assessing and refining business ideas; Customer profiling, Creating and mapping values and various problem-solution fit; Effective communication skills in business; Business opportunities; Elements of business planning; Business models (pros and cons); Small business and economic development challenges; Gender and entrepreneurship development. Business management; Businesses related to forests; Business principles; Business planning and implementation; Legal forms of the business; Types and sources of capital in business; Record keeping; Experimentation and testing of a new business idea; Business strategies; Business model development; Business planning and financing; Management of growth and theory of change in businesses.

viii. Teaching and Learning Activities

Teaching methodology will include lectures, seminar presentations, independent reading assignments, tutorials, field visits/excursions, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and end of semester examinations.

Coursework:	40%
University examination:	60%

x. Reading list

1. URT (1998). *National Forest Policy*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania. 38pp.
2. URT (2002). *National Forest Act*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania. 127pp.
3. NAFOMA (2015). National Forest Resources Monitoring and Assessment of Tanzania Mainland report.
4. URT (2017). *Forest Regulations*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania.
5. FTI (2019). *Understanding Plantation and Natural Forests: A Handbook for Forestry Practitioners*, Forestry Training Institute (FTI) – Olmotonyi, Arusha Tanzania.
6. Bell, E., Bryman, A., & Harley, B. (2018). *Business research methods*. Oxford university press.
7. Malecki, E. J., & Moriset, B. (2007). *The digital economy: Business organization, production processes and regional developments*. Routledge.
8. Hisrich, R.D. & Peters, M.P (2002), *Entrepreneurship*, 5th Ed. Boston McGraw-Hill Irwin

- i. Course Ante and Title: FEC 610: Value Chain Analysis and Development**
- ii. Course aim:** To enable students to analyze and develop forest products value chains so as to enhance competitive advantage of the sector.
- iii. Course expected learning outcomes:**

Upon successful completion of this course students should be able to:

1. Analyze and develop forest value chains appropriate for business development;
2. Design market driven value chains development projects that involve key actors in the sector;
3. Apply innovative technologies in the value chains development; and
4. Evaluate impact of value chain development on the economy.

iv. **Course Status:** Core

v. **Credit Rating:** 10

vi. **Total Hours Spent:** 100

vii. Course Content:

Value chain –value chains concepts, functions of value chains, significance of value chains, limitations of value chains; Value chain project design - selection of value chain, analysis of value chain, identification and assessment of market-based solutions (MBSs), MBS facilitation, collaboration structuring and performance monitoring, value chain development, practical examples of value chains in forest sector; Value chain intervention concept - value chain finance, partnership with firms, enabling environment, local economic development; Strengths & Constraints analysis in value chains - Analysis of end market, governance of value chain, inter-firm relationships, sustainable solutions; Gender engagement in value chains; Policy and legal environment influencing value chain development; Market linkages in value chain; Stakeholders mapping and role in value chains, factors affecting the linkages success, the enabling environment for market linkages.

viii. Teaching and learning activities

Teaching methodology will include lectures, seminar presentations, independent reading assignments, tutorials, group and individual assignments.

ix. Assessment Methods

Assessment methods for this course will include assignments, tests, quizzes, and the end-of-semester examination.

Coursework: 40%

University examination: 60%

x. Reading list

1. Teixeira, T.S. and Piechota, G. (2019). *Unlocking the Customer Value Chain: How Decoupling Drives*, Crown Publishing Group, 352p.
2. Presutti, D.W. (2013). *Understanding the Dynamics of the Value Chain*, Business Expert Press
3. Sophie D'Amours, S., Ouhimmou, M., Audy, J. and Feng, Y. (2016). *Forest Value Chain Optimization and Sustainability*, 1st Ed., CRC Taylor and Francis Group, 344 Pages.
4. Weiss, G., Pettenella, D., Ollonqvist, P. and Snee, B. (2011). *Innovation in Forestry: Territorial and Value Chain Relationships* CABI, 331p.
5. Parthiban, K. T. and Seenivasan, R. (2017). *Forest technologies: A complete value chain approaches*, Scientific Publishers 632p.

6. Haverhals, M., Ingram, V., Elias, M., Sijapati Basnett, B. (2014). Gender and forest, tree and agroforestry value chains, Wageningen University.
7. Ahenkan, A. and Boon, E. (2010). Improving the Supply Chain of Non-Timber Forest Products in Ghana, Supply Chain Management - New Perspectives, Sanda Renko, IntechOpen, DOI: 10.5772/19253. Available from: <https://www.intechopen.com/books/supply-chain-management-new-perspectives/improving-the-supply-chain-of-non-timber-forest-products-in-ghana>

i. Course ante and title: FEC 603: Human Resource Management

ii. Course aim: To enable students acquire knowledge on human resources management for forest business.

iii. Course expected learning outcomes:

Upon completion of this course, the students should be able to:

1. Manage human resources engaged in the firm;
2. Develop, motivate and maintain a competent work force; and
3. Use competencies of engaged human resources to improve productivity and efficiency.

iv. Course Status: Core

v. Credits Rating: 10

vi. Total Hours Spent: 100

vii. Course contents:

Human resource management (HRM)- Objectives and functions of HRM; Human resource planning- Job analysis, Manpower analysis, tracer studies, Selection and recruitment, Succession plan, concept of supervision, objectives and processes; Leadership skills; Performance appraisals - Types of performance appraisal and review systems e.g. Open performance review and appraisal system (OPRAS), reward management and motivation; Discipline and grievance procedures and management; Human resource and service quality; Human resource development; Employees relations; Communication techniques; Compensation and benefits; Counselling; Union and labour relations laws.

viii. Teaching and learning activities

Teaching and learning activities will include lectures, independent reading assignments, seminar presentations, tutorials, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end-of-semester examinations.

Coursework: 40%

University examination: 60%

x. Reading list

1. Armstrong, M. (2003). *A Handbook of Human Resource Management Practice*. Kogan Page.
2. Bratton, J. and Gold, J. (2003). *Human Resource Management: Theory and Practice*. Palgrave Macmillan.
3. Price, A. (2004). *Human Resource Management in a Business Context*. 2nd Edition. Thomson Learning

4. Darren, L. R. (1999). *Human Resource Management in Tourism and Hospitality*, Cassell, Great Britain.
5. Foot, M. and Hook, C. (2002). *Introducing Human Resource Management*. Harlow: Pearson Education.
6. Stredwick, J. (2000). *An Introduction to Human Resource Management*. London: Butterworth. Heinemann.

ELECTIVE COURSES

i. Subject Ante and Title: FEC 605: Ethics, Informal Rules, Culture and Norms in Forestry

ii. Course aim: To enable students acquire and apply knowledge on informal rules, culture, ethics and norms in forestry.

iii. Course expected learning outcomes

Upon successful completion of this course, the student will be able to:

1. Apply and demonstrate knowledge of forest ethics;
2. Demonstrate ethical conduct in forest business development and management;
3. Adopt and use informal rules, culture and norms in forest business development and management; and
4. Link culture, norms, formal and informal approaches and practices to understand community's behaviour for maximizing business opportunities.

iv. Subject Status: Elective

v. Credits Rating: 7 credits

vi. Total Hours Spent: 70

vii. Course Contents:

Concepts on ethics in forestry – ethical, rights and justices; Codes of ethics and codes of conduct; Theories of determinism and possibilism; Conditions for rights and society's moral judgments; Relationship between ethics and science; Concepts of rights in nature; Approaches to ethics - ethics of consequences, ethics of principle and ethics of purpose. Moral considerations in environmental ethics- interaction of humans with nature through culture and social structures; Critics and relevance of naturalistic fallacy in environmental ethics; Relevance of ethics in dealing with uncertainty in natural resources management; Application of precautionary principle in dealing with environmental threats; National policies, laws and standards versus ethics in natural resources management; Relevance of ethics in natural resources for public and private decision making. Concepts of informal rules, culture and norms; Emergence and change of informal rules; Culture and race, culture and ethnicity, subculture, and Co-culture, culture and identity; The economics of norms and norm origin; An esteem theory of norms; An esteem theory of origin; The power of esteem sanctions; Using esteem model to clarify and unify the new norms; Contrasting and reconciling esteem processes with internalization of norms; Explaining norm generality and social meaning; A unified theory of group and societal norms; regulating norms; The esteem model and norm change; Facilitating efficient norms- the expressive function of law; Norm efficiency and the problem of conformity; Impeding inefficient norms with privacy rights; how informal rules, culture and norms can be used to sustainably manage natural resources.

viii. Teaching methodology

Teaching methodology will include lectures, independent reading assignments, seminar presentations, tutorials, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end-of-semester examinations.

Coursework: 40%

University examination: 60%

x. Reading List:

1. Skoog, E. G. (2005). Supporting the Development of Institutions – Formal and Informal Rules: An Evaluation Theme Basic Concepts. Department for Evaluation and Internal Audit. Stockholm, Sweden. 37pp.
2. Spencer-Oatey, H. (2012). What is Culture? A compilation of Quotations. GlobalPAD Open House, University of Warwick, UK. 21 pp.
3. Pejovich, S. and Colombatto, E. (2008). Law, Informal Rules and Economic Performance: The Case for Common Laws. Edward Elgar Pub, Northampton, Massachusetts, USA 178pp.
4. Li, Y. (2008). Playing by the Informal Rules. Cambridge University Press. Cambridge, UK.
5. Elseinbroich, C. and Gilbert, N. (2014). Modelling Norms. Springer Science and Business Media, New York, USA. 216pp.

i. Subject Ante and Title: FEC 608: Negotiation Skills

ii. Course aim: Enable students to acquire principles of effective negotiation and develop skills needed to achieve a successful outcome.

iii. Course expected learning outcomes:

Upon successful completion of the course, the student shall be able to:

1. Organize and manage negotiations;
2. Identify the zone of possible agreement (ZOPA) in negotiations;
3. Apply negotiation skills, styles and tactics in different cultures;
4. Build trust, persuade, advocate and lobby; and
5. Apply psychological principles for successful negotiations.

iv. Subject Status: Elective

v. Credits Rating: 7

vi. Total Hours Spent: 70

vii. Course Content:

Concepts in negotiation; Types of negotiations; Purpose of negotiations; Preparing for negotiations; Negotiation approaches, styles and their comparison; Negotiation stages; Negotiation strategies; Post-negotiation stage; Special negotiation cases; Pillars of negotiations; Negotiation tactics; Conflict resolution during negotiation; Negotiation steps; Behaviour and conduct during negotiations; Communication process in negotiation; Common negotiation mistakes; Effective communication and interpersonal skills; Building trust in negotiation; Characteristics of good negotiators; Finalisation of negotiations and communication of Agreements; Recording final agreements, dissemination and making final agreements

accessible; Characteristics of a durable agreement, strong versus weak Agreements; Methods to deal with a deadlock, identification and exploration of options for deadlock resolution.

viii. Teaching and learning activities

Teaching methodology will include lectures, independent reading assignments, seminar presentations, tutorials, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end-of-semester examinations.

Coursework:	40%
University examination:	60%

x. Reading list

1. Siedel, J.G. (2014). *Negotiating for Success: Essential Strategies and Skills*. Van Rye Publishing, LLC, 160pp.
2. Lewis, R. D. (2006). *When Cultures Collide: Leading Across Cultures*. Boston: Nicholas Brealey International.
3. Lyons, C. (2009). *I Win, You Win: The Essential Guide to Principled Negotiation*. A&C Black Business Information and Development.
4. Lewicki, R.J., Saunders, D.M and Barry, B. (2010). *Negotiation: Readings Exercises and Cases*, 6th Ed., McGraw Hill Irwin, New York.

i. Course Ante and Title: FEC 614: Business Corporate Management

ii. Course aim: To enable students acquire knowledge on business corporate and its application in forestry

iii. Expected learning outcomes

Upon successful completion of this course, the student will be able to:

1. Apply business and corporate soft skills as a tool for business management;
2. Communicate effectively in business engagements;
3. Apply business etiquettes (protocols) in decision making; and
4. Apply executive skills in decision-making.

iv. Subject Status: Elective

v. Credits Rating: 7 Credits

vi. Total Hours Spent: 70

vii. Course Content:

The Mind – concepts of positive thinking and attitude; Motivation; Character building; Self-esteem; goal Setting; Effective communication- Conversation, pronunciation, voice modulation, stressing and stretching, accent improvisation, facial expressions, body language, writing skills; Business Etiquettes; Office Etiquettes; Phone Etiquettes; Dining Etiquettes; and Party Etiquettes; Corporate look - office wear, meetings/interviews, business presentations; Executive skills - writing a profile (Personal/ Company), group discussions, facing an interview; Business presentation skills; Special corporate skills - interpersonal relationship, leadership qualities, time management, stress management.

viii. Teaching methodology

Teaching methodology will include lectures, independent reading assignments, seminar presentations, practicals, tutorials, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end-of-semester examinations.

Coursework:	40%
University examination:	60%

x. Reading List:

1. Wentz, F. H. (2012). *Soft Skills Training: A Workbook to Develop Skills for Employment*. Createspace Independent Pub, California, USA. 368 pp.
2. Rao, M. S. and Goldsmith, M. (2010). *Soft Skills Enhancing Employability: Connecting Campus with Corporate*. IK International Publishing House Pvt. Ltd. New Delhi, India. 235 pp.
3. Gulati, S. (2006). *Corporate Soft Skills*. Rupa Publications Pvt. Ltd., New Delhi, India. 310 pp
4. Ramesh, G. and Ramesh, M. (2010). *The Ace of Soft Skills: Attitude, Communication and Etiquette for Success*. Dorling Kinderslay Pvt. Ltd. India. 131 pp.
5. Mitra, B. (2012). *Personality Development and Soft Skills*. Oxford University Press USA. 280 pp.
6. Willcox, G. (2016). *Soft Skills for the Workplace*. Goodheart-Willcox Company, Inc., Tinley Park, Illinois, United States. 168 pp.

i. Course Ante and Title: FEC 616: International Trade

ii. Course aim: to enable students to acquire knowledge on international trade, policies and their application.

iii. Course expected learning outcomes:

Upon successful completion of the course the student should be able to:

1. Conduct analysis using models of international trade and derive economic implications;
2. Apply international trade instruments such as tariffs, quotas, export subsidies for forest products value chain development;
3. Maximize profits in forest based businesses under free trade and/or trade protection setting;
4. Utilize international trade developments of forest based products for value chains development.

iv. Course Status: Elective

v. Credit Rating: 8

vi. Total Hours Spent: 80

vii. Course Content:

Theories of international trade: analysis of trade policy instruments (tariffs and non-tariffs) under perfect and imperfect competitions; Monetary and fiscal policy; Trade barriers and imperfect competition; Trade bodies; trade laws and product introduction; Selected models of international trade; Forest based markets; Market and demand analysis; World market analysis and

potentialities; Introduction to markets and export promotion; Import and export procedures; Balance of payment (BoP). Models seeking to explain the causes; patterns and consequences of international trade; International trade models - the Ricardian model, the Heckscher-Ohlin models, the Specific Factors model and new trade models featuring increasing returns and imperfect competition; International trade policy; analysis of trade policy instruments (such as tariffs; quotas and subsidies) under perfect and imperfect competitions; Institutions (such as the WTO and its various trade agreements); international trade coordination; Natural resource trade and policy; reforms in natural resource policy at the regional and multilateral levels.

viii. Teaching and learning activities

Teaching methodology will include lectures, independent reading, seminar presentations, tutorials, practical, group and individual assignments.

ix. Assessment Methods

Assessment methods for this course will include assignments, tests, quizzes, and the end-of-semester examination.

Coursework:	40%
University examination:	60%

x. Reading list:

1. Feenstra, R. (2004). *Advanced International Trade: Theory and Evidence*, Princeton University Press.
2. Pomfret, R. (1991). *International Trade: An Introduction to Theory and Policy* (Communication and Information Science) 1st Edition, Wiley-Blackwell, 292p.
3. Jessie Poon, J. and Rigby, L.D. (2017). *International Trade: The Basics* 1st Edition, Routledge, 210p.
4. Helpman, E. (2011). *Understanding Global Trade*, Belknap Press, 232p
5. Deardoff, A. V. and Robert, M. S. (1994). Multilateral Trade Negotiations and Preferential Trading Arrangements, in *Analytical and Negotiating Issues in the Global Trading System*. University of Michigan Press. 648pp.
6. Yarbrough, B.V. and Yarbrough, R. M. (1997). *The World Economy: Trade and Finance*. Dryden Press New York. 914p.

1.2 SEMESTER II

CORE COURSES

i. Course Ante and Title: FEC 606: Legal Frameworks and Operational Procedures in Forestry

ii. Course aim: To enable students to acquire knowledge on legal and operational procedures in forestry and related investments.

iii. Course expected learning Outcomes:

Upon successful completion of this course the student will be able to:

1. Comply to laws, regulations and guidelines governing forest business development;
2. Interpret and enforce laws, regulations and guidelines in forest business;

3. Identify gaps in laws, guidelines and procedures for improving business in the forest sector; and
4. Formulate guidelines and procedures for forest business development.

iv. Subject Status: Core

v. Credits Rating: 10

vi. Total Hours Spent: 100

vii. Course Content:

Main features of National Forest Policy; Land Policies; National Environmental Policy; National legal framework governing forest resources (Environmental Management Act – EMA, National Forest Act, National Land Act, Village Land Act and other relevant Acts); EMA and National Forest Act relevant to forest business development; Understanding and enforcement of key laws governing businesses in Tanzania; Key features of forest regulations and its implementation; Guidelines and procedure formulation.

viii. Teaching and learning activities

Teaching methodology will include lectures, seminar presentations, independent reading assignments tutorials, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end-of-semester examinations.

Coursework: 40%

University examination: 60%

x. Reading list

1. URT (2002). *National Forest Act*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania. 127pp.
2. URT (2004). *National Environment Management Act*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania. 53pp.
3. URT (1999). *Village Land Act*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania. 311pp.
4. URT (1999). *National Land Act*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania. 514PP.
5. URT (1998). *National Forest Policy*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania. 38pp.
6. URT (2017). *Forest Regulations*. Ministry of Natural Resource and Tourism, Government Printer, Dar es Salaam, Tanzania.

i. Course Ante and Title: FEC 604: Business Planning, Marketing and Financial Accounting

ii. Course aim: To enable students to acquire knowledge and skills for business planning, marketing and financial accounting.

iii. Course expected learning outcomes:

Upon completion of this course, the student will be able to:

1. Apply fundamental principles of business planning, marketing and financial accounting in running forest based businesses;
2. Prepare business accounts and interprets financial statements of an enterprise for decision making;
3. Develop relevant business plans and marketing strategies for forest based businesses; and
4. Link demographic, cultural and institutional factors to shape marketing environment.

iv. Course Status: Core

v. Credits Rating: 10

vi. Total Hours Spent: 100

vii. Course Contents:

Importance of a business plan; Elements of business planning; Business Planning Components; Corporate social responsibility and its preparations; Preparation of company or firm profile; Developing business plan; Developing a financial projections; Real cost of money; staffing costs; Market entry problems; Supplier dependence; Lack of identity and fad businesses; Marketing; Market segmentation and targeting; Ethics and social responsibility in marketing; Consumer behavior; Pricing strategies and distribution channels; Market system analysis; Market research; Marketing strategy; Import and export procedures and documentation of forest products; Principles of financial accounting and preparations of books of accounts: Preparation of budgets and their use; Accounting system; Financial decision making criteria in forest business.

viii. Teaching and learning activities

Teaching and learning activities will include lectures, seminar presentations, independent reading assignments, practicals, tutorials, and group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end of semester examinations.

Coursework:	40%
University examination:	60%

x. Reading list

1. David H. B. (2002). *The Business Planning Guide*. Kaplan Business; 256pp.
2. George E. P. and Colleen, C. (2013). *The Transition from Sales and Operations Planning to Integrated Business Planning*. Dog Ear Publishing, LLC, 112pp.
3. Kotler, P. and Armstrong, G. (2017). *Principles of Marketing*. Pearson, 736pp.
4. Stanton, W.J. (1975). *Fundamentals of marketing*. 4th Edition, Mc Craw-Hill Book Company, New York.
5. Cundiff, E.W. and Still, R.R. (1971). *Basic marketing, concepts, decisions and strategies*. 2nd Edition Prentice hall Inc., New Jersey.
6. Bragg, S.M. (2010). *Accounting Best Practices*. 6th Edition, John Wiley.

- i. Course Ante and Title: FEC 611: Products Grading, Branding and Certification**
- ii. Course aim:** To enable students acquire knowledge on grading, branding and certification for forest resources and products.

iii. Course expected learning outcomes

Upon successful completion of this course students should be able to:

1. Apply principles of product grading, branding and certification in forest business development;
2. Perform grading of forest resources and products;
3. Develop brands of forest products; and
4. Undertake certification of forest resources and products.

iv. Course Status: Core

v. Credit Rating: 10

vi. Total Hours Spent: 100

vii. Course Content:

Grading principles - product differences, defects identification; principles of branding, justification of brand; How to develop a brand; Things to consider when naming a brand; brand mapping; brand portfolio; brand promise - brand engagement, internal communication for a brand, measuring and tracking internal brand behaviour, branding engagement programme; Responsible forest management practices; Types of certifications; importance of certification; certification process; benefits and costs of certifications; forest management certification procedures; Chain-of-custody certification; Certification of small and medium-sized operation; National forest certification; Auditing of certifications.

viii. Teaching and learning activities

Teaching methodology will include lectures, independent reading, seminar presentations, tutorials, practical, group and individual assignments.

ix. Assessment Methods

Assessment methods for this course will include assignments, tests, quizzes, and the end-of-semester examination.

Coursework: 40%

University examination: 60%

x. Reading lists

1. WWF/World Bank (2006): Forest Certification Assessment Guide; a framework for assessing credible certification systems/schemes; a publication of the WWF/World Bank Global Forest Alliance
2. ISEAL Alliance (2004): ISEAL Code of Good Practice for Setting Social and Environmental Standards, Bonn.
3. Nussbaum, R. and Simula, M. (2005). *The forest certification handbook*. Second edition. London, Earthscan.
4. Nussbaum, R. (2000). *A practical guide to developing a group scheme for FSC-accredited certification of forests*. PROFOREST.
5. ISO/IEC Standard 14021 (1999): Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling), Geneva
6. ISO/IEC ISO standard 14020 (2000): Environmental labels and declarations — General principles, Geneva

- i. **Course Ante and Title:** FEC 604 Business Planning, Marketing and Financial Accounting
- ii. **Course aim:** To enable students to acquire knowledge and skills for business planning, marketing and financial accounting.

iii. Course expected learning outcomes:

Upon completion of this course, the student will be able to:

1. Apply fundamental principles of business planning, marketing and financial accounting in running forest based businesses;
2. Prepare his/her business accounts and interprets financial statements of an enterprise for decision making;
3. Develop relevant business plans and marketing strategies for forest based businesses; and
4. Link demographic, cultural and institutional factors to shape marketing environment.

iv. **Course Status:** Core

v. **Credits Rating:** 10

vi. **Total Hours Spent:**

vii. Course Contents:

Importance of a business plan; Elements of business planning; Business Planning Components; Corporate social responsibility and its preparations; Preparation of company or firm profile; Developing business plan; Common misconceptions in business plan; Developing a financial projections; Real cost of money; staffing costs; Market entry problems; Supplier dependence; Lack of identity and fad businesses; Marketing; Market segmentation and targeting; Ethics and social responsibility in marketing; Consumer behavior; Pricing strategies and distribution channels; Market system analysis; Market research; Marketing strategy; Import and export procedures and documentation of forest products; Principles of Financial accounting: Preparation of budgets and their use; Accounting system; Financial decision making criteria in forest business.

viii. Teaching and learning activities

Teaching and learning activities will include lectures, seminar presentations, independent reading assignments, practicals, tutorials, field visits/excursions, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end of semester examinations.

Coursework: 40%

University examination: 60%

x. Reading list

1. David H. B. (2002). *The Business Planning Guide*. Kaplan Business; 256pp.
2. George E. P. and Colleen, C. (2013). *The Transition from Sales and Operations Planning to Integrated Business Planning*. Dog Ear Publishing, LLC, 112pp.

3. Kotler P. and Armstrong, G. (2017). *Principles of Marketing*. Pearson, 736pp.
4. Stanton W.J. (1975). *Fundamentals of marketing*. 4th Edition, Mc Craw-Hill Book Company, New York.
5. Cundiff E.W. and Still R.R. (1971). *Basic marketing, concepts, decisions and strategies*. 2nd Edition Prentice hall Inc., New Jersey.
6. Bragg S.M. (2010). *Accounting Best Practices*. 6th Edition, John Wiley.

i. Course Ante and Title: FEC 615: Feasibility Studies and Investment Analysis

ii. Course aim: To enable students acquire knowledge to conduct feasibility studies and perform investment analysis.

iii. Course expected learning outcomes

Upon successful completion of the course the student should be able to:

1. Conduct feasibility studies for investments in forestry;
2. Appraise forest related investment projects;
3. Conduct viability analysis of investments in forestry;
4. Use various scenarios to perform sensitivity analysis on investments in forest sector.

iv. Course Status: Core

v. Credit Rating: 10

vi. Total Hours Spent: 100

vii. Course Content:

Types of forest based investments; feasibility study objectives; feasibility study versus business plan, feasibility study cycle; feasibility study preparation steps, feasibility study elements; feasibility study report elements; technical feasibility; feasibility study financial model using microsoft excel; building the feasibility study financial model; weighted average cost of capital (WACC); cost of equity using the capital asset pricing model (CAPM); creating different scenario analysis; feasibility study appraisal and analysis; financial analysis parameters; liquidity ratios; operating ratios; financial leverage ratios; security ratios; profitability ratios; investment appraisal analysis; breakeven points analysis; payback period; net present value (NPV); internal rate of return (IRR); profitability index; feasibility study evaluation and implementation; using the feasibility study results; selection of investment(s).

viii. Teaching and learning activities

Teaching methodology will include lectures, independent reading, seminar presentations, tutorials, practical, group and individual assignments.

ix. Assessment Methods

Assessment methods for this course will include assignments, tests, quizzes, and the end-of-semester examination.

Coursework: 40%

University examination: 60%

x. Reading list

1. Havard, T. (2013). *Financial Feasibility Studies for Property Development: Theory and Practice* 1st Edition, Routledge, 288p.

2. Karis, C. (2017). *Feasibility Study: Startup & Sustainability*. Paperback Create Space Independent Publishing Platform, 70p.
3. Capooth, W.B. (2002). *Market Square Development: An economic analysis and financial feasibility study* University of Tennessee - Knoxville Tennessee Honors Thesis Projects. https://trace.tennessee.edu/utk_chanhonoproj/523.
4. Gunter, J. E. (1984). *Essentials of Forestry Investment Analysis*. 1st Ed., Oregon State University Bookstores.

i. Course Ante and Title: FEC 609 Risk Assessment , Management and Insurance

ii. Course aim: To enable students acquire knowledge on risk assessment, management and insurance.

iii. Course expected learning outcomes:

Upon successful completion of this course, the student will be able to:

1. Identify risk areas, assess risk levels and propose risk management measures;
2. Undertake a range of relevant management interventions to address identified risks;
3. Use qualitative and quantitative risk assessment methods; and
4. Prepare and implement a risk management plan based on prevailing ISO standards e.g. ISO 31000:2009.

iv. Course Status:	Core
v. Credits Rating:	10
vi. Total Hours Spent:	100

vii. Course Contents:

Concepts of risk assessment and management; risks description- identification, classification and magnitude; risk assessment framework- risk areas and prioritization; Types and sources of risks and uncertainty; risk assessment methods and analysis; dealing with uncertainty; management of risks and uncertainties; Risk management strategies; environmental risk management and sustainable development; economic approaches in risk assessment and management- qualitative and quantitative analysis of risks; risks behavior and decision making and risks management with conformity to ISO standards; Risk monitoring and evaluation; Risk identification and management in forest based value chains - framework of risk management, techniques of risk management; Functions and historical development of insurance; Fundamentals principles of insurance- insurable interest; the law of contract and their application to insurance; classes of general insurance; underwrite, rating and documentation; quantitative techniques in insurance reinsurance; claim handling/administration; micro-insurance; insurance marketing; insurance in forest sector.

viii. Teaching and learning activities

Teaching and learning activities will include lectures, independent reading assignments, seminar presentations, tutorials, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end-of-semester examinations.

Coursework:	40%
University examination:	60%

x. Reading list

1. Fenton, N. and Neil, M. (2019). *Risk assessment and decision analysis with Bayesian Networks* 2nd Ed. Chapman and Hall/CRC Press ISBN-13: 978-1138035119 660pp
2. Gadow, K. (2001). *Risk analysis in Forest management: managing forest ecosystems*, Eds, Springer. 241pp.
3. Just, R.E. and Pope, D.R. (2001). *A comprehensive Assessment of role of Risk in U.S Agriculture: Natural Resource management and Policy*, Springer SBN-13: 978-0792375678. 586pp.
4. Hopkin, P. (2017). *Fundamentals of Risk Management*: 4th Ed, Understanding, Evaluating and Implementing Effective Risk Management. Kogan page ISBN-13: 978-0749479619. 449pp
5. Manley, B. and Watt, R. (2009). Forestry insurance, risk pooling and risk minimization options. Ministry of Agriculture and Forestry. 54 pp
6. Brunette, M. Couture, S. and Pannequin, F. (2017). Is forest insurance a relevant vector to induce adaptation efforts to climate change? *Annals of Forest Science*, 74(2), 41.

ELECTIVE COURSES

i. Course Ante and Title: FEC 614: Resource Mobilization and Fund Raising

ii. Course aim: To enable students to acquire knowledge on resource mobilization and fund raising.

iii. Course expected learning outcomes

Upon successful completion of the course the student should be able to:

1. Identify appropriate sources of funds;
2. Develop and implement strategies for resource mobilization and fund raising;
3. Develop competitive proposals to attract funding in forest related business; and
4. Attract funding/resources from and for government, NGOs, private sector and from development partners.

iv. Course Status: Elective

v. Credit Rating: 8

vi. Total Hours Spent: 80

vii. Course Content:

Resource mobilization; principles of resource mobilization; development and management of a resource mobilization strategies; resource mobilization framework; main sources of funding and support; international cooperation; motivations and trends in funding; ethics, accountability and transparency; effective communications for resource mobilisation; financial institutions and their packages; resource mobilisation techniques and strategies, fundraising events, payroll management, corporate fundraising; negotiating for funding; relationship building for shareholding; partnership including Public Private Partnership.

viii. Teaching and learning activities

Teaching methodology will include lectures, independent reading, seminar presentations, tutorials, group and individual assignments.

ix. Assessment Methods

Assessment methods for this course will include assignments, tests, quizzes, and the end-of-semester examination.

Coursework:	40%
University examination:	60%

x. Reading lists

1. IDRC (2010). *Resource mobilization: practical guides for research and community based organizations*. Venture for Fund Raising Unit. , Ortigas Center, Pasig City Metro Manila, Philippines. <https://www.idrc.ca/sites/default/files/sp/Documents%20EN/Donor-Partnership-guide.pdf>
2. Gitonga, B.A. (2017). *Resource Mobilization & Fundraising Training Guide*, Project support information consultants publication series,
3. Carter, C. and Aaron, J. (2003). *How to Write a Grant Proposal* 3rd Edition, John Wiley & Sons.
4. OECD (2018). *Monitoring and evaluation of SME and entrepreneurship programmes*. Policy note 10pp.
5. Matsizila, N.S. (2018). The application of result-based monitoring and evaluation to improve performance in small business. *African Journal of Hospitality, Tourism and Leisure*, Volume 7 (3)- 10pp.

i. Course title: FEC 612: Principles of Monitoring and evaluation

ii. Course aim: To enable students to acquire knowledge on monitoring and evaluation of forest base business.

iii. Course expected learning Outcomes

Upon successful completion of this course, the student will be able to:

1. Develop monitoring and evaluation systems for forest based businesses;
2. Integrate M&E in strategic plans of forest based businesses;
3. Conduct monitoring and evaluation of forest based enterprises; and
4. Produce monitoring and evaluation reports.

iv. Course Status: Elective

v. Credits Rating: 8

vi. Total Hours Spent: 80

vii. Course Contents

Basic concepts of M&E and applications; Typology of monitoring and evaluation - situation monitoring, performance monitoring, process evaluation, outcome evaluation, formative evaluation, summative evaluation, participatory evaluation, non-participatory evaluation; Theories of M&E Theory of change; Principles of M&E, Evaluation criteria, Monitoring and evaluation at different intervention levels, Evaluation standards and Ethical issues in monitoring and evaluation; Steps required to develop monitoring and evaluation system, Appropriate indicators for monitoring and evaluation, Sources of data for monitoring and evaluation and analysis; Evaluation perspectives and monitoring techniques; monitoring and evaluation reports.

viii. Teaching and learning activities

Teaching and learning activities will include lectures, independent reading assignments, seminar presentations, tutorials, field visits, excursions, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, tests and the end-of-semester examinations.

Coursework:	40%
University examination:	60%

x. Reading list

1. Jody, Z.K and Ray, C.R. (2004). *Ten steps to a result based monitoring and evaluation system*. The International Bank for Reconstruction and Development, Washington D.C. 239pp.
2. Batjes, K., and Kusters, C. (2017). *Managing for Sustainable Development Impact: An Intergrated Approach to Planning, Monitoring and Evaluation*. Practical Action Publishing, Rugby, 240pp.
3. Nuguti, E. (2016). *Understanding Project Monitoring and Evaluation*. Ekon Publishers, Nairobi, 420pp.
4. Batjes, K. and Kusters C. (2017). *Managing for Sustainable Development Impact: An Integrated Approach to Planning, Monitoring, and Evaluation*. Wageningen, Netherlands. 240pp.
5. Bamberger, M. and Valadez, I. (Eds.) (1994). *Monitoring and Evaluating Social Programs in Developing Countries*. The World Bank, Washington D.C. 519pp
6. Gudda, P. (2011). *A Guide to Project Monitoring & Evaluation*. AuthorHouse, United States of America. 304pp.

i. Course Title: FEC 611: Environmental and Social Impact Assessment

ii. Course aim: To enable students acquire knowledge on environmental and social impacts assessment

iii. Course expected learning outcomes:

Upon successful completion of the course, the student should be able to:

1. Develop baseline for environmental and social impact assessment;
2. Conduct environmental and social impact assessment (ESIA);
3. Suggest cost effective mitigations,
4. Produce ESIA report;
5. Document, communicate, review and make informed environmental decisions.
6. Participate in the development and implementation of an Environmental Management Plan (EMP) and environmental audit activities.

iv. Subject status: Elective

v. Credit rating: 7 Credits

vi. Total hours spent: 70

vii. Course contents:

Core values; Principles; Procedures and Guidelines of ESIA; Registration; Formal declaration of project concepts, idea and proposals; Screening of project proposals: Proposed activities and potential outcomes; Scoping process: Planning for the ESIA studies in the field, Stakeholder Analysis; Impacts Assessment: Types of impacts, Methods of identification, analysis and evaluation of impacts. Mitigating impacts: Suggestion and evaluation of cost - effective measures and alternatives; Reviews of ESIA reports: A review process, decision-making and post-review outcomes; Environmental follow assessment: Environmental Management Plans 'EMPs', Monitoring and Auditing; Environmental audits: Reviews, Checks, Re-examination, Confirmation and Verifications; ESIA as a profession: Professionalism in environmental assessment and management; and EIA updating.

viii. Teaching methodology

Teaching methodology will include lectures, independent reading assignments, seminar presentations, tutorials, field visits, excursions, group and individual assignments.

ix. Assessment methods

Assessment methods for this course will include assignments, essays, tests, and the end-of-semester examinations.

Coursework: 40%

University examination: 60%

x. Reading list

1. Barrow, C.J. (2001). *Environmental and Social Impact Assessment: An Introduction*. Westview Press, Inc. 310pp.
2. UNEP (2002). *UNEP Training EIA Resource Manual*, 2nd Edition, 573pp. (www.unep.ch/etu/publications/EIAMan_2edition_toc.htm)
3. Barton, H. and Bruder, N. (1995). *A Guide to Local Environmental Auditing*. Earthscan, London.
4. Clayton, D.B. and Sadler, B. (2005). *Strategic Environmental Assessment: A Sourcebook and Reference Guide to International Experience*, Earthscan, London.
5. Glasson, J., Therivel, R. and Chadwick, A. (1999). *Introduction to Environmental Impact Assessment*, Spon Press, London. 496pp.
6. Lawrence, D.P. (2003). *Environmental Impact Assessment: practical solutions to recurrent problems*, Wiley-Interscience, New York.
7. Morris, P. and Therivel R. (eds.) (2007). *Methods of Environmental Impact Assessment*, 2nd Edition. Spon Press, Taylor and Francis Group, London, 492pp.
8. Wood, C. (2003). *Environmental Impact Assessment: A Comparative Review*, 2nd Edition. Pearson Prentice Hall, Edinburgh. 405pp.
9. URT (2002). *Environmental Management Act*, Government printers, Dar es Salaam-Tanzania 53pp.

i. Course Ante and Title: FEC 613: Strategic Planning and Goal Setting

ii. Course aim: To enable students acquire knowledge on strategic planning and goal setting in forest businesses.

iii. Expected Learning outcomes

Upon successful completion of the course the student should be able to:

1. Use analytical tools for identification of gaps to be addressed in the strategic plan;
2. Develop missions, visions, set goals, strategic objectives and activities;
3. Develop forest business strategies and plans; and
4. Implement, evaluate and review a strategic plan.

iv. Course status: Elective

v. Credit rating: 7

vi. Total hours spent: 70

vii. Course Contents:

Concept of strategic Planning; Gaps analysis using analytical tools (e.g. SWOT Analysis, PESTLE Analysis, VMOST Model, Problem Tree); Stakeholders mapping; Financial analysis to support strategy, Moving Strategy to business plan, Principles of effective measurement, Cause and effect modeling, drivers to deliver the strategy, Turning business drivers into practical measures, Setting targets, Developing the performance management framework; Parameters for the Strategic Planning Process; Creating Core Value statements; Develop a Mission statement and develop a Vision statement; Set goals and objectives - SMART Goals; Goals with SPIRIT, Draft the strategic plan; Developing the Strategic Plan; Action Plan - assign responsibility and authority, accountability Strategic alignment; Establishing a monitoring system; The full picture – strategic planning snapshot; making the change - the three phrases, insights, control and change.

viii. Teaching and learning activities

Teaching methodology will include lectures, independent reading, seminar presentations, tutorials, group and individual assignments.

ix. Assessment Methods

Assessment methods for this course will include assignments, tests, quizzes, and the end-of-semester examination.

Coursework:	40%
University examination:	60%

x. Reading list

1. Bryson, J. M. (2011). *Strategic Planning for Public and Non Profit Organizations: A Guide to Strengthening and Sustaining Organizational Achievement*, (4th. ed.). San Francisco, CA: Wiley and Sons. (ISBN: 978-0-470- 39251-5).
2. Bryson, J. (2010) “The Future of Public and Nonprofit Strategic Planning in the United States,” *Public Administration Review*, Volume 70, pp. S255 – S267.
3. Poister, T. H., Pitts, D. W. and Edwards, L. H. (2010) “Strategic Management Research: A Review,” *The American Review of Public Administration*, 40, pp. 522 – 545.
4. Wheeland, C. (2003), “Implementing a Community-Wide Strategic Plan,” *The American Review of Public Administration*, 33(1), pp. 46-69.
5. Bryson, J. M., Crosby, B. C. and Bryson, J. K. (2009). “Understanding Strategic Planning and the Formulation and Implementation of Strategic Plans as a Way of Knowing,” *International Public Management Journal*, 12(2), pp.172 - 207.
6. Jung, C. S. (2014). “Extending the Theory of Goal Ambiguity to Programs: Examining the Relationship between Goal Ambiguity and Performance,” *Public Administration Review*, 74(2), pp. 205 – 219.

i. Course Ante and Title: FEC 618: Business Opportunities in Forest Ecosystem Services

ii. Course aim: To enable students acquire knowledge on potential business opportunities in forest environmental services.

iii. Course expected learning outcomes:

Upon successful completion of the course the student should be able to:

1. Identify potential business opportunities in ecosystem services in forestry;
2. Assess value of environmental goods and services;
3. Conduct business related to environmental services

iv. **Course Status:** Elective

v. **Credit Rating:** 7

vi. **Total Hours Spent:** 70

vii. Course Contents:

Principals of Ecosystem sustainability; Sustainable Development Goals; Environmental goods and services in forest sector; Environmental management concepts; economic incentives for environmental management; Environmental Business opportunities; Environmental Pollution & Waste Management in forestry; Environmental evaluation methods; Markets and payments for environmental services; guidelines for environmental markets (e.g. guidelines for accessing forestry carbon trading); Payment of environmental services (PES).

viii. Teaching and learning activities

Teaching methodology will include lectures, independent reading, seminar presentations, tutorials, group and individual assignments.

ix. Assessment Methods

Assessment methods for this course will include assignments, tests, quizzes, and the end-of-semester examination.

Coursework: 40%

University examination: 60%

x. Reading list

1. OECD (2005). *Managing Request-Offer Negotiations Under the GATS: The Case of Environmental Services*, OECD Trade Policy Working Paper No. 11, by M. Geloso Grosso, , 15 February 2005
2. UNCTAD (2003). *Energy and Environmental Services: Negotiating Objectives and Development Priorities*, New York and Geneva, 2003
3. Grosso M. G. (2007), *Regulatory Principles for Environmental Services and the General Agreement on Trade in Services*, ICTSD Issue Paper No. 6, 2007
4. Rogers, C. D. (2014). *The Importance of Environmental Management* Retrieved from eHOW: http://www.ehow.com/about_5434664_importance-environmental-management.html
5. McMurchie, J. (2014). *Importance of Environmental Management System*. Retrieved from eHOW: http://www.ehow.com/facts_6804978_importance-environmental-management-system.html
6. EMS, G. (2014). *Global EMS*. Retrieved from Environmental Management System: http://www.pearson.com/content/dam/pearson-corporate/files/enviro-reports/Global_EMS.pdf

7.0 FACILITIES AND SUPPORT SERVICES

7.1 Facilities

MSc. FoBD students are located at Main Campus. At the Main Campus, there are a total of 50 lecture rooms with a sitting capacity ranging from 40 to 400 of which 10 rooms have a sitting capacity of 40 – 100; six rooms have between 101 – 150 sitting capacity; nine rooms with 151 – 250 sitting capacity and one room with a sitting capacity of slightly over 400. Three lecture rooms are dedicated to MSc. FoBD programme for lectures. Allocation of programmes to lecture rooms for different courses is managed centrally by the Students' Records Office (SRO), hence all lecture rooms are available to all students.

Laboratories and other facilities for general use in teaching and learning

Practical training/ research works shall mainly be conducted in research laboratories, and/or in the field. Both the main campus and SMC, each have subject/cluster oriented laboratories (e.g. Agribusiness, Forestry, Engineering etc.) for training.

7.2 Library Facility

The SUA library is designated a national repository for resources on agriculture and other related sciences, hence the name Sokoine National Agricultural Library (SNAL), with the main library located at the main campus and a branch of the same at SMC. Additional mini-libraries are located at departments, institutes and centres across the two campuses. The combined sitting capacity of the two libraries is 890, divided between the library at the main campus (300) and at SMC (590). The library has a book student ratio of 1:6. In addition, the library is also the custodian of reports of research projects by undergraduate students. Research project reports by staff as well as theses and dissertations of postgraduate students registered at SUA and of staff who complete their studies in other institutions of higher learning in Tanzania and abroad are available. Also, available in the library are e-resources including 30 computers at the main campus and 32 computers at SMC, connected to the internet, all of which serve as an additional, but very valuable, source of information to students, staff and the general public.

To ease the problem of inadequacy of books and e-resources for teaching and learning, SNAL has made a lot of efforts to enable students and staff to access e-depositories including free periodicals such as AGORA (agriculture and related sciences journals), Science Direct, and others. SNAL also subscribes to the Tanzania Consortium of Universities and Research Institution Libraries which has many data bases relevant to SUA degree programmes. Also, SNAL has a digital library for searching all the subscribed online data bases and information resources.

Access of learners to library facilities (actual/remote)

The students in this programme will have an access to the library just like other bonafide students and the public.

Location(s) and the staff qualifications in the library

Library is located at the Main Campus, which is also accessible by students. The library has well qualified administrative staff and professional librarians.

Material (detailed list of relevant readings available in the library accessible remotely or actual)

The reading materials for forest resources and business development students are available at SNAL. The list of specific discipline books and journals, short communications, research and/or non-research reports, proceedings etc. can be accessed by visiting the website of the SNAL (<http://www.lib.sua.ac.tz/>).

7.3 Equipment

The most important equipment for conducting MSc FoBD programme such as computers, Liquid Crystal Display (LCD) and overhead projectors are available. Some of the teaching/seminar rooms are fitted with immovable power point projectors, but almost all rooms are fitted with black and white boards.

7.4 Information and Communications Technology

The Information and Communication Technologies (ICT) at SUA are coordinated by the computer Centre (established in 1991) which is guided by an ICT Policy formulated since 2002. ICT functions at SUA are an integral part of the teaching, learning, research, outreach, consultancy, library and administrative activities. Services are open to all regular and visiting students, visiting researchers, and all staff members of the University community. The Computer Centre trains students to use ICT facilities in responsible, efficient and innovative ways and has provided computers in designed computer laboratories for this purpose. There is a wireless link between Main Campus and SMC to enhance connectivity for the dissemination of information in campuses with a current bandwidth of 4 Mbps dedicated for SUA since December 2010. There is wide access to internet through provision of wireless connectivity at strategic places since 2011. The wireless connection facilitates internet connectivity between SUA students and staff and the outside world. In 2013, SUA procured an additional 157 new computers and increased the bandwidth from 4 to 20. SUA is connected to the National Fibre Optic network to allow the SUA to connect to the Seacom International undersea fibre optic network.

7.5 Learner Support Services

Catering Services:

- i. 4 cafeteria/restaurants at the main campus;
- ii. 4 cafeteria/restaurants at SMC; and
- iii. Help desks in the office of Dean of Students.

Health Services

SUA is well equipped with students support services. At Main Campus there is a fully-fledged Health Centre at the main campus and a hospital in Mazimbu. All health services offered by district hospitals are being offered at Mazimbu hospital. SUA has highly and adequately qualified health workers/professionals.

Accommodation Services

Both private and university accommodation services are available at affordable prices inside and outside of main campus and SMC. The Sokoine University of Agriculture Student

Accommodation Bureau (SUASAB) manages student hostels and/or may assist students to secure accommodation.

Sports and Games Facilities

Students enrolled in the proposed program will enjoy the availability of playgrounds including running track, football grounds, volleyball, cricket, basketball, netball, lawn tennis grounds etc.

Academic Advisor(s) and Counselling Facilities

All postgraduate students are allocated academic supervisors for mentoring and coaching through their tenure at SUA especially on academic write up of the dissertation. Also the mentors will guide the students on how to handle the social and psychological issues affecting his/her academic affairs. In addition to academic supervisors, SUA is gifted with professional guidance and counselling professionals under the office of the dean of students. These personnel offer free guidance and counselling services to students. The Office of the Dean of Students (DOS) offers counselling services to needy students and has designated Officers that handle matters pertaining to international students, students with special needs and general academic and social welfare of students.

8.0 ACADEMIC STAFF AVAILABLE TO RUN THE PROPOSED PROGRAMME WITH THEIR QUALIFICATIONS

Table 1: Profile of the academic staff to teach the MSc. Forestry Business Development programme

S/N	Name of Academic Staff	Nationality	Age	Academic Rank	Academic Qualification	Duration of Studies (yrs)	Classification & GPA	Conferring Institution	Year Qualification Obtained	Employment Status (Full time/Part time)	Teaching Experience	Check Number in the payroll	Course Title	Code	Semester	Year
1.	Gerald c. Monela	Tanzanian	62	Professor	Bachelor of Science in Forestry	3	3.9	Sokoine University of Agriculture	1986	Full time	34	118 86747		FEC 600	1	1
					Masters of science in Forestry	2	4.3	Sokoine University of Agriculture	1989							
					PhD in Forest Economics & Natural Resource Management	4	Pass	Agricultural University of Norway	1996							
2.	John F. Kessy	Tanzanian	55	Professor	Bachelor of Science in Forestry	3	4.3	Sokoine University of Agriculture	1988	Full time	27	11904922		FEC 608	1	1
					Masters of Science in Management of Natural Resource	2	Pass	Agricultural University of Norway	1992					FEC 613	2	1
					PhD in Community Forestry	4	Pass	Wageningen University, Netherlands	1998							
3.	Yonika M. Ngaga	Tanzanian	60	Associate Professor	Bachelor of Science in Forestry	3	4.3	Sokoine University of Agriculture	1987	Full time	32	11904933		FEC 610,	1	1
					Master of Science in Forestry	2	4.2	Sokoine University of Agriculture	1990					FEC 611	2	1
					PhD in Forest Economics & Socio-economics	4	Pass	Agricultural University of Norway	1998							
4.	Jumane M. Abdallah	Tanzanian	44	Associate Professor	Bachelor of Science in Forestry	3		Sokoine University of Agriculture	1997	Full time	14	11190553		FEC 614,,	1	1
					Masters of Science in Forestry	2		Sokoine University of Agriculture	2001					FEC 606, FEC 609	2	1

S/ N	Name of Academic Staff	Nationality	Age	Academic Rank	Academic Qualification	Duration of Studies (yrs)	Classification & GPA	Conferring Institution	Year Qualification Obtained	Employment Status (Full time/ Part time)	Teaching Experience	Check Number in the payroll	Course Title	Code	Semester	Year
					PhD in Productive efficiency	3	Pass	SUA/ Bonn University	2006							
5.	Felister M. Mombo	Tanzanian	44	Associate Professor	Bachelor of Science in Forestry	3		Sokoine University of Agriculture	1998	Full time	11	11906054		FEC 616	1	1
					Masters of Science in Natural Resource Management	2		Agricultural University of Norway	2001					FEC 618, FEC 614	2	1
					PhD in Resource and Environmental Economics	3	Pass	Ghent University, Belgium	2012							
6.	Emmanuel F. Nzunda (PhD)	Tanzanian	48	Associate Professor	BSc. Forestry	3	4.4	Sokoine University of Agriculture	1999	Full time	14	11902630		FEC 612	2	1
					MSc. Forestry	2	4.6	Sokoine University of Agriculture	2002							
					PhD. Ecological Sciences	4	Pass	University of KwaZulu-Natal, Pietermaritzburg, South Africa	2009							
7.	Leopold P. Lusambo	Tanzanian	52	Senior Lecturer	Bachelor of Science in Forestry	3	4.1	Sokoine University of Agriculture	1994	Full time	17			FEC 602,	1	1
					Master of Science in Forestry	2	4.3	Sokoine University of Agriculture	2002					FEC 615	2	1
					PhD in Forestry (Ecological Economics)	3	Pass	University of Wales, Bangor, UK.	2009							
8.	Philip Damas (PhD)	Tanzanian	48	Senior Lecturer	BSc. Agriculture General	3	4.4	Sokoine University of Agriculture	1998	Full time	15	221/003		AEA 600	1	1
					MSc. Agriculture Economics and Agribusiness	2	Pass	Sokoine University of Agriculture	2001							
					PhD. Agriculture Economics and Agribusiness	3	Pass	University of Bonn	2007							

S/ N	Name of Academic Staff	Nationality	Age	Academic Rank	Academic Qualification	Duration of Studies (yrs)	Classification & GPA	Conferring Institution	Year Qualification Obtained	Employment Status (Full time/ Part time)	Teaching Experience	Check Number in the payroll	Course Title	Code	Semester	Year
9.	Greyson Zabron Nyamoga	Tanzanian	42	Lecturer	Bachelor of Science in Forestry	3	4.1	Sokoine University of Agriculture	2003	Full time	10	11903925		FEC 605, WLM 601	1	1
					Master of Science in Forestry	2	4.2	Sokoine University of Agriculture	2008						2	1
					Master in Sustainable Development	2	3.8	University of Florida	2012					FEC 604		
					PhD in Resource and Environmental Economics	4	Pass	Norwegian University of Life Sciences	2019							
10.	Beatus J. Temu	Tanzanian	37	Assistant Lecturer	Bachelor of Science in Wildlife Management.	3	3.7	Sokoine University of Agriculture	2006	Full time	4	111449529		FEC 603	1	1
					Master of Science in Forestry	2	4.2	Sokoine University of Agriculture	2013							
11.	Neema Kitasho	Tanzanian	33	Assistant Lecturer	Environmental Sciences and Management	3		Sokoine University of Agriculture	2009	Full time	4			FOE 611, FEC 612	2	1
					Master of Science in Environmental and Natural Resource Economics	2		Sokoine University of Agriculture	2013							

Appendix 1:



SOKOINE UNIVERSITY OF AGRICULTURE
COLLEGE OF FORESTRY, WILDLIFE AND TOURISM
FORCONSULT

**STAKEHOLDERS WORKSHOP FOR MAINSTREAMING FOREST PRODUCTS VALUE CHAINS IN
CURRICULUM AT SUA, HELD ON 7th NOVEMBER 2019 AT EASTERN AFRICA STATISTICAL
TRAINING CENTRE, DAR ES SALAAM**

WORKSHOP REPORT

SUBMITTED TO

FOREST VALUE CHAIN DEVELOPMENT PROGRAMME (FORVAC)

NOVEMBER 2019



Workshop Photo

EXECUTIVE SUMMARY

Introduction

Stakeholder's workshop for developing a new degree in Forest Resource Economic and Business Development was conducted on 7th November 2019. The workshop was hosted by the Department of Forest and Environmental Economics (DFEE), College of Forestry, Wildlife and Tourism (CFWT) of Sokoine University of Agriculture (SUA). Various key stakeholders were invited and attended the workshop to explore how to mainstream forest products value chains into the curriculum at SUA. The stakeholder's consultation was among the key recommendations of the CFWT Board when the proposal for the new degree programme was discussed. Through the workshop, inputs from stakeholders were solicited from participants on how to mainstream forest value chain into curriculum at SUA. The workshop was also a necessary requirement for the accreditation process by Tanzania Commission of Universities (TCU) which require involvement of stakeholders when developing a new degree programme. Stakeholder's consultations are useful and appropriate for identification, discussion agree on key issues and market the new curriculum.

Objectives of The Workshop

The objectives of the workshop were to:

- raise awareness on the need for training in value chain development in the forest sector;
- introduce the proposed degree programme to stakeholders;
- collect views on how training of the forest value chains development could be improved; and
- assess marketability of the proposed training in forest value chains.

Participation

The workshop brought together a diverse audience of stakeholders from different establishments within Tanzania. Involvement of stakeholders working in private and government sectors and NGOs was necessary to capture diverse views and inputs on forest value chain development. Participants were representatives from government, students, academicians, bankers, small-scale tree growers, entrepreneurs, business experts, forest service providers, NGOs and wood based industries.

Opening Remarks

The opening remarks for the workshop were given by the Deputy Vice Chancellor (Administration and Finance) from Sokoine University of Agriculture, Prof. Yasinta Muzanila who represented Professor Raphael Chibunda, the Vice Chancellor of Sokoine University of Agriculture. She provided a brief description on the role of departments in horizontal and vertical expansion of the University. She appreciated the efforts of the Department in which the proposed programme will be hosted. She then highlighted on the uniqueness of the proposed programme and its potential contribution to the Corporate Strategic Plan of Sokoine University of Agriculture. Prof. Muzanila requested the stakeholders to openly share their views and comments on the proposed curriculum. Finally, she expressed gratitude on behalf of SUA for their attendance.

Curriculum Presentation and Discussion

Curriculum presentation focused on background, rationale, outline of the programme and Courses descriptions.

Background and Rationale

The background reflected that the current government emphasizes on industrialization, requires that hands-on skills and knowledge. The proposed training will impart knowledge on business development, markets, job creation, and value chain in forest sector. Key issues raised on the background presentation were:

- The training curriculum is vital and is in line with the current government industrialization drive.
- The training curriculum will contribute to elevate the performance of the forest sector in the country.
- Since most of the forest plantations are under small-holders, their training on forest value chain development is central for their produces.
- In developed countries, associations/cooperatives of smallholders are the main employers of forestry graduates therefore the training should also focus on changing their attitude not only to focus on government employment alone.
- The training should address all aspect of the forest value chains.
- The training will fill the existing gap between forest and business model development which does not feature out clearly in the existing curricula.
- Proposed training will include marketing which is deficient for most of the people working in the sector. This has been a problem for quite sometimes in the forestry sector.
- Linking forestry and the national economy (GDP) and realization of tangible contribution of the forestry sector in the national economy.
- The training will provide business oriented forest professionals
- The training will give candidates ability to capture potential opportunities and understanding of various value chains, marketing and employment opportunities.
- The training should help to generate graduate who can ensure and improve standards and branding of forest products.
- SUA can learn from other experienced Universities such as Helsinki University where student are involved in business practically.
- Alumni who are successfully engaged in forestry business can also be invited to the university to share their experiences.

Programme outline

The presentation showed that the training curriculum contained 58 courses distributed in three years (six semesters). The outline contains various disciplines including value chain, ethics and information and communication technologies. Each semester has a minimum of 60 credits from core and elective courses. Some of the key issues raised were:

- There are so many changes in the forest based industries which are in line with the national industrialization drive implemented by the government of Tanzania and the proposed programme is therefore important in bridging this gap in the forest sector.
- SUA as an institution has a great role to play in ensuring that the potential opportunities are explored and efficiently utilized.
- There are many potential opportunities in the forest sector that are yet to be explored. If these opportunities were fully utilized, they could contribute significantly to the economy of the country (carbon trade, charcoal etc.).
- The need to impart knowledge and skills on technological advancement is crucial.
- Changing the mindset of actors along value chains towards business orientation in forest production.
- Most graduates are still thinking of being employed instead of employing themselves especially in the forest sector.
- Training should include analysis of the entire value chains of all forest products
- Timber and other forest products certification are needed.
- Training on practical skills and case studies should be intensified in the last semester.
- Students to formulate groups and develop business feasibilities studies and if possible implement ideas.
- Proper and efficient use of forest resources should be emphasized in the training.
- Offering value chain training in form of short courses is also very important.
- The structure of the programme in some semesters require students to take a large number of courses to attain the minimum required credits
- More ICT based courses should be added into the curriculum to capture technological aspects such as remote sensing, GIS and so on.
- A course on botany should be added to equip the students with the knowledge of various plants and their usefulness in different communities.
- For the graduates of the programme to be competent in economic settings they must be subjected to a proper dose of mathematical economics and therefore courses related to economics should be given priority in the course outline.

Courses description

In each course the following were described: Subject name and title, course aim, expected learning outcomes, status (either core or elective), credits rating, total hours spent for lectures, seminars/tutorials, practical, assignments and independent study, course content, teaching and learning activities, assessment methods and reading lists. Some of the key issues raised were:

- Consider to reduce the workload to students
- Increase the number of credit hours per course to reduce the number of courses per Semester.
- Entry qualification should also allow those with passion to forest business to be admitted.
- Increase diversity of courses to enhance employability.
- Need to check if a graduate meets requirements for professional jobs after completing their studies.
- Re-check allocation of credit hours for different courses.

- Add insurance course, although currently insurance companies are not ready to insure forest related business due to the high risks of fire.
- Consider increasing the first enrollment from 50 to 100.
- Graduates in BSc. Forestry could be given short courses on value chains to equip them with business skills.
- Graduates are trained on knowledge, skills and attitudes. Partially, succeeded in the knowledge but still have challenges on skills and positively changing attitudes towards work.
- Curriculum is too academic, need to change and help graduates to have the hands on skills

Plenary Discussions on Various Issues

In addition to issues raised about the curriculum, the following set of questions were discussed

- Is the representation of stakeholders in the workshop adequate? (Relevance of the stakeholders workshop): Participants were of the opinion that they made an adequate representation of stakeholders for discussion on the proposed training curriculum and that the workshop was very relevant.
- Are there serious omissions/redundant contents in the programme/courses?
 - add more courses related to business such as business planning management and project planning;
 - the training be designed as a master programme
 - Include feasibility study among the core courses in the programme
- Which level do you think the proposed degree program should be? (BSc., MSc., Postgraduate Diploma or Short course?)
 - It is important for students to have knowledge in forestry in order to effectively undertake the proposed training in forest business development. Therefore, the proposed programme could be offered at a Masters level for candidates who already have a foundation in Forestry.
 - Consider to develop an Executive Masters programme (evening classes) to capture employees who cannot attend full time studies.
 - In a short run, the need for tailor-made short courses to equip former forestry graduates, forest workers etc. with practical skills for forest based business development was pointed out.

Recommendations

The Workshop recommended to:

- Formulate MSc. Forest Business Development degree programme using comments raised in the workshop;
- Develop and implement an Executive Masters programme (evening classes) in forest business development to capture employees who cannot attend full time studies;
- Formulate modules and establish short courses as “low hanging fruits” from the curriculum discussed to quickly address existing business and value chain development

challenges in the forest sector. The short course should be used to re-tool stakeholders in the forest sector.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
TABLE OF CONTENTS.....	1
1. BACKGROUND AND OBJECTIVES TO THE WORKSHOP.....	2
1.1 Why the workshop	2
1.2 Objectives of the Workshop	2
1.3 Workshop Programme.....	2
2. PARTICIPATION	3
3. OPENING REMARKS	3
4. CURRICULUM PRESENTATION AND DISCUSSION	4
4.1 Background and rationale	4
4.1.1 Key issues presented.....	4
4.1.2 Key issues raised during presentation	4
4.2 Programme outline	5
4.2.1 Key issues in the presentation	5
4.2.2 Key issues raised during discussions.....	5
4.3 Courses description.....	7
4.3.1 Key issues in the presentation	7
4.3.2 Key issues raised during discussions	8
5. PLENARY DISCUSSIONS ON VARIOUS ISSUES.....	8
6. CONCLUSION AND RECCOMENDATIONS.....	12
6.1 Conclusion.....	12
6.2 Recommendations	12
7. VOTE OF THANKS	12
APPENDICES	14

1. BACKGROUND AND OBJECTIVES TO THE WORKSHOP

1.1 Why the workshop

Stakeholder's workshop for developing a new Bachelor degree in Forest Resource Economic and Business Development was conducted on 7th November 2019 hosted by the Department of Forest and Environmental Economics (DFEE), College of Forestry, Wildlife and Tourism (CFWT) of Sokoine University of Agriculture (SUA). Various key stakeholders were invited and attended the workshop to explore how to mainstream forest products value chains into the degree curriculum at SUA. The stakeholder's workshop was among the key recommendations of the CFWT Board when the proposal for the new degree programme was discussed. The stakeholder's workshop aimed to solicit inputs from participants to further improve the proposed curriculum.

The workshop is also necessary requirement for the accreditation process by Tanzania Commission of Universities (TCU) which require involvement of different stakeholders when developing a new degree programme. Stakeholder's workshops are useful and appropriate forum for identification, discussion and resolution of key issues.

In addition, the workshop was used as a forum to discuss current trends in forestry, linkages between various sectors and the challenges facing the sector including value chains development and how they could be fitted in the proposed curricula. During the workshop, presentations were made on the rationale of the proposed degree programme, courses in each semester and course description followed by intensive discussions on strategies on how training in value chain development could be implemented in the forest sector.

1.2 Objectives of the Workshop

The workshop was conducted to achieve the following objectives:

- introduce the proposed degree programme to stakeholders;
- raise awareness on the need for training in value chain development in the forest sector;
- collect views to further improve the proposed degree programme and training in value chain development; and
- assess marketability of the proposed programme.

1.3 Workshop Programme

The workshop started at 8:00 am and ended at 5:30 pm. Participants were given enough time to discuss and provide their comments and views within the allocated time. The full workshop schedule of activities is provided in Appendix 1.

2. PARTICIPATION

The workshop assembled a diverse audience of stakeholders from different establishments within Tanzania. Participants with different backgrounds including government, students, academicians, bankers, small-scale tree growers, entrepreneurs, business experts, farmers and forest service providers, NGOs, representatives from wood based industries participated. Involvement of stakeholders working under the private and government sectors was necessary to broaden the understanding of the value chains of different forest products. The discussions in this workshop were interesting and intense but constructive. Governmental institutions participated in the workshop included:

- i. Tanzania Forest Research Institute (TAFORI)
- ii. University of Dar es Salaam (UDSM)
- iii. College of Business and Education (CBE)
- iv. Forest Industry Training Institute (FITI)
- v. Forest Training Institute (FTI)
- vi. Tanzania Revenue Authority (TRA)
- vii. Bank of Tanzania (BoT)
- viii. Tanzania Forest Service Agency (TFS)
- ix. Beekeeping Training Institute (BTI)
- x. Sokoine university of Agriculture (SUA)
 - Students from the College of Forestry, Wildlife and Tourism (CFWT)
 - Administrative staff (SUA-Quality Assurance Bureau, Director of Undergraduate Studies)
 - Academicians from different departments of the CFWT

Participants from the private sector include stakeholders largely involved in forest plantation and natural forest conservation such as:

- i. Sao Hill Forest Industries Association (SAFIA)
- ii. Tanzania Forest Industries Federation (SHIVIMITA)
- iii. Green Resources Ltd (GRL)
- iv. Tanzania Tree Growers Association (TTGA)
- v. Mpingo Conservation and Development Initiative (MCDI)

The full list of participants is attached in Appendix 2.

3. OPENING REMARKS

The opening remarks for the workshop were given by the Deputy Vice Chancellor (Administration and Finance) from Sokoine University of Agriculture, Prof. Yasinta Muzanila who was representing Professor Raphael Chibunda, the Vice Chancellor of Sokoine University of Agriculture.

In the speech, she provided a brief description on the role of departments in horizontal and vertical expansion of the University. She appreciated the efforts of the Department in which the proposed programme will be hosted. She then highlighted on the uniqueness of the proposed programme and its potential contribution to the Corporate Strategic Plan of Sokoine University of Agriculture.

She further, narrated that the proposed programme is in line with the policies of the Fifth Phase government under His Excellency Dr. John Pombe Magufuli and she commended the kind of graduates the programme is expected to generate. Prof. Muzanila requested the stakeholders to openly share their views and comments on the proposed curriculum. Finally, she expressed gratitude on behalf of SUA for their attendance. A full text of the opening remarks is provided in Appendix 3.

4. CURRICULUM PRESENTATION AND DISCUSSION

4.1 Background and rationale

4.1.1 Key issues presented

The background presented reflected that our country is rich in forestry resources with the largest portion (more than 50% of Tanzania) being classified as forested. Forest sector has been contributing a lot to the livelihoods of local people but its contribution in the GDP is still not significant. This may be due to type of methodology applied or lack of experts. The current government slogan emphasizes on industrialization, therefore the hands on skills and knowledge on market creation and business management is important for the process. The programme will impart knowledge on business development, markets, job creation, value chain and value addition in forest resources.

4.1.2 Key issues raised during presentation

- The programme is crucial for the present times and is in line with the current government industrialization drive.
- The programme will help to elevate the performance of the private sector in the country.
- Need to learn from others who have experience in value addition in natural resources aspects such as forestry.
- The course will enable graduates to trace the trend between demand and supply in the market.
- Capturing the needs of smallholder farmers as they own the largest portion of forest plantations. In Tanzania about 54% of all planted forests are owned by small scale holders. Due to current land ownership status, expansion of forest plantations in Tanzania will mainly be through small holder growers.
- Since most of the forest plantations are under small holders woodlots therefore they have to be trained on sustainable utilization and value chain development of their produce.
- The programme will help to fill the gap between demand and supply which is expected to shoot up to 3million m³ per year in 2035, if the current situation prevails.

- In developed countries, smallholders are the main employers of forestry graduates therefore the programme should also focus on changing the attitude of our graduates as they think of being employed by the government alone.
- The programme will address most aspect of the forest resources value chain.
- The programme will fill the existing gap between forest and business model development which does not feature out clearly in the existing programmes.
- The programme will capture the lack of marketing aspect for most of the people working in the forest sector. This has been a problem for quite sometimes in the Forestry Sector.
- Filling the gap in value chain analysis, business skills and knowledge in negotiations
- Linking forestry and the national economy (GDP) and realization of tangible contribution of the forestry sector in the national economy.
- The programme will provide business oriented forest professionals
- The programme will provide knowledge and skills in business management
- The programme will give candidates ability to capture potential opportunities and understanding of various value chains, marketing and employment opportunities
- The programme should help to generate graduate who can ensure the standards of our forest products as well as branding them.
- How do you teach the business component at SUA? May be SUA can learn from other experienced Universities such as Helsinki University where student are exposed early to practical situation in business settings. Also the Alumni who are already engaged in forestry business can be invited to the university to lecture students and share their experience.

4.2 Programme outline

4.2.1 Key issues in the presentation

- The programme contained 58 courses distributed in three years (six semesters).
- Each semester has a minimum of 60 credits from core and elective courses.
- Introductory courses were placed in the first and second semesters to enable students to develop a foundation for the subsequent courses.
- The courses in the second and third semesters were intermediate while those in the fifth and sixth semesters were framed to specifically orient a student towards forest resource economics, marketing and business disciplines.
- The outline contains various disciplines including value chain, ethics and information and communication technologies.

4.2.2 Key issues raised during discussions

- The contribution of the forest sector in the national income in Tanzania is underestimated
- There are so many potential opportunities in the forest sector in Tanzania that are yet to be explored. If these opportunities are fully explored, they can contribute significantly to the economy of the country (carbon trade, charcoal etc.).

- Sokoine University of Agriculture as an institution has a great role to play in ensuring that the potential opportunities are explored and efficiently utilized.
- There are so many changes in the forest based industries which are in line with the national industrialization drive implemented by the government of Tanzania and the proposed programme is therefore important in bridging this gap in the forest sector.
- However, we need to involve many stakeholders especially those from developed world to acquire technological advancement.
- Forest resources are declining therefore, there is a need to continue promoting tree growing to meet the increasing demand in Tanzania.
- Changing the mindset of people from the conservation thinking to include business oriented forest production.
- Plantation forest is still low in Tanzania but the demand is very high hence market potentials for forest products.
- Small-scale tree growers are the most important group to target because they have land for planting trees which when aggregated together can make a difference.
- Despite the increasing number of tree growers there is still shortage of wood in the country
- Most graduates are still thinking of being employed instead of employing themselves especially in the forest sector. Elsewhere in the World, it is both small scale and large-scale farmers who are the main employers.
- It is important to have a look of the entire value chain analysis of various forest products
- Technological improvement is important in the forest sector and we are still behind in this aspect.
- Timber and other forest products certification still need to be explored
- Consider how best to teach value chain analysis and change the mindsets of people
- More trainings on practical skills is needed, hence must intensify case studies in the last semesters
- Formulate groups and develop business feasibilities studies and if possible implement ideas
- Proper and efficient use of forest products to increase the value of the forest e.g using mpingo for charcoal is not efficient
- Offering value chain training as a short courses is more important than a degree programme
- Promoting agroforestry – Avocado for efficient use of the available land
- The structure of the programme in some semesters require students to take a large number of courses to attain the minimum required credits
- FEC 103 is so broad, therefore could be broken into three different courses
- More ICT based courses should be added into the curriculum to capture technological aspects such as remote sensing, GIS and so on.

- A course on botany should be added to equip the graduate with the knowledge of various plants and their usefulness in different communities.
- The minimum number of elective courses is only two so the department should ensure that no semester has less than two elective courses throughout the programme.
- The proposed programme can borrow some of the courses which are relevant from other departments.
- Each College is now required to develop its own statistics course relevant to their programme and therefore discouraging the idea of borrowing statistics courses from other Colleges.
- For the graduates of the programme to be competent in economic settings they must be subjected to a proper dose of mathematical economics and therefore courses related to economics should be given priority in the course outline.
- The course content and outcome should be structured to impart needed skills not only knowledge (Re-visit learning outcomes).
- Interest in forest resource economics should be taken as one of the criteria for enrollment if possible.
- The students of this programme should be prepared as an economist and the forest based knowledge should just distinguish him/her from other economists.
- Econometrics, microeconomics and macroeconomics courses should appear in various semesters since they are the backbone of the proposed programme.
- The programme should motivate graduates to pursue further studies in natural resources economics.

4.3 Courses description

4.3.1 Key issues in the presentation

- There is a total 58 (core and elective) courses distributed in three years (six semesters)
- In each course the following were described:
 - (i) Subject ante and title (e.g. FEC 101 Introduction to Resource Economics)
 - (ii) The course aim
 - (iii) Course expected learning outcomes
 - (iv) Course status (either core or elective)
 - (v) Credits rating – total credits allocated
 - (vi) Total hours spent for lectures, seminars/tutorials, practical, assignments and independent study
 - (vii) Course content
 - (viii) Teaching and learning activities
 - (ix) Assessment methods
 - (x) Reading lists

4.3.2 Key issues raised during discussions

- Check the course contents and its distribution to reduce the workload to students
- There are so many courses to make a total of 60 credit hours per Semester
- Suggested to increase the number of credit hours per course to reduce the number of courses per Semester
- The entry qualification should also allow those with passion of doing forest related business to be admitted in the programme
- Diversity of courses in the programme vs employability
- The economic background and skills need to be strengthened
- The programme is good for students in the Masters programme hosted by the same Department
- Need to check if graduates are competent for professional jobs after completing their studies
- Check allocation of credit hours for different courses
- Need to invest more in the forest sector
- Insurance companies not ready to insure forest related business due to the high risks of fire. Also, financial institutions do not provide loans to forest owners who want to use plantations as collateral
- Consider increasing the first enrollment from 50 to 100 and then reduce the number in the subsequent years.
- Graduates in BSc. Forestry be given a refresher short courses to equip them with business and entrepreneurship skills
- Is the exit strategy of giving students a certificate in case they fail to complete the entire course a rational alternative to discontinuation?
- Diversified thinker-economists who can integrate different things at the same time are needed.
- The Department should be flexible in modifying the existing BSc. Forestry programme to orient it with the business thinking
- Graduates from this programme should be both leaders and change agents
- There is need to understand the market and value chains of various forest products
- Graduates are trained on knowledge, skills and attitudes. Partially, we have succeeded in the knowledge but we still have challenges in imparting skills and positively changing attitudes towards work.
- Too academics, need to change and help graduates to have the hands on skills

5. PLENARY DISCUSSIONS ON VARIOUS ISSUES

Is the representation of stakeholders in the workshop adequate? (Relevance of the stakeholders' workshop)

- Noted that invitations were sent to representatives from various and diverse group of stakeholders as summarized in section 2 of this report.
- It was observed that some failed to attend and sent apologies to the organizers of the workshop.
- Some participants were of the view that the number of participants from the private sector could have been higher and those from the government institutions lowered
- Women were not specifically targeted to attend
- However, on the overall, participants were of the opinion that they made an adequate representation of stakeholders for discussion on the proposed training programme and that the workshop was very relevant (Figure 1)

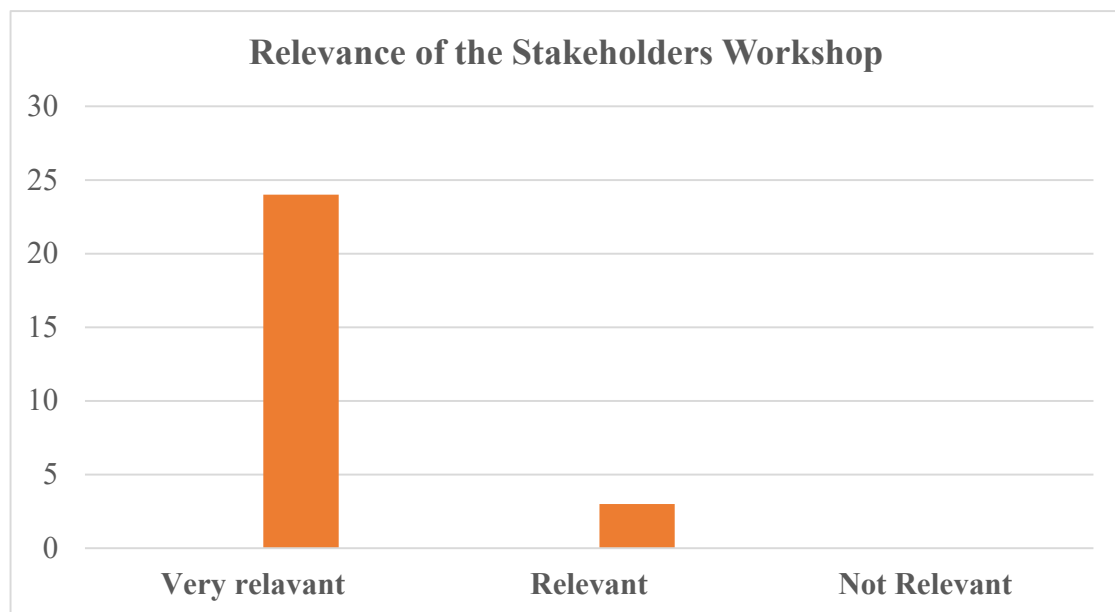


Figure 1: Relevance of the workshop

Are there serious omissions/redundant contents in the programme/courses?

Stakeholders had the following views:

- Add more courses related to business such as business planning and management, project planning
- The programme is too intense for a bachelor degree and can overdose students. Need to reduce some courses

- It is the perfect programme because it captures the value addition and value chain analysis of various forest products which was missing
- Link the programme with the national development programme
- The courses should have practical applications after graduation. For example graduates should be able to apply the time series and econometric techniques in the real life
- The name of the programme (branding) is very good and it capture the contents presented
- Review modalities for assessing the case studies (Could be different from those used for field practicals)
- A number of representatives were of the view that the programme be designed as a masters programme
- Include feasibility study among the core courses in the programme

Which level do you think the proposed degree program should be? (BSc., MSc., Postgraduate Diploma or Short course?)

Stakeholders had the following views:

- It is important for students to have knowledge in forestry in order to effectively undertake the proposed training in forest business development. Therefore, the proposed programme could be offered at a Masters level for candidates who already have a foundation in Forestry.
- The programme is relevant to be at bachelor level and in a long run can address some of the challenges not been addressed by other programmes.
- In a short run, the need for tailor-made short courses to equip former forestry graduates, forest workers etc. with practical skills for forest based business development was pointed out.
- The proposed programme is not adequately linked to the current job description for Tanzania government services (Will the graduate be categorized as forester?, economists? or business developer?)
- Consider adding few courses on business development in the current BSc. Forestry programme to make it stronger
- It was proposed that forest business development be offered at Masters level
- An Executive Masters programme (evening classes) to capture employees who cannot attend full time studies.
- Also consider to offer an evening postgraduate diploma or certificate course to attract more students and more money to the college and the University

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Training in forest business development is very important to address existing challenges (limited value chain development, creativity in recognizing job opportunities and wealth creation, employment base, entrepreneurship skills, business compliance and marketing skills, negotiation skills, ability to adapt to customers, communities and emerging issues) in the forest sector. Therefore, the workshop revealed high demand to establish training on forest business development at all levels in the CFWT at SUA to produce graduates who can employ themselves and create jobs for others.

The workshop attended by a diverse of stakeholders and conducted in a frank and participatory manner therefore enabled acquisition of views from all participants. Participants declared that the workshop was successful and made recommendations presented below.

6.2 Recommendations

The Workshop recommended to:

- Formulate modules and establish short courses as “low hanging fruits” from the curriculum discussed to quickly address existing business and value chain development challenges in the forest sector. The short course should be used to re-tool stakeholders in the forest sector;
- Formulate MSc. Forest Business Development degree programme using comments raised in the workshop;
- Develop and implement an Executive Masters programme (evening classes) in forest business development to capture employees who cannot attend full time studies;
- Consider to develop a Postgraduate Diploma programme in Forest Business Development mainly for diploma holders
- Use all inputs from the workshop to improve the BSc. Forest Resource Economics and Business Development.

7. VOTE OF THANKS

- Prof. Monela thanked all participants for accepting the invitation and for participating fully in the discussion.
- He thanked the Forest Value Chain Development (FORVAC) Programme for supporting the workshop financially.

- He extended the gratitude to the management of Sokoine University of Agriculture willing to facilitate the process and the Eastern Africa Statistical Training Centre for hosting the workshop and offering good services to people.
- The discussion was rather tough but with a good intention of improving the proposed programme.
- The Facilitator Prof. R. C. Ishengoma has done a very good job, we thank him very much.
- On behalf of the Department, Professor Monela thanked all the participants, wished them safe journey back home and declared the workshop closed.

APPENDICES

Appendix 1: Programme for the Stakeholders' Workshop for the BSc. Forest Economics and Business Development, held at the East Africa Statistical Training Centre Conference Facility, Dar es Salaam on 7th November 2019

Date	Time	Activity	Responsible personnel
6 th Nov.		Travel	Participants from up-country
7 th Nov.	8:30am to 9:00am	Registration	Dr G.Z. Nyamoga and Mr Masaka Kosei and Ms Scolastica Ntalikwa
	9:00am – 9:10am	Introduction	Facilitator
	9:10am – 9:40am	Opening Remarks	VC SUA, Prof Raphael Tihelwa Chibunda
	9:40am – 10:30am	Background to the BSc. Forest Economics and Business Development	Prof F.M. Mombo
	10:30am – 10:45am	Discussion	Facilitator
	10:45am – 10:50am	Group Photo	Facilitator
	10:50am – 11:20am	Health Break	All
	11:20am – 12:20am	Programme Outline	Prof Y.M. Ngaga
	12:20 am – 1:20pm	Courses Description	Prof J.M. Abdallah
	1:20pm – 2:20 pm	Lunch	All - Facilitator
	2:20pm – 2:30pm	Formation of groups and ToR	Facilitator
	2:30pm – 3:30pm	Group Work	All - Facilitator
	3:30pm – 4:30pm	Presentation of Group work	Chairman of group
	4:30pm – 4:40pm	A Word from Private Sector	Dr Martin Kijazi
	4:40pm – 5:00pm	Remarks from TFS	Conservation Commissioner, Prof Dos Santos A. Silayo

	5:00pm – 5:20pm	Closing Remarks	Director, Dr Ezekiel E. Mwakalukwa
	5:20pm – 5:25pm	Vote of Thanks	Prof G.C. Monela
	5:25pm –	Tea/refreshments and Departing	

Rapporteurs: Dr G.Z. Nyamoga, Mr K.J. Masaka and S.J. Ntalikwa

Appendix 2: List of Participants to the Stakeholders Workshop for Mainstreaming Forest Products Value Chains In Curriculum at SUA, Held on 7th November 2019 At Eastern Africa Statistical Training Centre, Dar es Salaam

S/N	Name	Institution	Email
1	Prof Yasintha Muzanila	DVC AF- SUA	muzanila@sua.ac.tz
2	Godlisten Minja	Green Resources Ltd	godlisten.minja@greenresources.no
3	Samwel Mawinda	FITI- Olmotonyi	samwelmauinda@hotmail.com
4	Beatus Temu	DFEE- SUA	beatus.temu@sua.ac.tz
5	Cosmas Emily	SUA- Morogoro	cosmas.emily@sua.ac.tz
6	Hadija Mchelu	Student - SUA	mcheluhadija@gmail.com
7	Laban Ambakisye	Student - SUA	ambakyomo@gmail.com
8	Moureen Daffa	Student - SUA	moureen.nick@yahoo.com
9	Prof John F. Kessy	Principal- CFWT	jfkessy@sua.ac.tz
10	Joseph Chuwa	Regional Secretariat Morogoro	chuwaj@yahoo.com
11	Scolastica Ntalikwa	DFEWS- SUA	scolastica.ntalikwa@sua.ac.tz
12	Emmanuel Msoffe	FOVARC	emmanuelmsoffe@yahoo.com
13	Leopold P. Lusambo	DFEE- SUA	lusambo2009@sua.ac.tz
14	Kosei Masaka	DFEE- SUA	Kosei.jr@gmail.com
15	Prof Felister M. Mombo	DFEE- SUA	fmombo@sua.ac.tz
16	Prof Yonika M. Ngaga	DFEE- SUA	ngaga@sua.ac.tz
17	Stephano P. Kingazi	Quality Assurance - SUA	Stephano.kingazi@sua.ac.tz
18	Dr Greyson Z. Nyamoga	DFEE- SUA	gnyamoga@sua.ac.tz
19	Kabura Foye	FITI	kjfoye@gmail.com
20	Ben Sulus	SHIVIMITA	bensulus@gmail.com
21	Anna-Kaisa Kähkölä	FOVARC	annakaisakahkola@gmail.com
22	Kastory Timbula	TTGAU	kmtimbula@gmail.com
23	Aloyce Mbujilo	BoT	ambujilo@bot.go.tz
24	William Alphonse	SAFIA	manhattan2005@gmail.com
25	Dr Suzana N. Agustino	DUS - SUA	dus@sua.ac.tz
26	Dr W. Ngasamaku	DoE - UDSM	ngasamaku@yahoo.com
27	Glory Massao	MCDI	glory.massao@mpingoconservation.org
28	Dr Ubaldo Tumaia	CBE	ubaldusjohn@gmail.com
29	Stanslaus Lukiko	BTI- Tabora	sblukiko@gmail.com
30	Prof Gerald C. Monela	DFEE- SUA	geraldmonela9@gmail.com
31	Prof Romanus C. Ishengoma	Workshop Facilitator	ishengomarc@yahoo.com
32	Prof Jumanne M. Abdallah	DFEE- SUA	abdallah@sua.ac.tz

33	Dr Consolatha Kapinga	TAFORI	consolatha.ck@gmail.com
34	Prof Fortunatus B. Makonda	DFEWS - SUA	makonda@sua.ac.tz
35	Dr Nsajigwa E. Mbije	DWC- SUA	mbije@sua.ac.tz
36	Prof Japhet S. Kashaigili	DFRAM - SUA	jkashaigili@sua.ac.tz
37	Cecilia Kagoma	TRA	ckagoma@tra.go.tz
38	Gerald Iwomile	SUA- Media	geraldlwomile@sua.ac.tz

Supporting staff to the Workshop

S/N	Name Of Participant	Institution	Mobile Phone
39	Emmanuel Gerald	SUA - Morogoro	0712 - 268414
40	Goodluck G. Moshi	SUA - Morogoro	0752 - 040254
41	Zawadi S. Mtae	SUA - Morogoro	0756 - 242392
42	Athuman S. Massanga	SUA - Morogoro	0712 - 224449
43	Moses A. Hassan	SUA - Morogoro	0717 - 288321
44	Sinani Kitimla	SUA - Morogoro	0655 - 767717

Appendix 3: Opening Remarks by the Guest of Honour

OPENING REMARKS BY
PROF. RAPHAEL T. CHIBUNDA,
VICE-CHANCELLOR OF SOKOINE UNIVERSITY OF AGRICULTURE FOR THE STAKEHOLDERS'
WORKSHOP AT THE EAST AFRICA STATISTICAL TRAINING CENTRE CONFERENCE FACILITY, DAR
ES SALAAM, 7TH NOVEMBER 2019 ON ESTABLISHMENT OF BSC FOREST RESOURCE
ECONOMICS AND BUSINESS DEVELOPMENT AT SUA

- Executive Secretary Tanzania Commission of Universities
- Deputy Vice Chancellor (Academic), Prof Raphael P. Gillah,
- Director, Forestry and Beekeeping Division, Dr. Ezekiel E. Mwakalukwa,
- Principal, College of Forestry, Wildlife and Tourism, Prof J.F. Kessy
- Conservation Commissioner, Tanzania Forest Service Agency, Prof. Dos Santos A. Silayo,
- Representatives from Private sector,
- Representatives from Tree Growers Association,
- Representatives from Forest Industry Association,
- Representatives from Commercial Industries,
- Representatives from NGOs,
- Heads of Departments from SUA,
- Students representatives,
- Invited Guests,
- Media and

Ladies and gentlemen

I wish to take this opportunity, on behalf of Sokoine University of Agriculture (SUA) and on my own behalf, to warmly welcome you all to this Stakeholders' Workshop held at the East Africa Statistical Training Centre, Dar es Salaam, today on the 7th November 2019. A warm welcome is especially extended to Government representatives and to all non-SUA participants. I also wish to extend a warm welcome to participants from SUA. I hope all of you will find your participation to this stakeholders' workshop worthwhile.

The College of Forestry, Wildlife and Tourism through the Department of Forest and Environmental Economics, initiated a process of developing a new BSc in Forest Resource Economics and Business Development curriculum in January 2019. The programme is expected to provide opportunities to candidates to acquire knowledge and develop desired, skills, experiences and techniques that will enable them to initiate and operate forest businesses along the value chains in the forest sector. The students upon completion will be able to initiate their own businesses in forestry, but also address issues related to business negotiations, contracts,

agreements, inclusive decision-making processes, business compliance, entrepreneurship and job opportunities creation in forestry.

This BSc in Forest Economic and Business Development is unique in the sense that it combines several disciplines including forestry, economics, entrepreneurship, marketing and business skills which together will give a candidate a solid foundation in forest based business, entrepreneurship and value chain development.

The proposed degree programme is in-line with SUA CSP 2016-2021 that among other things directs to expand existing programme and establish new demand driven ones with a target of increasing undergraduate enrolment up to 15,000 by June 2021.

I am informed that, the draft curriculum is in place and has been approved at the Department and discussed at the College Board level. Although the College Board commended the initiative of the Department, and found the proposal in line with policies of the 5th Phase Government of H.E. Dr John Pombe Magufuli, it was of the view that the curriculum could further be strengthened by soliciting and incorporating view from stakeholders outside SUA. It is for that reason that SUA has organized this stakeholders' consultation workshop today.

I am further informed that this workshop brings together 35 professionals and practitioners working in forest based business and related sectors.

I would like to kindly thank you and your respective institutions and organizations for participating in this workshop. Your attendance is a testimony of the commitment you have on the forest sector, but also for harnessing its potential contribution to economic and livelihood improvement of our people.

Dear participants,

Formal forest education in Tanzania started 1937 at Olmotonyi. Initially the education was designed to produce forest rangers to protect forests. Eventually education was expanded to certificate, diploma levels and degree levels. Bsc Forestry training started in 1973 and the curriculum included course in silviculture, botany, engineering, wood sciences, forest resources assessment, utilization, harvesting and economics. This science based education was and still is important to support knowledge based forest management.. The science based education has produced most of the foresters working in the country and in sub-Saharan African. The forest science based education has been successful and is still needed for the development of forestry.

On the other hand, there are new challenges for forest education in country. For example, most graduates in forestry prefer office jobs in urban areas over field-based jobs in rural areas; most do not adapt quickly to customer and community needs. In addition, the majority of the forest graduates do not respond quickly to emerging opportunities in forestry. Consequently, majority of the forest science based graduates end up into a pool of job seekers. Today, most graduates are not able to start their own business and employ others despite of enormous opportunities in forest sector. To that effect, forestry education is now challenged to (in addition to producing

good forest scientists and managers) but to also produce graduates who can employ themselves and create jobs for others.

The objective of the proposed BSc FRE&BD programme is to impart knowledge and skills on forest economics and business development that will enable graduates to utilize business opportunities in all value chain in the forest sector for job and wealth creation. This stakeholder's workshop is a forum to further improve the proposed Bsc Forest Economics and Business Development curriculum. The programme is intended to complement other degree programmes in the CFWT and refocus the mindset of the youths in this country.

Dear participants,

It is therefore my hope that you will provide substantial and constructive inputs to the CFWT to further improve the curriculum.

Dear participants,

Last but not least, I wish to thank CFWT, the Ministry of Natural Resources and Tourism and all the stakeholders attending this workshop today.

Ladies and gentlemen,

Distinguished resource persons, scientists and experts with these few remarks, I now have the pleasure to declare this Stakeholders workshop to discuss the Draft BSc Forest Resource Economics and Business Development officially opened and I wish you a successful workshop.

THANK YOU VERY MUCH FOR LISTENING

Prof. Raphael Tihelwa Chibunda

Vice Chancellor, SUA

inputs to curriculum development and modules developed, conclusions including recommendations for further activities)

Annex 2: Report on MSc. Dissertation Support by FORVAC

Report on FORVAC MSc Dissertation Support

Background

FORVAC intended to provide financial support to dissertation research to students of superior academic ability. The selection of students was required to base on demonstrated achievement, financial need and exceptional promise to undertake study in selected fields of interest to FORVAC activities in Tanzania. The support intended to meet costs of research and dissertation writing and submission and not to finance fees or stipends to the selected students. The Department of Forest and Environmental Economics through FORCONSULT took lead developing modalities for selecting the students to be supported.

Approach

Topics were solicited from FORVAC and shared with facilitator and some members of the DFEE. The topics were refined and thereafter agreed with both FORCONSULT and FARVAC. The topics covered broad area so as to give interested students to select research titles. The following were the topics:

1. Natural Wood Timber Grading System in Tanzania (document the system in use) and Cameroon -comparative study;
2. Bamboo Value Chain in Tanzania (country wide market system analysis, and in Ruvuma area for the source: species, etc. processing, buyers, etc.);
3. How do women benefit from Community Forestry? (Qualitative research, a few areas appointed, comparison of communities who gain income from the VLFR, and who don't. What products do women get from the forest and do they see any extra value in having it reserved for future);
4. Quality of Community Timber (qualitative study, interviews within the furniture industry, why many industries import timber for furniture?); and
5. Beekeeping in Ruvuma.

Based on the topics the advert for 'Call for Application for research support to MSc dissertation' was drafted and shared with FORVAC, facilitator and some members of DFEE. The advert was shared and commented by client. The comments were incorporated and finally the advert (Appendix 1) was posted to and circulated to various media. The media were SUA website, SUA noticeboards, DFEE and FORCONSULT websites. The link below is an example of media use:

<https://www.sua.ac.tz/announcements/call-application-research-support-msc-dissertation>

Six candidates submitted their applications within the deadline and all were shortlisted and called for interview. Shortlisted candidates are in Appendix 2. The interview was set to be done on Friday 22nd November starting at 10:00 am and Saturday 23rd November 2019 starting 9:00am in the DFEE. The shortlisted candidates were informed and officially invited for interview.

Protocol for the interview was drafted and shared with FORVAC, facilitator and DFEE. Appendix 3 is the protocol used to interview the candidates.

FCG.