

Module Title:	Research Skills
Language of Instruction:	English
Credits:	5
NFQ Level:	7
Module Delivered In	4 programme(s)
Teaching & Learning Strategies:	Learners will undertake practical, class-based assignments (development of questionnaires, etc) in order to enhance learning. The programme gives the learners a thorough background in practical report and research writing that they will encounter in the work environment. Students will undertake a cross modular assignment, applying their learning on this module with their experience on the placement module in order to complete a real world agri-business research project.
Module Aim:	To provide learners with the competence, knowledge and skills to plan, design, formulate and manage an agricultural research project.
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Apply the means, competences, and techniques of the Research Process to an ethical standard to conduct an agri-business research project
LO2	Develop an applied scientific agricultural research proposal
LO3	Demonstrate a knowledge of data analysis and interpretation, and statistical testing using SPSS software
Pre-requisite learning	
Module Recommendations	
<i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content
Introduction to the Research Process • The Research Process: The importance of research within the farming and agri- business context; Research terminology, Research industry, Ethics, Technology for agricultural improvement.
Research Design • Types of research design. Steps in the research design process. Potential errors, Research objectives
Data Types, Secondary Data • Purposes, sources of secondary data
Experiments • The concept of experiments. Types of experiments, Experimental validity. Types and tools.
Qualitative Research • Observation and other qualitative methods • Survey data collection methods and the Survey Instrument • Data collection modes, Factors determining same, Errors, Wording Of Questionnaires, Structuring, Sequencing, Error minimization.
Measurement • General concepts, Measurement scales, Attitude measurement, • Rating and ranking scales, Reliability and validity of measurements.
Report Writing and Presentation • How to write a research report, Format and content, Presentation of results and referencing.
Data Collection and Descriptive Statistics • Mean, mode, median.
Probability • Probability laws. Binomial, Poisson and Normal distributions.
Statistical Inference Using Samples • T-test, Chi-square testing. • Statistical determination of sample size. • Statistical significance and practical significance. • Confidence intervals
Syllabus Content for Practical S.P.S.S. Component. 1. Introduction to SPSS and Analysis of variance / ANOVA 2. Using the data editor • Data coding and entry • Defining variables • Value labels • Missing values 3. Modifying and recoding data values Data analysis using a case study dataset Frequencies Descriptive statistics Explore and cross tab procedures Multiple response procedures Hypothesis testing
Using the Output Editor • Creating and modifying charts • Exporting tables and charts

Assessment Breakdown	%
Project	80.00%
Practical	20.00%

Continuous Assessment				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Theoretical research project	1,2	40.00	n/a
Project	Develop an applied research project	1,2	40.00	n/a

No Project

Practical				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Data Analysis, Interpretation and Statistical Analysis using SPSS Software	1,2,3	20.00	n/a

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	1.50
Lab/Lecture	12 Weeks per Stage	1.50
Independent Learning Time	12 Weeks per Stage	3.00
Total Hours		72.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_SWOAG_B	Bachelor of Science (Honours) in Organic Agriculture	5	Mandatory
CW_SWSFM_B	Bachelor of Science (Honours) in Sustainable Farm Management and Agribusiness	5	Mandatory
CW_SWOAG_D	Bachelor of Science in Organic Agriculture	5	Mandatory
CW_SWSFM_D	Bachelor of Science in Sustainable Farm Management and Agribusiness	5	Mandatory