Module Title:	Research Skills
Language of Instruction:	English

Credits:	5

NFQ Level:	7

Module Delivered In	No Programmes

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
On successful completion of this module the learner should be able to:

LO1	Apply the tools, skills and techniques of the Research Process to an ethical professional standard in order to carry out an agri-business research projec
LO2	Recognize potential errors within the research process and propose and formulate methods and strategies to minimise these errors.
LO3	Perform and critically evaluate data and interpret results and outcomes within a farm business framework
LO4	Demonstrate a knowledge of statistical testing
LO5	Analyse data using SPSS (Analysis of variance / ANOVA) statistical software.

Pre-requisite learning
Module Recommendations This is prior learning (or a practical skill) that is recommended before enrolment in this module.
No recommendations listed
Incompatible Modules These are modules which have learning outcomes that are too similar to the learning outcomes of this module.
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.
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 Interference 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	50.00%
Practical	50.00%

No Continuous Assessment

Project

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Practical Research Project	1,3	50.00	n/a

Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Statistical Analysis test. Class projects	2,4	40.00	n/a
Practical/Skills Evaluation	Use SPSS to carry out research analysis	4,5	10.00	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		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	26 Weeks per Stage	1.50
Independent Learning Time	26 Weeks per Stage	1.50
	Total Hours	78.00