SHORT LEARNING PROGRAMME IN RESEARCH DESIGN

NWU | OPTENTIA

North-West University · Vanderbijlpark Campus

Duration: 19 Weeks

Delivery Mode: Contact (Face-to-face & Blended)

Language: English

Recognition: Certificate of Successful Completion, issued by North-West University

About This Programme

Postgraduate study and research endeavours require a researcher who can conduct rigorous, cutting-edge research and communicate the process and findings in a clear and transparent way. This Short Learning Programme provides an overview of quantitative and qualitative research methods, how to design and implement sound research, how to improve scientific thinking and writing, and how to communicate research findings effectively.

Programme Information

Programme Name: Short Learning Programme on Research Design

SCAS Offering Number: P36 100 1

Field of Study: Social Sciences

CESM Code: 20 — Social Sciences

Delivery Mode: Contact (Face-to-face & Blended)

Duration: 19 weeks · 160 notional hours

Who Should Attend

This programme is primarily aimed at postgraduate students who have been out of a research environment and require a refresher course, or who have never completed a research-based degree before. It is also suitable for prospective postgraduate students and staff in research departments of government agencies and business firms who wish to strengthen their understanding of research methodology.

Admission Requirements

Minimum Qualification: An Honours degree (or equivalent four-year degree) in the social sciences or a related field.

Prior Knowledge: A basic understanding of and interest in social sciences research, with an indicated area of application and implementation.

Learning Outcomes

On successful completion of this programme, participants will be able to:

- Define research and describe the research process and methods with integrated knowledge.
- Conduct a thorough literature review and develop a sound conceptual framework.
- Apply qualitative research principles and methods to execute trustworthy qualitative studies.
- Apply quantitative research principles to execute valid and reliable quantitative studies.
- Design and apply mixed methods research with methodological rigour.
- Use JASP, Mplus, jamovi, or RStudio to perform statistical analyses and interpret results.
- Evaluate scientific articles and understand the peer-review and publication process.
- Write a well-structured, ethical research proposal suitable for postgraduate study.

Assessment

Formative Assessment: Multiple-choice tests completed throughout the programme to reinforce learning.

Summative Assessment: A research proposal submitted one month after course completion, evaluated by three independent researchers against specified criteria.

Programme Structure: 10 Study Units

The programme is structured across ten study units, each combining readings, narrated presentations, videos, and applied activities.

Study Unit 1: The Nature of Research

Approximate time: 950 minutes

This study unit introduces foundational concepts through readings, narrated PowerPoints, and videos covering the nature of research, basic vs. applied research, epistemology, philosophy of science, scientific paradigms, and the research design process. Activities include identifying research types, matching epistemologies, and applying concepts to participants' own studies. Three formative assessments are included.

Key topics

- Introduction to research and the research process
- Basic and applied research
- Epistemology, ontology, axiology, and philosophy of science
- Scientific paradigms
- Research planning, design, and process
- Clarifying basic concepts of research

Study Unit 2: Research Entities and Phenomenon-Based Research

Approximate time: 745 minutes

Explores research entities at NWU with a focus on Optentia, multidisciplinary and phenomenon-based research, and Optentia's philosophical approach including precarity and the capability approach. Activities involve personal journal reflections, LMS evaluations, and a major applied activity in which participants identify multidisciplinary research problems and questions linked to sustainable development goals.

Key topics

- Research entities at the NWU and Optentia
- Multiple disciplinary research and phenomenon-based learning
- Philosophy of Optentia: points of departure and approach
- Precarity and the capability approach
- Sustainable development goals and research question development

Study Unit 3: The Research Process, Administration, and Psychological Readiness

Approximate time: 757 minutes

Covers the academic research lifecycle at NWU from student registration (SALA) through proposal submission and ethics clearance. The second half focuses on psychological readiness for postgraduate study: motivation, personal strengths (VIA), resource management, and navigating the external environment through reflective activities, a sailboat baseline assessment, and two Teams contact sessions.

Key topics

- Student Academic Lifestyle Administration (SALA)
- The research process at the NWU: proposal submission and ethics clearance
- Psychological readiness: motivation, capabilities, and resources
- Managing the external environment
- Letter to future self

Study Unit 4: The Research Proposal

Approximate time: 1 164 minutes

Guides participants through the characteristics of good research, the cyclical research process, and acquiring research language for qualitative, quantitative, and mixed methods approaches. A substantial series of activities supports step-by-step proposal development — from topic selection and supervisor identification to drafting the title, problem statement, purpose statement, research questions, and ethical considerations. AI literacy and the responsible use of AI tools in research are also addressed.

Key topics

- Characteristics of good research and the cyclical research process
- Research language for qualitative, quantitative, and mixed methods research

- Finding a suitable topic and identifying a supervisor
- Structure and components of a research proposal
- Literature review and problem statement
- Purpose statement and research questions
- Ethical considerations in research proposals
- Critical thinking and responsible use of AI in research

Study Unit 5: Literature Review and Academic Writing

Approximate time: 1 140 minutes

Develops skills in planning, conducting, and writing a literature review, including academic writing conventions, logical connectors, and search strategies. Referencing in both APA 7th edition and Harvard styles is covered through videos and LMS quizzes. A dedicated section introduces AI-assisted tools for literature reviews — Zotero, ASReview, NotebookLM, and Elicit AI — supported by readings, tutorial videos, and slides.

Key topics

- Overview and types of literature reviews
- Academic writing conventions and logical connectors
- Conducting a literature search: search strategies
- Processing and producing information for the literature review
- Writing the literature review
- APA 7th edition and Harvard referencing
- AI tools for literature reviews: Zotero, ASReview, NotebookLM, Elicit AI

Study Unit 6: Qualitative Research Design and Methods

Approximate time: 1 125 minutes

Provides a comprehensive introduction to qualitative research, covering the role of the researcher as research instrument, conceptual (methodological) coherence, purposive sampling, and data collection and analysis approaches including qualitative interviewing. Trustworthiness criteria appropriate to qualitative research are addressed. Learning is reinforced through community forums, group discussions, demonstration interviews, and individual research activities.

Key topics

- Introduction to qualitative research and its rationale
- The qualitative researcher as research instrument and critical realism
- Conceptual (methodological) coherence
- Sampling in qualitative research
- Data collection: interviews and research questions
- Qualitative data analysis

- Trustworthiness and quality criteria in qualitative research

Study Unit 7: Quantitative Research Design and Methods

Approximate time: 810 minutes

Introduces experimental, quasi-experimental, and non-experimental quantitative designs, as well as cross-sectional and longitudinal approaches. Participants develop quantitative purpose statements and research questions, learn probability and non-probability sampling techniques, and receive a foundational introduction to statistics including modern modelling principles. Questionnaire construction and validation are also covered, with knowledge checks, discussion forums, and a summative assessment.

Key topics

- Experimental, quasi-experimental, and non-experimental research designs
- Quantitative purpose statements and research questions
- Probability and non-probability sampling techniques
- Cross-sectional and longitudinal research designs
- Introduction to statistics and modern modelling principles
- Questionnaire construction and validation

Study Unit 8: Mixed Methods and Design Science Research

Approximate time: 1 004 minutes

Explains the rationale, terminology, paradigms, characteristics, and types of mixed methods research, with guidance on formulating mixed methods research questions and data analysis strategies. The second component introduces design science research — what it is, when and why to use it, and how it works — through videos, slides, exercises, and readings. Discussion forums and a Teams session support integration of both approaches.

Key topics

- Definition, rationale, and characteristics of mixed methods research
- Theoretical frameworks and paradigms for mixed methods research
- Types of mixed methods designs
- Formulating mixed methods research questions
- Mixed methods data analysis
- Introduction to design science research
- When, why, and how to use design science research

Study Unit 9: Statistical Analysis — JASP, Mplus, jamovi, and RStudio

Approximate time: 1 140 minutes (compulsory total)

Provides hands-on statistical training using multiple software platforms. The compulsory JASP component covers data preparation, descriptive statistics, correlations, linear regression, t-tests, and exploratory and confirmatory factor analysis. An optional Mplus pathway extends to structural equation

modelling, mediation, moderation, and measurement invariance. jamovi and RStudio pathways offer equivalent training. Activities are practical and data-driven throughout.

Key topics

- JASP: data import and preparation, descriptive statistics, frequency analysis
- JASP: correlations, linear regression, t-tests, and factor analysis (EFA & CFA)
- Mplus: structural equation modelling, measurement models, and model fit
- Mplus: indirect effects, moderation, and measurement invariance (recommended)
- jamovi: equivalent statistical analyses
- RStudio: equivalent statistical analyses

Study Unit 10: Scientific Publishing and Research Impact

Approximate time: 765 minutes

Prepares participants to publish and communicate their research. Topics include understanding journal audiences, the NOUS factor in academic writing, the IMRAD format, publication ethics, and selecting appropriate journals. The second section focuses on communicating research impact, including translating scholarly papers into policy briefs. Activities involve LMS discussion forums, Teams sessions, article analyses, and a final summative assessment.

Key topics

- Understanding your audience and meeting the editor
- The NOUS factor in academic writing
- The IMRAD format for scientific articles
- Publication ethics
- Selecting appropriate journals
- Practical writing tips
- Communicating research impact
- Translating scholarly papers into policy briefs

Contact Details

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