

National University – Sudan

**Faculty of Graduate Studies
Faculty of Medicine and Surgery**

**Doctor of Philosophy (PhD) in
Human Anatomy by Research**



Program Title: Doctor of Philosophy (PhD) in Human Anatomy by Research

Mode: Research only

Discipline: Human Anatomy

Award: Doctor of Philosophy (PhD)

1. Introduction

The Doctor of Philosophy (PhD) in Human Anatomy by research is an advanced postgraduate research program designed to develop highly competent and independent researchers in the anatomical sciences. The program provides candidates with the opportunity to undertake an original and substantial investigation that contributes new knowledge to Human Anatomy and its related fields.

Human Anatomy is a fundamental biomedical discipline that provides the structural basis for understanding normal human function, disease, clinical diagnosis and surgical practice. Contemporary anatomical research increasingly integrates traditional morphological approaches with clinical anatomy, imaging, histology, embryology, neuroanatomy, morphometry, molecular techniques, anatomical education, digital technologies and three-dimensional anatomical reconstruction.

2. Vision

To establish an internationally recognized doctoral program that develops leading researchers in Human Anatomy who generate innovative knowledge and contribute to the advancement of biomedical science, medical education and healthcare in Sudan and internationally.

3. Mission

The program aims to:

- Develop independent and competent researchers in Human Anatomy and related biomedical sciences.
- Provide a rigorous research environment for conducting innovative and ethically responsible anatomical research.
- Promote research addressing national, regional and international health priorities.
- Develop advanced competencies in research methodology, scientific writing, data analysis and scholarly communication.
- Foster collaboration between anatomical sciences, clinical disciplines and other biomedical sciences.
- Produce research that contributes to scientific knowledge, clinical practice, education and health services.
- Strengthen Sudan's capacity for postgraduate research and academic leadership in the anatomical science.

4. Aim

To prepare doctoral graduates who are capable of independently designing, conducting, analyzing, communicating and defending original research that makes a significant contribution to knowledge in Human Anatomy or a related anatomical discipline.

5. Program Objectives

By the end of the program, the graduate should be able to:

5.1 Research Competencies

- Formulate significant and original research questions in Human Anatomy.
- Critically evaluate and synthesize the scientific literature relevant to a research problem.
- Design appropriate and scientifically rigorous research studies.
- Apply advanced qualitative and/or quantitative research methods appropriate to anatomical research.
- Conduct research independently while maintaining appropriate academic and professional standards.
- Analyze and interpret research data using appropriate statistical and scientific approaches.
- Demonstrate appropriate use of anatomical, histological, imaging, morphometric, molecular, clinical or other relevant research techniques.

5.2 Scholarship Competencies

- Demonstrate comprehensive and critical knowledge of the selected area of Human Anatomy.
- Identify gaps in existing knowledge and develop research capable of addressing those gaps.
- Demonstrate originality, critical thinking and independent scientific judgement.
- Critically evaluate published research and distinguish established knowledge from emerging evidence.

5.3 Research Ethics and Integrity

- Conduct research according to principles of research ethics, integrity and responsible conduct of research.
- Obtain appropriate ethical and institutional approvals before commencing research involving human participants, human tissues, cadavers, animals or identifiable data.
- Demonstrate responsible management, storage and reporting of research data.

5.4 Communication and Academic Leadership

- Communicate research findings effectively through scientific publications, presentations, seminars and conferences.
- Prepare manuscripts suitable for publication in peer-reviewed scientific journals.
- Prepare and defend a doctoral thesis demonstrating an original contribution to

knowledge.

- Academic leadership
- Demonstrate the ability to work independently and collaboratively within multidisciplinary research teams.
- Develop the capacity to supervise, mentor and contribute to the development of future researchers.
- Apply research findings to the advancement of anatomical science, medical education and healthcare.

6. Research Areas

- Clinical and applied anatomy
- Neuroanatomy
- Histology and cellular anatomy
- Embryology and developmental anatomy
- Medical imaging and radiological anatomy
- Morphometry and stereology
- Molecular and experimental anatomy
- Anatomical variation and anthropometry
- Three-dimensional reconstruction and digital anatomy
- Anatomical education research

7. Admission Requirements

Admission should normally be open to candidates who meet the following requirements:

- A relevant master's degree in Human Anatomy.
- Submission of a preliminary research proposal demonstrating relevance, originality, feasibility, and research potential.
- Submission of certified academic certificates, transcripts, and an updated curriculum vitae.

8. Study Period

Recommended duration: 3–5 years

9. Progression and Monitoring

Each candidate should have a formal research progress system.

Stage 1: Registration

Candidate is admitted with an approved research area and provisional supervisor.

Stage 2: Research proposal

The candidate develops a full research proposal.

Stage 3: Proposal presentation, defense, and approval

The proposal is presented to the postgraduate research committee.

Stage 4: Confirmation of candidature

The candidate must demonstrate:

- Adequate literature review.
- Clearly defined research question.
- Appropriate methodology.
- Feasible research plan.
- Ethical compliance.
- Adequate research progress.

Stage 5: Ministry of Higher Education Registration

The candidate shall complete any applicable registration, academic-number allocation, or research-recognition procedures required by the relevant Ministry of Higher Education. The University shall verify the applicable requirements and ensure that the necessary documentation is completed in accordance with current regulations.

Stage 6: Annual progress review

A written progress report shall be submitted by the supervisor. Unsatisfactory progress shall be addressed through an appropriate remedial plan in accordance with University regulations.

Stage 7: Publication Requirement

The candidate should demonstrate dissemination of the doctoral research through at least one manuscript submitted to a peer-reviewed journal indexed in an internationally recognized database.

Stage 8: Thesis preparation and submission

Upon completion of the research, the candidate shall prepare and submit a doctoral thesis in Human Anatomy. The thesis shall comply with the University's regulations regarding format, referencing, academic integrity, and submission procedures.

Stage 9: Viva voce examination

The thesis shall be examined by appropriately qualified examiners. The candidate shall defend the thesis through a viva voce examination.

10. General Requirements for Award of the Degree

The degree of Doctor of Philosophy (PhD) in Human Anatomy by Research shall be awarded to a candidate who:

- Has fulfilled the minimum period of registration prescribed by the University.
- Has completed the required doctoral research training activities.
- Has obtained appropriate ethical and institutional approvals.
- Has successfully completed the approved program of original research.
- Has demonstrated satisfactory progress throughout the period of candidature.
- Has submitted a doctoral thesis of an appropriate academic and scientific standard.
- Has successfully completed the required thesis examination.
- Has successfully defended the thesis in the viva voce examination.

- Has satisfactorily completed any corrections or revisions required by the examiners.
- Has fulfilled all other requirements specified by the University's postgraduate regulations.