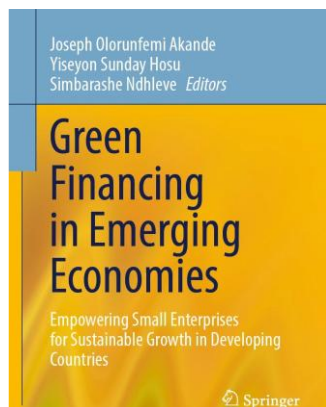


Faculty of Natural Sciences Newsletter

February 2026

Professor Albert T. Modi, Executive Dean



Every day is a test. Every month, we will do better. Every quarter, we will answer the hard questions with confidence. Every year, we will grow stronger.

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Executive Summary

The dedication of the Faculty of Natural Sciences staff to the academic project is best demonstrated through performance, evidence-based progress, and commitment to our strategic goals. Our strategy—shaped through participatory goal-setting, collective agreement on key performance areas, and acceptance of realistic, flexible KPIs—continues to guide our work with purpose.

As February began, we welcomed our new First-Time Entry Students (FTENs) and introduced them to the values of WSU and the Faculty's structured plan for student success. The month has given us reason to remain positive and optimistic. We displayed resilience, cohesion and foresight in the face of challenges, while maintaining our pursuit of excellence.

Our monthly reports will continue to serve as evidence that we honour accountability, embrace audit processes—both internal and external—and improve continuously. February's performance gives us confidence that every month will indeed be better than the last.

1. Administration and Governance

The approved Faculty Strategic Plan emphasises the establishment of a **Faculty of Natural Sciences Administration Office**—a central hub for collaborative, consistent service to students and staff, living out WSU values daily, and strengthening institutional cohesion.

This February, our administrative successes demonstrated the power of teamwork:

- **02 February 2026:** We welcomed FTENs with a momentous academic event—the **Orientation Aptitude Test**, executed with excellence. Despite short notice, **80% of FTENs participated**, marking one of our strongest starts to an academic year.
- We have **met institutional registration targets** for undergraduate and Honours programmes.
- Our MSc and PhD students continue resolving financial and administrative challenges, and we remain confident about meeting the 2026 postgraduate enrolment targets.

As we progress through the term, organisational culture and precision in all administrative processes—especially **error-free recording**—remain non-negotiable. Our performance so far is proof of a growing culture of reliability, excellence, and professionalism.

Section A: Mathematical Studies

- Solve for x : $2x^2 - 5x + 3 = 0$ (a) 1, 1.5 (b) 3, -1 (c) 1, 3 (d) None of the above
- A sequence is defined as $n = 3n + 2$. Find the 10th term.
- If the probability of an event is 0.25, what is the probability of its complement?

SECTION C: Chemistry

- Which of the following is an example of a covalent compound? (a) NaCl (b) H_2O (c) $CaCl_2$ (d) KBr
- Balance the equation: $C_2H_4 + O_2 \rightarrow CO_2 + H_2O$
- What is the pH of a solution with $[H^+] = 1 \times 10^{-9}$?

SECTION D: Emotional Intelligence

- You receive negative feedback from a lecture. What is the most constructive response? (a) Ignore it (b) Argue back (c) Reflect and improve (d) Complain to peers
- Which of the following best describes empathy? (a) Feeling sorry for someone (b) Understanding and sharing another's feelings (c) Giving advice (d) Avoiding emotional situations
- During group work, a member is quiet and withdrawn. What should you do?



FACULTY OF NATURAL SCIENCES STUDENT ORIENTATION DAY TEST 2026

Section B: Computer Science

- Which of the following is NOT a programming language? (a) Python (b) Java (c) HTML (d) Pascal.
- Convert binary number 101101₂ to decimal.
- What is the time complexity of binary search? (a) $O(n)$ (b) $O(\log n)$ (c) $O(n^2)$ (d) $O(1)$

CRISTINA TOMA FNS RESEARCH AND HIGHER DEGREES CHAIRPERSON LAUNCHES FIRST HONOURS INDUCTION AND ANNUAL WORKPLAN FOR 2026



- On 27 February 2026, close to 90% of Honours students attended a student-oriented induction programme: student success comes with responsive support services and meeting of targets by both students and staff.

FNS Honours Research Project Calendar_ 2026

Activity	Deadline
Deadline for Honours admissions and registration	Institutional deadline
Induction of Honours Students	23 – 27 February 2026
Completion of Proposal Drafts	13 April 2026
Departmental Proposal Presentations	20 – 25 April 2026
Submission of the Final Proposals Document to the Faculty	05 May 2026
Submission of Ethical Clearance Applications	22 May 2026
Departmental Presentation of Results	24 – 28 August 2026
Research Project Report Writing	14 – 18 September 2026
Submission of projects to the Faculty Post-Grad Rep	02 October 2026
Examination of the Projects	02 - 23 October 2026

2. Teaching and Learning

February presented unexpected difficulties, including the **loss of significant classroom time**. Although this challenge was beyond our control, our response is firmly within our grasp.

We have developed a **clear short-, medium-, and long-term action plan** anchored in:

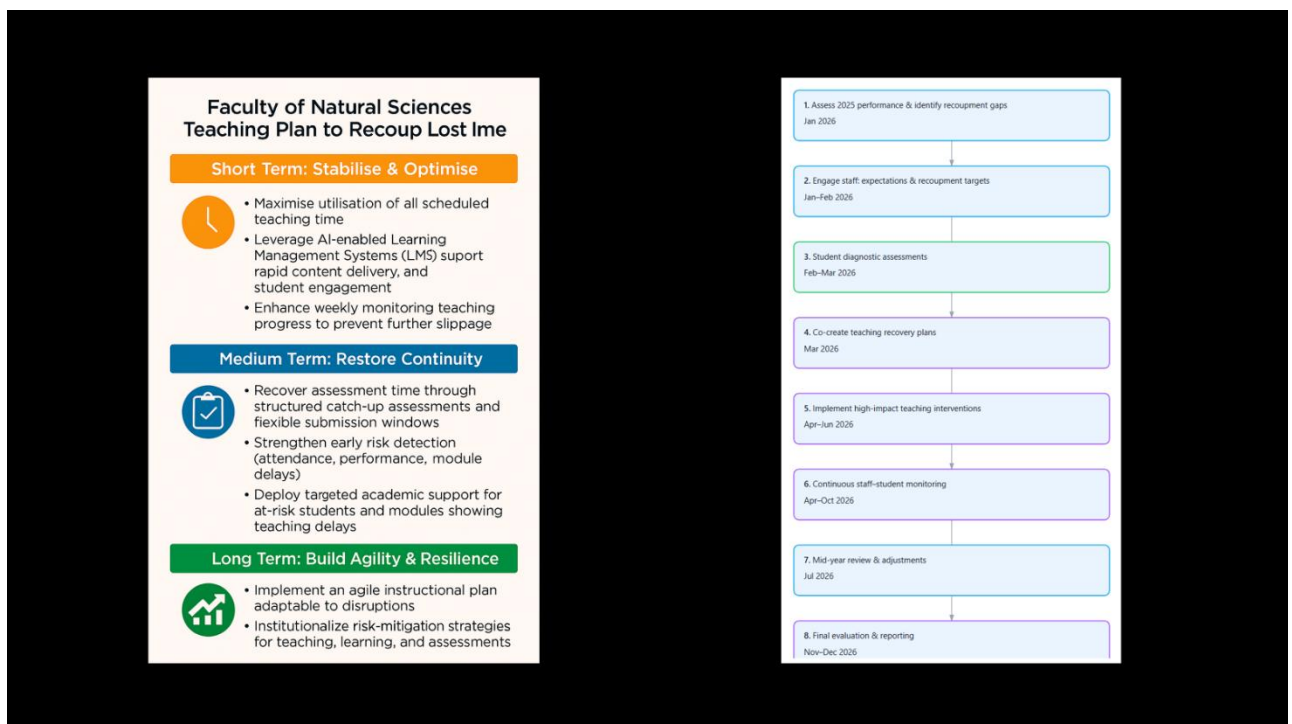
- Maximising every lecture period**

- **Module-specific success strategies** driven by both staff and students.
- **Respectful resistance to distractions** and external pressures
- **Empowered teaching**, guided not by hierarchical instruction but by professional agency.
- **Enhanced digital communication**, leveraging small but powerful technological tools.

To strengthen the academic programme:

- We will prioritise **training in Artificial Intelligence** for all lecturers.
- **MSc and PhD students** will be integrated as tutors for undergraduate classes.
- The **“100 Days of Teaching” requirement for PhD candidates** will be implemented.
- Tutor appointments will be **reset and properly aligned** before approval of the 2026 cohort.
- Evidence of lecturer involvement in tutor selection will be mandatory.

These measures also serve as mitigation for the risk of additional teaching workload caused by delays in the academic programme. The faculty remains committed to adhering to the **2026 academic calendar**.



FNS BOARD APPROVES AI TRAINING COURSES FOR STAFF

BUBELE VAKALISA: PROJECT MANAGER: ESTABLISHMENT OF THE AI CENTRE PROJECT, WALTER SISULU UNIVERSITY WILL BRING:

1. **Foundational AI Literacy (Generic Course):** A baseline AI course to establish common understanding among academic staff. This foundational course can be replicated across all faculties to ensure a shared conceptual grounding.
2. **AI for Administrative Productivity:** A targeted course for administrative staff focusing on practical AI applications to enhance operational efficiency and workflow optimisation.
3. **AI in Teaching and Learning :** A course tailored for lecturers, focusing on responsible and effective integration of AI tools in pedagogy, assessment, and curriculum development.
4. **AI for Research:** A specialised course directed at researchers and postgraduate students, covering AI-assisted literature reviews, data analysis, drafting support, and related research productivity tools.

Memorandum of Understanding ("MOU")

Between

Walter Sisulu University ("WSU")

And

Bytefuse (Pty) Ltd ("Bytefuse")
registration number 2021/608244/07

And

Alphawave Holdings (Pty) Ltd ("Alphawave")
registration number 2005/011051/07

And

Maskew Miller Learning (Pty) Ltd ("MML")
registration number 2009/022455/07

1. Purpose and overview

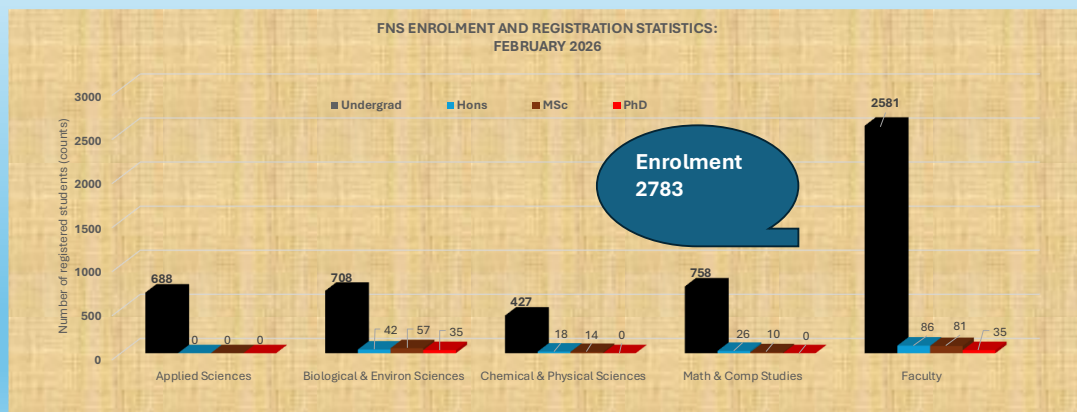
Walter Sisulu University (WSU) plans to launch an Artificial Intelligence ("AI") Centre to foster technology and digital transformation, aligning with its Vision 2030 goals and aiming to become a technology-infused African university.

The Faculty Research Committee (FRC) has continued its strong collaborative approach with the Teaching and Learning Committee, particularly in finalising undergraduate and postgraduate registrations in preparation for **May 2026 graduation**. We anticipate celebrating:

- **150+ graduates**, including:
 - **5 MSc**
 - **4 PhD**

(Data currently under validation.)

FACULTY OF NATURAL SCIENCES REGISTRATION STATISTICS: FEBRUARY 2026



FNS STUDENTS SELECTED TO STUDY FOR NEW MASTERS DEGREE IN OCEAN SCIENCE

- Four FNS students were selected for funding – including Mthembu twins, Asanda and Amanda.
- Four FNS academics teach and/or supervise in the programme.



The faculty is pleased to welcome an experienced staff member in the Department of Applied Sciences.

FACULTY OF NATURAL SCIENCES WELCOMES MALESSA LOUW

New Department of Applied Sciences Lecturer in Consumer Science - Food and Nutrition

- A Consumer Scientist with a BSc and BSc Honours (both Cum Laude), an MSc in Consumer Science - currently completing her PhD, which focuses on the development, sensory evaluation, microbial safety, and chemical stability of a novel fish-based functional food product.
- Research interests span food security, consumer behaviour, and functional food innovation, and her scholarly contributions include international conference presentations and published work.



OPEN ACCESS PEER-REVIEWED CHAPTER

The Application of Noble Gases in the Food Industry

WRITTEN BY

Malessa Louw

Submitted: 31 December 2024, Reviewed: 06 March 2025, Published: 31 July 2025

DOI: 10.5772/intechopen.1009978

3. Research and Innovation

The response to the target of **at least 1 publication unit (PU) per academic per annum** is highly encouraging:

- February recorded **12 publications** from fewer than 5 academics.
- This positions us strongly to meet and possibly exceed the **minimum 100 PU target** for 2026.

Beginning March, monthly submissions of publication records will support recognition of **Platinum, Gold, and Silver medallists**.

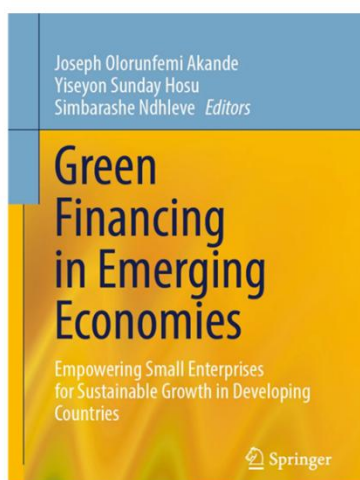
FACULTY MONTHLY PUBLICATION OUTPUTS COMPETITION

- Gold: Exceeding 1PU with international collaboration
- Silver: Exceeding 1 PU with no international collaboration
- Bronze: Meeting 1 PU anyway



CENTRE FOR GLOBAL CHANGE CELEBRATES BOOK PUBLICATION

Joseph Akande, Simbarashe Ndhleve, Hlekani Kabiti, Ayabonga Zweni, Leonard Chitongo



Book: © 2026

Plus 5 chapters

OVERVIEW

- Offers insights from a diverse group of contributors, including policymakers, financial experts, and entrepreneurs
- Focuses on innovative financial instruments and the role of technology in green finance
- Includes real life case-studies

NJABULO GUMEDE COMPLETED A SHORT LEARNING WEBINAR TO IMPROVE HIS MOLECULAR BIOLOGY SKILLS



ALFRED MAPFUMO'S EXAMPLE OF ACTIVE ACADEMIC



We must remain mindful that WSU still faces limitations in research implementation funding. Therefore, all staff are urged to:

- Apply for **external national and international research funding**.
- Strengthen collaborative networks.
- Pursue partnerships that expand capacity, competitiveness, and visibility.

The momentum we are building is promising and must be sustained.

ALL ACADEMIC STAFF MUST ACTIVELY PURSUE EXTERNAL RESEARCH FUNDING TO STRENGTHEN OUR RESEARCH OUTPUTS AND ENHANCE POSTGRADUATE TRAINING AND SUPPORT.

- Numerous opportunities are available through reputable national and international funders, including the National Research Foundation (NRF), the South African National Biodiversity Institute (SANBI), intergovernmental and bilateral research collaborations, as well as regional and global development partners.
- The NRF will publish the **One Call for Applications for funding in February 2026 (Review Period 1)**. The One Call includes applications for FBIP Small Grants (Review Period 1) which must be submitted electronically on the new NRF Connect system at <https://nrconnect.nrf.ac.za/>. Instructions for Review Period 2 will be published later.



Concluding Highlights and Future Direction

February 2026 marks a month of renewed energy, shared commitment, and foundational progress. The following highlights capture our achievements and set the tone for the road ahead:

Key Highlights

- Successful FTEN orientation and testing, with **80% participation** at short notice.
- Institutional registration targets met for undergraduate and Honours programmes.
- Strong administrative performance with a growing culture of precision and teamwork.
- Teaching and learning resilience demonstrated despite lost classroom time.
- Early achievement of impressive research output—**12 publications in a single month**.
- Strengthened collaboration between Faculty structures and committees.

Future Direction

Moving forward, we will:

1. **Operationalise the Faculty Administration Office** to support efficiency, cohesion, and service excellence.
2. **Implement a rigorous academic recovery plan** to ensure all modules remain on track within the 2026 calendar.
3. **Expand AI-focused capacity development** for lecturers to modernise teaching practice.

4. **Fully integrate postgraduate students into tutoring and teaching support roles.**
5. **Drive external research funding applications** to mitigate budget constraints.
6. Maintain **transparent, audit-ready processes** aligned with institutional and stakeholder expectations.
7. **Celebrate excellence monthly** through publication recognition awards to sustain motivation and output.

Final Remarks

February has affirmed what is possible when a faculty works with purpose, humility, and shared resolve. The resilience shown by staff and students sets a sturdy foundation for 2026. As we step into March and beyond, let us continue demonstrating that the Faculty of Natural Sciences is defined by excellence, accountability, innovation, and a commitment to student success.