Lincoln University of Eswatini (LUE)

Faculty of Computing and Emerging Technologies

PROSPECTUS

Bachelor of Science in Software & AI

(BSc Software & AI)

Master the Mathematics and Machine Learning Behind Tomorrow's AI

4 Years | 8 Semesters | 60 Credits per Semester | 480 Total Credits | ESQF Level 7

ACCREDITATION STATUS: This programme has been developed by LUE in accordance with Eswatini Higher Education Council (ESHEC) Programme Approval Standards and is being submitted to ESHEC for accreditation. Prospective applicants should confirm the current accreditation status of this programme with LUE's Admissions Office before enrolling.

September 2026

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WELCOME

The Bachelor of Science in Software & AI is LUE's mathematically rigorous alternative to a general IT degree — built for students and employers who want genuine depth in machine learning, deep learning, natural language processing, computer vision and robotics, not a brief survey.

Why Study BSc Software & AI at LUE?

- A mathematics-first foundation (calculus, linear algebra, probability, statistics, numerical methods, theory of computation) most regional computing degrees don't provide.
- Africa's AI-skills shortage is severe and well-documented; this degree is built specifically to close it, not just to teach programming.
- A genuine specialisation sequence — Machine Learning → Deep Learning → NLP/Computer Vision/Reinforcement Learning — not AI as a single elective.
- A full Honours Thesis, not a general project, giving you real independent-research experience for postgraduate study or advanced industry roles.

PROGRAMME AT A GLANCE

Award:	Bachelor of Science in Software & AI
Faculty:	Faculty of Computing and Emerging Technologies
Duration:	4 Years | 8 Semesters | 60 Credits per Semester | 480 Total Credits | ESQF Level 7
Total Credits:	480 credits
ESQF Level:	Level 7
Mode of Study:	Full-Time, Campus Learning
Number of Modules:	32 modules
Practical/Workplace Learning:	One Industrial Attachment placement (Semester 6) plus an Honours Thesis

ENTRY REQUIREMENTS

- 2 points in 2 relevant A-Level subjects, which MUST include Mathematics, plus 5 O-Level credits/passes including English and Mathematics, each at Grade C or better.
- A-Level Physics or Computer Studies strengthens an application but is not mandatory.

International qualifications are accepted subject to LUE's equivalency assessment and Eswatini Qualifications Authority (EQA) confirmation. Mature applicants without the standard qualifications may apply via LUE's Recognition of Prior Learning (RPL) process. All applicants remain subject to LUE's Admissions Committee decision, which may apply additional selection criteria where places are limited.

PROGRAMME STRUCTURE

480 credits over 4 years (8 semesters): rigorous mathematical and algorithmic foundations in Years 1–2, then sequential AI specialisation in Years 3–4.

Semester 1

Module	Credits
Foundations of Programming	15 cr.
Calculus I	15 cr.
Discrete Mathematics	15 cr.
Computer Systems and Architecture	15 cr.

Semester 2

Module	Credits
Object-Oriented Programming	15 cr.
Calculus II and Linear Algebra	15 cr.
Probability and Statistics	15 cr.
Digital Logic and Computer Organization	15 cr.

Semester 3

Module	Credits
Data Structures and Algorithms	15 cr.
Database Systems	15 cr.
Discrete Structures for AI: Graph Theory and Logic	15 cr.
Operating Systems	15 cr.

Semester 4

Module	Credits
Software Engineering	15 cr.
Algorithm Design and Analysis	15 cr.
Computer Networks	15 cr.
Numerical Methods and Scientific Computing	15 cr.

Semester 5

Module	Credits
Artificial Intelligence	15 cr.
Machine Learning	15 cr.
Theory of Computation	15 cr.
Software Architecture and Design Patterns	15 cr.

Semester 6

Module	Credits
Deep Learning and Neural Networks	15 cr.

Module	Credits
Natural Language Processing	15 cr.
Computer Vision	15 cr.
Industrial Attachment (Work-Integrated Learning)	15 cr.

Semester 7

Module	Credits
Reinforcement Learning and Robotics	15 cr.
Big Data and Distributed Systems	15 cr.
AI Ethics, Safety and Governance	15 cr.
Research Methods and Thesis Proposal	15 cr.

Semester 8

Module	Credits
Honours Thesis / Final Year Research Project	20 cr.
Advanced Software Engineering (DevOps and MLOps)	15 cr.
Human-Computer Interaction for Intelligent Systems	15 cr.
Entrepreneurship in AI and Software Ventures	10 cr.

Full Course Learning Outcomes, weekly teaching schedules and reading lists for every module are available in LUE's Detailed Course Outlines for this programme, available on request from the Admissions Office.

WHAT YOU'LL LEARN

Deep Mathematical Foundations

Calculus I & II, Linear Algebra, Probability and Statistics, Numerical Methods, and Theory of Computation give you the grounding to design AI systems, not just apply them.

The Full AI Specialisation Sequence

Artificial Intelligence → Machine Learning → Deep Learning and Neural Networks → Natural Language Processing / Computer Vision → Reinforcement Learning and Robotics.

Responsible, Deployable AI

AI Ethics, Safety and Governance, and Advanced Software Engineering (DevOps and MLOps), ensure you can deploy AI responsibly and reliably, not just build a prototype.

CAREER AND FURTHER-STUDY PATHWAYS

BSc Software & AI graduates are prepared for advanced technical careers and postgraduate research:

- Machine learning / AI engineer
- Data scientist
- Deep learning researcher
- Robotics engineer
- MLOps / AI infrastructure engineer
- Postgraduate research (MSc/PhD) in AI or computer science
- AI-focused technology entrepreneurship

ASSESSMENT AND GRADING

Every module is assessed using LUE's standardised, criterion-referenced rubrics, moderated internally and, for capstone/thesis/dissertation components, externally examined. Marks are converted to a letter grade and grade point on LUE's institution-wide scale:

Percentage Mark	Letter Grade	Grade Point	Interpretation
80–100	A+	4.00	Exceptional
70–79	A	4.00	Excellent
60–69	B	3.00	Very Good
50–59	C	2.00	Good
45–49	D	1.00	Pass
0–44	F	0.00	Fail

Award Classification

Classification	Weighted Average
First Class Honours	70% and above
Second Class Honours (Upper Division)	60% – 69%
Second Class Honours (Lower Division)	50% – 59%
Third Class / Pass	45% – 49%

HOW TO APPLY

- Submit a completed LUE application form, available from the Admissions Office or LUE's website.
- Attach certified copies of academic transcripts and certificates evidencing the entry requirements set out above.
- Attach a certified copy of your national identity document or passport.
- Pay the non-refundable application fee specified by LUE's Finance Office.
- Attend an admissions interview or assessment, where required for this programme.

Applications are considered by LUE's Admissions Committee, and successful applicants receive a formal offer of a place, conditional upon final confirmation of qualifications and, where applicable, ESHEC accreditation status at the time of enrolment.

Contact

Faculty:	Faculty of Computing and Emerging Technologies

Office:	LUE Admissions Office

This prospectus is accurate as of the date shown on the cover page and is provided for general information. It does not form part of any contract between LUE and an applicant. Programme content, fees and accreditation status are confirmed at the point of offer.