

FRANCOIS BOTHA

Curriculum Vitae

PERSONAL

Full name: Francois Botha

Sex/nationality: Male; Afrikaner American

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Addresses on file: Austin, Texas

ASU student ID: 1214413863

UP student number: 29042951

Languages: English and Afrikaans (both native).

Licenses: Driver's License; Food Handler Certificate, Responsible Training (ANAB-accredited), completed 10/04/2026, expires 10/04/2029, certificate #202635042057708

PROFESSIONAL PROFILE

Electronic/electrical engineering student with prior study in analog and digital electronics, electromagnetics, embedded systems, and related laboratory work. Additional lived experience as co-owner of a family agricultural holding (maintenance, water, electrical, labor, machinery), as a university laboratory assistant, and in U.S. hospitality, retail, and grounds work. IEEE student member; former student-branch treasurer.

WORK HISTORY

Shareholder and Director

2008 – August 2022

Elfravalei Landgoed Pty Ltd (Elfra Valley Estates) — Kroonstad, Free State, South Africa

Holding firm for agricultural properties and businesses of the Botha and Roux families. Many roles as a co-owner. From about 2017, activity was mainly silent shareholder and technical advisory. The company was sold in August 2022 after the death of P.E. Roux Junior, who had been in charge of day-to-day operations.

- Building and housing maintenance.
- Irrigation-system maintenance.
- Water-supply maintenance, including boreholes, pumps, pipelines, and reservoirs.
- Electrical maintenance.
- Plumbing maintenance.
- Fencing maintenance.
- Cattle herding and working.
- Labor relations and leadership of a labor team.
- Operation and maintenance of heavy machinery.

Prep Cook, Cold Kitchen

September–October 2020

Scofield Catering & Management — Creek Fire base camp, North Fork area, California

- Temporary assignment of about three weeks on the mobile kitchen supporting the Creek Fire response.
- Prep cook on the cold kitchen: prepared and portioned cold items for firefighters and camp staff under camp food-safety rules.
- Supported setup, service, and breakdown of the base-camp food line during partial repopulation of evacuated areas.

Sales Associate

August 2019 – February 2020

7-Eleven and 76 — Oakhurst, California

- Assisted and checked out customers.
- Received and checked in orders.
- Restocked merchandise.
- Hot-food preparation.

- Cleaned store, food equipment, and restrooms.

Prep and Pantry Cook

August 2018 – June 2019

Tenaya Lodge at Yosemite — Delaware North Parks and Resorts

- Preparation and service of desserts, salads, and sandwiches.
- Banquet preparation.

Dishwasher

April 2018 – August 2018

Tenaya Lodge at Yosemite — Delaware North Parks and Resorts

- Dishwashing and running the flight dishwasher.
- Washing and scrubbing floors.
- Cleaning walk-ins.
- Removing trash, recycling, and compost.

Landscape / fire-clearance, self-employed

June 2019 – August 2019

North Fork area, California

- Mowed yards.
- Cleared 100 feet around houses in accordance with the state fire code.

Research and Laboratory Assistant

June 2013 – August 2013

Materials Science Laboratory, Department of Electrical, Electronic and Computer Engineering, University of KwaZulu-Natal (UKZN)

- Maintenance and preparation of laboratory equipment.
- Assisting postgraduate students with research.
- Implementation and design of new experimental laboratory equipment.

This placement aligns with the University of Pretoria practical training module EPY423 (Practical training and report 423), which appears on the 2014 academic record without a recorded mark.

EDUCATION — ARIZONA STATE UNIVERSITY

B.S.E., Electrical Engineering — Electric Power and Energy Systems. Expected 2027. Unofficial transcript printed 4 September 2026. Academic standing as of Spring 2026: Probation; after Summer 2026: Good Standing was not restated on the last page (cum GPA 2.37). Transfer credit from University of Pretoria: 99.000 earned hours, 0.000 GPA points (transfer block).

Courses completed with credit (repeats shown as the attempt that earned the hours)

Term	Course	Title	Cr	Grade
2018 Spring	CSE 100	Principles of Programming with C++	3	A
2020 Fall	HST 100	Global History to 1500	3	A
2021 Spring	ENG 101	First-Year Composition (repeat)	3	A-
2021 Spring	HST 109	United States to 1865 (repeat)	3	A+
2021 Fall	ECN 211	Macroeconomic Principles	3	A-
2022 Spring	ENG 102	First-Year Composition (repeat)	3	B+
2022 Fall	MAT 117	College Algebra	3	A
2023 Summer	MAT 170	Precalculus	3	C
2024 Spring	HST 328	Women in US History, 1880–1980	3	C+
2024 Spring	MAT 265	Calculus for Engineers I (repeat)	3	A
2024 Spring	MAT 266	Calculus for Engineers II	3	B+
2024 Fall	MAT 343	Applied Linear Algebra (repeat)	3	B-
2024 Fall	PHY 121	Univ. Physics I: Mechanics	3	B-
2025 Spring	PHY 122	University Physics Lab I	1	A
2025 Summer	MAT 267	Calculus for Engineers III (repeat)	3	C
2026 Spring	MAT 275	Modern Differential Equations (repeat)	3	C
2026 Spring	PHY 132	University Physics Lab II (repeat)	1	A
2026 Summer	CHM 114	General Chemistry for Engineers	4	B
2026 Summer	EEE 350	Random Signal Analysis	3	C

In progress — Fall 2026 (grades NR / not recorded on the 4 Sep 2026 print)

Term	Course	Title	Cr	Status
2026 Fall	EEE 333	Hardware Design Lang. / Prog. Logic	4	In progress (NR)
2026 Fall	EEE 360	Energy Systems / Power Electronics	4	In progress (NR)
2026 Fall	PHY 131	Univ. Physics II: Electricity & Magnetism	3	In progress (repeat allowed)

ASU attempts that did not award credit (W withdraw, E fail, EU, D excluded, compassionate withdrawal). Included so this record can be checked against the unofficial transcript.

- 2018 Spring: ENG 101 D (later excluded; eventually earned A-); SOC 334 W.
- 2018 Fall: HST 109 E (later earned A+); SOS 111 W. Standing: Probation.
- 2019 Fall: MAT 275 W; PHY 131 W; PHY 132 W. Withdrew 3 Nov 2019.
- 2021 Spring: ENG 102 W.
- 2021 Summer: ENG 102 W (withdrew 4 Jul 2021).
- 2021 Fall: ENG 102 EU (excluded; later earned B+). Standing: Borderline Probation.
- 2022 Spring: HST 337 W; MAT 267 W; MAT 343 E.
- 2022 Fall: HST 302 W (History of the Olympic Movement); HST 327 W.
- 2023 Spring: MAT 170 W twice; compassionate complete withdraw effective 19 Mar 2023.
- 2023 Fall: MAT 265 D then W. Standing: Borderline Probation.
- 2024 Fall: MAT 267 E; PHY 122 W; PHY 131 W. Standing: Borderline Probation.
- 2025 Spring: MAT 267 W (two listings).
- 2025 Summer: MAT 275 E.
- 2025 Fall: PHY 131 EU; PHY 132 E. Standing: Borderline Probation.
- 2026 Spring: PHY 131 E (repeat included in GPA). Standing: Probation. Cum GPA 2.35 then 2.37 after Summer 2026.

Older application résumés (2024) stated "GPA 3.3, 139 credit hours." That figure is superseded by the 4 September 2026 unofficial transcript: cumulative GPA 2.37 on 85 ASU-attempted hours / 153 earned hours, including the 99-hour transfer block.

EDUCATION — UNIVERSITY OF PRETORIA

B.Eng., Electronic Engineering (plan: Electronic Engineering). Full-time 2009–2014 on the official record issued 20 October 2014 (document 000357497); later résumés extend studies through December 2015. Did not graduate. ASU later accepted 99 transfer hours. Student number 29042951.

Workshop practice (WWP121) and related shop skills were undertaken in part at Tshwane South FET College as an outside student of the University of Pretoria (www.tsc.edu.za), per the 2017 résumé.

2009 — weighted average 61.31 • cumulative 61.31 • Permitted to proceed

Code	Course	Cr	%	Result
CHM172	General chemistry 172	16	50	B- (Pass)
CIL111	Computer literacy 111	4	—	Exemption exam passed
CIL121	Information literacy 121	4	83	A (distinction)
EBN111	Electricity and electronics 111	16	64	B (Pass)
EMR100	Measurement techniques and computer modelling 100	4	93	A+ (distinction)
FSK176	Physics 176	16	54	B- (Pass)
JNV100	Innovation 100	8	—	Exemption exam passed
MGC110	Graphical communication 110	16	75	A- (distinction)
NMC113	Materials science 113	16	55	B (Pass)
SNV111	Innovation 111	4	86	A (distinction)
SNV121	Innovation 121	4	71	B+ (Pass)
SWK122	Mechanics 122	16	56	B (Pass)
WTW158	Calculus 158	16	56	B (Pass)
WTW161	Linear algebra 161	8	67	B+ (Pass)
WTW168	Calculus 168	8	50	B- (Pass)

2010 — weighted average 47.90 • cumulative 54.42 • Permitted to proceed

Code	Course	Cr	%	Result
BES220	Engineering statistics 220	8	50	Pass
COS131	Introduction to programming 131	16	69	Pass
EIR211	Electrical engineering 211	16	51	Pass
ELI220	Linear systems 220	16	40	Fail (later passed 2011)
EPW200	Practical wiring 200	4	—	Attendance satisfactory
ERS220	Digital systems 220	16	—	Not admitted 2010; passed 2011
JCP203	Community-based project 203	8	85	Pass with distinction
JSQ216	Communication skills 216	8	65	Pass
MSD210	Dynamics 210	16	50	Pass
WTW238	Mathematics 238	16	—	Discontinued 2010; passed 2011
WTW256	Differential equations 256	8	41 / 50	Fail, then Pass
WTW258	Calculus 258	8	44 / 53	Fail, then Pass
WTW263	Numerical methods 263	8	62 / 40	Pass, then Fail
WWP121	Workshop practice 121	6	—	Attendance satisfactory

2011 — weighted average 47.57 • cumulative 52.54 • Permitted to proceed

Code	Course	Cr	%	Result
BIE310	Engineering economics 310	8	—	Not admitted to examination
BIE320	Engineering economics 320	8	50	Pass
ELI220	Linear systems 220	16	51	Pass
EMZ310	Electromagnetism 310	16	62	Pass
EMZ320	Microwaves and antennas 320	16	—	Course discontinued
ENE310	Analogue electronics 310	16	35	Fail (passed 2012)
ERS220	Digital systems 220	16	70	Pass
WTW238	Mathematics 238	16	40 / 50	Fail, then Pass

2012 — weighted average 37.75 • cumulative 49.01 • Permitted to proceed

Code	Course	Cr	%	Result
BSS310	Engineering management 310	8	61	Pass
MIA320	Impact of engineering activity and group work 320	8	63	Pass
EBB320	Control systems 320	16	—	Not admitted 2012
ELO320	Electronic engineering design 320	16	55	Pass
EMK310	Microprocessors 310	16	50	Pass
EMS310	Modulation systems 310	16	50	Pass
EMZ320	Microwaves and antennas 320	16	—	Not admitted 2012
ENE310	Analogue electronics 310	16	52	Pass
ESC320	Stochastic communications systems 320	16	33	Fail

2013 — weighted average 29.14 • cumulative 47.13 • Continuation subject to readmittance

Code	Course	Cr	%	Result
IPI410	Engineering professionalism 410	8	72	Pass
EBB320	Control systems 320	16	29	Fail
EMZ320	Microwaves and antennas 320	16	37	Fail
ESC320	Stochastic communications systems 320	16	—	Not admitted to examination

2014 — no term average recorded • cumulative 47.13 • Conduct satisfactory

Code	Course	Cr	%	Result
EPY423	Practical training and report 423	16	—	No mark on Oct 2014 record
EBB320	Control systems 320	16	—	Re-enrolled; no mark listed

EMZ320	Microwaves and antennas 320	16	—	Re-enrolled; no mark listed
ESC320	Stochastic communications systems 320	16	—	Re-enrolled; no mark listed

EDUCATION — SECONDARY

Christian Brothers' College Mount Edmund, Pretoria. Student 2004–2008. National Senior Certificate 2008.

Subject	Mark %	Rating
English Home Language	81	7
Afrikaans First Additional Language	87	7
Mathematics	88	7
Physical Science	75	6
Information Technology	84	7
Accounting	79	6
Life Orientation	82	7

Headmaster/educator letter of recommendation, December 2008 (D.N. Slabbert, English Educator; P.R. Ross, Headmaster):

- Subjects: English Home Language, Afrikaans First Additional Language, Mathematics, Science, Information Technology, Accounting, Life Orientation.
- Described as highly talented and dedicated, consistently in the top ten of the academic ranking.
- Award for top student in Information Technology, 2007 and 2008.
- Competitive swimming for CBC 2004–2008; Gauteng North Colors for open-water swimming, 2007 and 2008.
- Hockey, 2004–2007.
- Choir member; honors blazer for academic, sport, and cultural contribution.

SKILLS INVENTORY

Electronic engineering: Analog design; digital design (FPGA, VHDL); microwave engineering; antenna design; PCB design and layout; electromagnetic field theory; phase-locked loops; analog communications and modulation; electronic engineering design; microprocessors; linear systems; control systems; stochastic / modulation/communications systems.

Programming: C, C++, SQL, Git, Delphi; embedded / VHDL; MATLAB, Simulink, LabVIEW, PSpice, LTSpice, OrCAD.

Microcontrollers: Microchip, Texas Instruments, Atmel; serial communications RS-232, I2C, USB.

CAD/drawing: SolidWorks, AutoCAD, Cadence, OrCAD; graphical communication / technical drawing.

Lab: Oscilloscope, multimeter, signal generators, network analyzers, spectrum analyzers; soldering; PCB development, manufacturing, prototyping, and debugging; measurement techniques and computer modeling.

Manufacturing/shop: Manufacturing processes; materials science; practical wiring; fitting and turning basics; welding and brazing basics; woodwork; plumbing.

Software / OS: Apple and Microsoft office suites; Microsoft Project; Visio; macOS, Windows, Linux.

Management coursework: Engineering management; engineering economics; engineering professionalism; impact of engineering activity and group work; project-team leadership.

Vocational/agricultural: Building maintenance; irrigation; water supply (borehole, pump, pipeline, reservoir); electrical and plumbing maintenance; fencing; livestock; heavy machinery; labor relations.

Hospitality/retail: Dishwashing; prep and pantry cooking; banquet prep; cashiering; receiving; restocking; store and kitchen sanitation.

Written communication: Laboratory reports, detailed project reports, email, letters; verbal peer and group communication; slide and poster presentations.

ACTIVITIES, MEMBERSHIPS, COMMUNITY

- An IEEE student member since 2010; active in the University of Pretoria IEEE student branch.
- Treasurer, IEEE UP student branch, 2010–2011
- University of Pretoria community-based project JCP203 (85%, distinction): assisted in designing and building exhibits for a science center at the CSIR Department of Defense Safety and Security.