



UNIVERSITY OF TM
KWAZULU-NATAL
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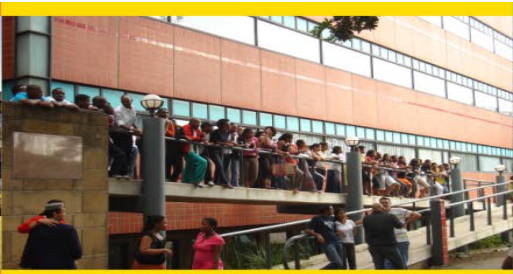
Dean's Overview: School of Engineering



EDGEWOOD CAMPUS



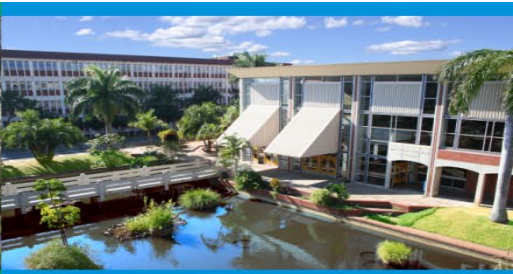
HOWARD COLLEGE CAMPUS



NELSON R MANDELA SCHOOL OF MEDICINE



PIETERMARITZBURG CAMPUS



WESTVILLE CAMPUS

INSPIRING GREATNESS

UKZN Structure – four Colleges

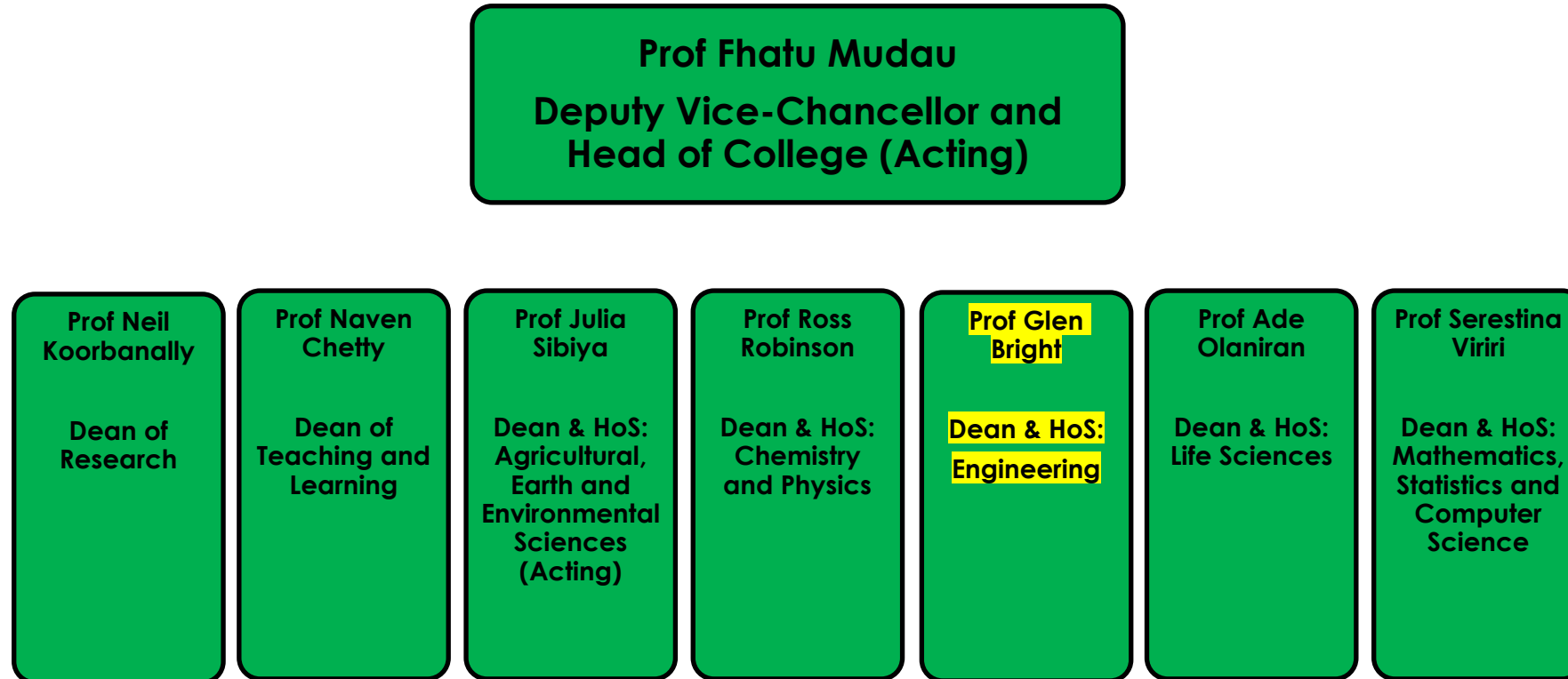
Agriculture, Engineering and Science

Health Sciences

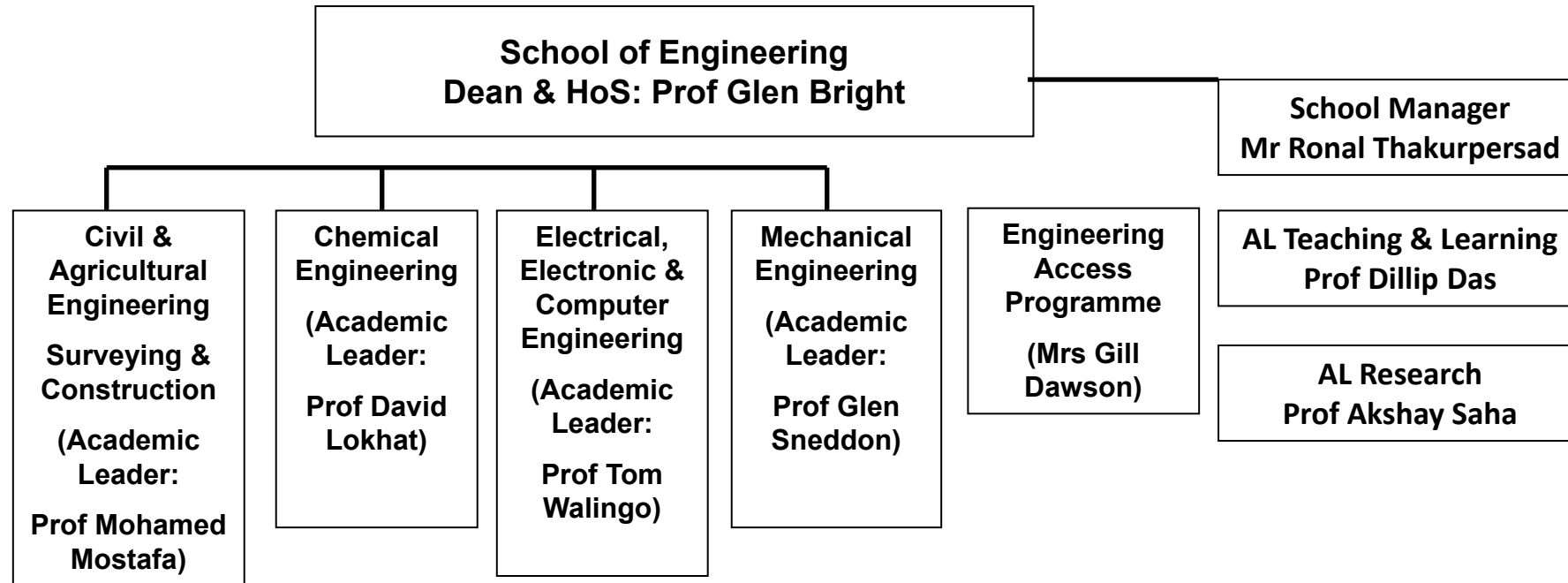
Humanities

Law and Management Studies

College Academic Structure



School of Engineering: Academic Structure



UG Programmes in the School of Engineering

Academic Clusters	Programmes	UG Degrees
CAESC	Civil Engineering Agricultural Engineering Surveying	BScEng(Civil) BScEng(Agricultural) BScSur
CE	Chemical Engineering	BScEng(Chemical)
EECE	Electrical Engineering Electronic Engineering Computer Engineering	BScEng(Electrical) BScEng(Electronic) BScEng(Computer)
ME	Mechanical Engineering	BScEng(Mechanical)



About the School of Engineering: Postgrad

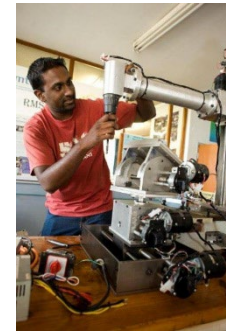
The most research-productive University in South Africa:

- Personal experience
- Masters & PhD enrolled/grad 2018: 433/106
- Large complement of staff establishing strong research careers
- Established and developing international exposure



Large and emerging research groups in:

- Factories of the future / mechatronics
- Materials science
- Nanotechnology
- Artificial Intelligence and Data Science
- Biochemical and Reaction Engineering
- Conservation of water
- Agriculture, flooding, irrigation
- Thermodynamics
- Radio technology
- High Voltage DC Engineering



About the School of Engineering: Undergrad

Staffing:

- 81 academics and 67 support posts
- Range from lecturer to professor
- Significant student support structures
- Academic (specific and general), personal counselling, career guidance



2018: graduated 420 UG students with 2304 registered (all years)

Four year programmes – exit with honours. Postgrad study straight to masters

Significant number do graduate in minimum time (4 years), but average +/- 5.

Education or Training

The last 100 years has seen us move from:

- Ox Wagon to Space Shuttle
- Penny Post to e-mail and Internet
- Log tables to personal computers
- Rural agriculture to genetic engineering



The jobs you will be doing in ten years' time may not yet exist:

- Training you for today's job is preparing you for yesterday
- Educating you for problem-solving is preparing for tomorrow

Strategies for Successful Studies

- Professional view to deep learning
- Needs consistent and sustained effort
- Engineering is really the work of **Saving the Planet**
- False diligence and memory-based learning – content overload
- Deeply understand and come to appreciate – relatively light
- Be able to explain and express



What Students Should Know

- 16-20 lectures a week
- Three to four 3 hour pracs/tuts (usually afternoon)
- First lecture 7.45 am
- Pracs end at 5.15 pm
- No “teachers’ meetings” or report cards
- Continuous assessment - you WILL have tests in all subjects
- Need to earn a DP to be allowed to write exams

How Students can help themselves

- Work consistently and effectively
- 72 credits \Rightarrow 720 hours for an average student
 \Rightarrow 60 hours/week (usually more, especially if you want to do well)
- Resolve problems early
- Consult lecturers if you have problems or are not sure what to do
- If necessary, consult with the Programme Coordinators or Academic Leader (Teaching & Learning) Dean
- Social life: Important but in moderation!

Student Experience

- Different from school – less supervision
- Must take responsibility for your own work
- First year – large classes
- Temptations, peer pressure, important to keep focus on goals
- Great opportunities for widening horizons
- Sports
- Clubs and societies
- Lifelong friendships

What We Expect of Our Students

- Work hard - and consistently
- Don't fall behind – seek help
- Don't ever bunk a lecture, tutorial or practical
- Don't ever, **ever** cheat in any way

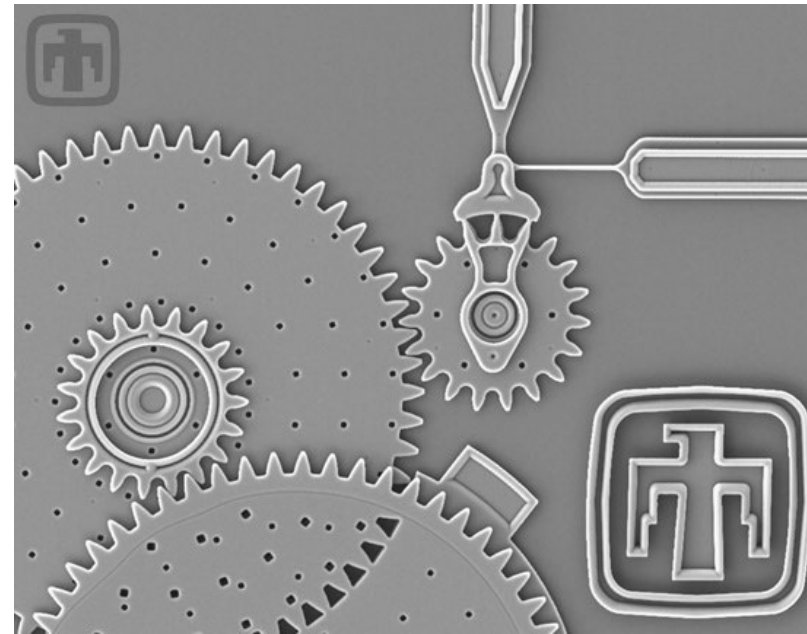
- Be enthusiastic
- Become involved
- Embrace ALL university has to offer

Cheating and Plagiarism

- Too easy to copy
- You learn nothing and fool yourself
ONLY
- Do your own work and do not copy
- Prosecution may mean permanent expulsion and a criminal record!!!

College Office provides assistance:

- Staff help with academic administration
- Around 500 students for each admin officer so please be patient!
- Applications
- Orientation
- Registration
- DP Appeals
- Graduations
- Withdrawals
- Exam Boards
- Exclusions



What You Can Expect From Us

- Quality education with high standards
- Nurturing environment
- Professionalism, integrity and fairness
- Multicultural environment
- Tolerance and respect for all
- Pride in ourselves, our students and our university

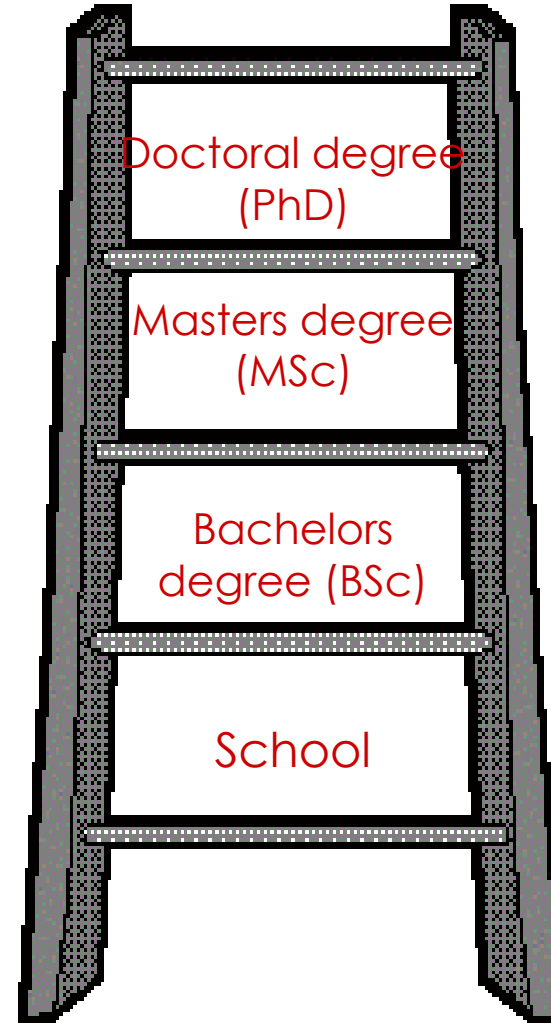
Engineering

- Critical profession for the future of the country
- Degree is tough but rewarding
- Be careful of the transition from school
- Students should enjoy their time at university, both socially and intellectually



Qualifications Ladder in Engineering

Climb the ladder
of life-long
learning



THANK YOU

for choosing UKZN

www.ukzn.ac.za