

# Faculty of Mining & Mineral Processing Engineering

**MIDLANDS STATE UNIVERSITY**

Antony Mamuse



# Presentation outline

- Introduction
- Current programmes
- Proposed new programmes
- Student enrolment
- Faculty staff
- Linkages
  - Linkages: Faculty & small scale miners
- Research, training, equipment
- Conclusion



# Introduction

- **Faculty Name:** Mining & Mineral Processing Engineering.
- **Location:** Midlands State University, Zvishavane Campus, Zvishavane.
- **Date Established:** August 2015.
- **Purpose:** To advance the national aspiration of minerals beneficiation and value addition through appropriate training, research and stakeholder engagement.

# Guided by MSU Vision....

“To be a unique, development-oriented, pace-setting and stakeholder-driven University that produces innovative, enterprising and internationally acclaimed graduates for the empowerment of society and creation of wealth”



# Current Departments & Programmes

- Mining Engineering
  - BEng Honours Degree in Mining Engineering
- Metallurgical & Materials Engineering
  - BEng Honours Degree in Metallurgical Engineering
  - BEng Honours Degree in Materials Engineering



# Future Departments & Programmes

- At full strength the Faculty will incorporate
  - More departments
  - Postgraduate programmes
- New departments envisaged in the growth strategy include:
  - Geosciences
  - Mechanical Engineering,
  - Spatial Sciences,
  - Fuels and Energy.
- The proposed Department of Geosciences is earmarked to commence in 2018.
- Faculty puts mining-related engineering disciplines and earth sciences under one roof



# Proposed Department of Geosciences

- Programmes proposed to commence 2018 are:
  - BSc Honours Degree in Applied Geology
  - BSc Honours Degree in Exploration Geophysics
  - BSc Degree in Applied Geology
    - Designed for holders of diplomas in Geology wishing to advance their qualifications
      - Currently they can only advance at foreign universities



# Student Enrolment

- Conventional students
  - Mainly high school graduates
- Visiting students
  - Mining industry technicians with relevant diplomas
- On average each department enrolls:
  - 15-20 conventional students per intake
  - 15-20 visiting students per intake



# Faculty Staff

Staff qualifications	No. of staff members
	FULL-TIME TEACHING STAFF
PhD holders	3
MSc, registered for PhD	3
MSc, registering for PhD	3
Studying for MSc	2
<b>SUB-TOTAL</b>	<b>11</b>
	TECHNICIANS
Chief Technicians	1
Technicians	2
	ADMINISTRATIVE STAFF
Faculty Administrator	1
Secretary	1
<b>TOTAL</b>	<b>16</b>

- Faculty recruits staff as new specialist areas accrue with student progression.
- Table excludes 3 part-timers.
- Advert for 2018 positions out soon.



# Linkages

- Faculty and MSU value linkages with local and international partners from:
  - Mining industry
  - Universities and research institutions
  - Government institutions
- Locally:
  - Faculty has a Mining Industry Advisory Committee (MIAC)
    - Platform for interaction of MSU, industry and government
    - Drawn from large- scale and small-scale miners
- Internationally:
  - R&D collaborative partnerships being developed with institutions in RSA, India, Australia, Canada, Sweden etc.
    - Projects to be unveiled in 2018
  - Professorial chairs
    - Faculty has been authorised to create and fill 2 professorial chair positions



# Research, Training & Equipment

- MSU is building capacity for world-class research and training at the Faculty
  - sequential acquisition of state-of-the art mining and mineral processing equipment
    - Mineral beneficiation Laboratory
    - Physical metallurgy laboratory
    - Mining engineering laboratory
    - Workshop Equipment
    - Geology and geophysics equipment in stock
  - Faculty quality assurance team working towards accreditation of Faculty laboratories
  - Key research projects in various stages of formulation at the Faculty:
    - Some to be unveiled in 2018.





Building capacity:  
MSU taking delivery  
of workshop  
equipment recently.

# Facilities: Physical Metallurgy lab



# Instruments room & chem lab



# Faculty engages small-scale miners to understand their needs



# Short courses for mining industry...1



MIDLANDS STATE UNIVERSITY

## FACULTY OF MINING & MINERAL PROCESSING ENGINEERING

# SHORT COURSES

### 1) Geostatistics

**02 October 2017 to 06 October 2017**

The training will cover the following topics:

- Introduction to Geological Modelling & Resource Estimation
- Data, Data Units and Spatial Domaining
- Sampling and Sampling Errors
- Classical Statistics and Probability
- Quality Assurance and Quality Control
- Spatial Continuing and Variography
- Estimation Techniques
- Geostastical Estimation (Inverse Distance, Ordinary Kriging, Simple Kriging)
- Introduction to Conditional Simulation

#### Contact Persons:

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mandazaez@staff.msu.ac.zw

#### Cell:

0772 716005 / 0777 800675

#### \*Banking Details:

Course fees can be made at



# Short courses for mining industry...2

## 2) Mining Law

**09 October 2017 to 13 October 2017**

The training will cover the following topics:

- Introduction to Mining Law
- International and Regional Instruments Impacting on Mining Law and Policy
- Historical Development of Mining Law in Zimbabwe
- Acquisition of Mining Rights
- Land Owners and Mining Right
- Disposal of Mining Rights
- Mining Law Administration: Mining Commissioners vs Provincial Directors
- Marketing and Exportation of Minerals
- Safety and Environmental Issues in Mining
- Indigenisation and the Mining Industry

### Who should attend?

This training is designed for Ministry of Mines officials, Mining Industry Legal officers, Local Authority' officials, Safety and Health and Environmental officers, Human Resources Practitioners Consultants, Farmers, Small-scale miners, Investors , Individuals, Students and Lecturers.

**Course Fee:** US\$400.00 (including certificate, course material, teas and lunches)

**Registration Deadline:** 04 October 2017

**Venue:** Faculty of Mining and Mineral Processing Engineering, MSU Zvishavane Campus

**BANK: FBC**

**BRANCH: GWERU**

**BRANCH CODE: 8510**

**ACCOUNT NUMBER**

**6137535960297**

**BANK: ZB**

**BRANCH: GWERU**

**BRANCH CODE: 4575**

**ACCOUNT NUMBER:**

**4575486039200**

\*Payment Details: Short Courses

**Special accommodation rates** are available at Pote Hill Hotel for participants who make reservations by 25 September 2017 . For reservations, please call on: **+263 775 746 509** or **+263 772 168 191**.

[www.msu.ac.zw](http://www.msu.ac.zw)

# MSU Short courses certification



# Conclusion

- The MSU Faculty of Mining & Mineral Processing Engineering:
  - is guided by the University's vision
  - Supports the Government, University and Industry in advancing the national goal of local value addition to, and beneficiation of Zimbabwe's mineral resources.
  - Requires strong local and international mutually beneficial collaborations and partnerships
    - ensures that graduates are properly equipped with skills that
      - Match industry needs
      - Ignite graduates' entrepreneurship fortitude.



# Thank You

