WELCOME

At Potchefstroom College GCC we offer a variety of courses to help engineers successfully complete their Government Certificate of Competency, otherwise known as GCC or ticket.

Because this is such a prestigious qualification you need to qualify before you can write this exam. To qualify you must have a letter of acceptance from either the Department of Minerals and Energy (Mines) or the Department Labour (Factories).

For further details please read these requirements or if you’re still not sure, send us copies of your qualifications with pass rates for each subject as well as details about your relevant experience.

Q: What makes the Government Certificate of Competency such a prestigious qualification?

A: Once you’ve passed your GCC you are considered a competent engineer, and by law, you are allowed to manage an engineering section of a mine or factory.

IMPORTANT DATES

EXAM DATES 2019

<table>
<thead>
<tr>
<th>PLANT</th>
<th>3 Jun</th>
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<tbody>
<tr>
<td>Mines and Works</td>
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<tr>
<td>Factories</td>
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REGISTRATION DATE

Last date for examination registration 8 March 2019

AVAILABLE COURSES

Preparation week course
This course is designed to help prepare students for the GCC exam, with loads of advice on how to approach the exam.

**Subjects:** Plant and Law subjects

**Cost:**
- R2700  Plant
- R1300  Law

**Dates:**

<table>
<thead>
<tr>
<th>Mines</th>
<th>20 - 24 May 2019</th>
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<tr>
<td>Factories</td>
<td>20 - 23 May 2019</td>
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**Venue:** Amelia Recreational Hall, Richardson Str, Bailliepark, Potchefstroom.

**GPS:** 52°6.42.965',0,27.010'

**IMPORTANT INFORMATION:**

1. Registration and payment will be between 7:00 -9:00 on the Monday of arrival for Plant candidates doing both Plant and Law
2. Registration and payment for Law will be between 13:00-14:00 on the Monday of arrival.
3. **Please note:** On registration day only CASH will be accepted
4. All payments has to be done before the start of the course or during registration on the Monday of arrival.

5. If an Invoice, should be send to your Company a Company Confirmation letter that states that the company is responsible for and accepts liability for the candidates course fees will be asked with registration.

6. Please report at Registration desk before taking a seat.

7. Only written cancellations done 5 working days prior to the start of the course will be accepted, otherwise the candidate will remain liable for the payment of the full course fee.

- **Candidates who pre-register:** Complete registration form and send back together with proof of payment. A proof of enrolment will be send back to candidate.

- **Private Payment:** Complete registration form and send back via email or fax together with proof of payment. Proof of enrolment will be send back to candidate.

- **Company payment:** Complete registration form and fax or email back with Company’s Confirmation letter that states that company is responsible and accepts liability for candidate’s course fees.

Aforesaid letter should be on Company’s letterhead and should reflect Company VAT number, correct postal address, contact person with a contact number.

As soon as an ORDER NO or letter of confirmation of payment or payment is received, a proof of enrolment will be send to candidate.

**Training course**

This course, held in Potchefstroom on Monday evenings, boast lots of personal attention and covers Plant Engineering.

**Subjects:** Plant subjects only  
**Cost:** R2 700

**Dates:**
**NB:** Dates are subject to change. Make sure that you fill in your email address on the registration form so that we can inform you in time.

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<tr>
<th>Date</th>
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<tr>
<td>11 Feb</td>
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<td>25 Feb</td>
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<td>4 March</td>
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<td>11 March</td>
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<td>1 April</td>
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<td>8 April</td>
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<tr>
<td>15 April</td>
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<td>29 April</td>
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Dates are subject to change

**Venue:** Amelia Recreational Hall, Richardson Str, Bailliepark, Potchefstroom.  
**GPS:** 52°6’42.965”,0,27.010’  
**Time:** 17:30 (± 2 hours)
Correspondence courses
This course is for students that want to study via mail. You will receive books and assignments via POST-NET (if you do prefer courier, you will be responsible for the arrangements and payments). You can work on your own time and send assignments back to us via email or fax

Subjects: Plant and law subjects
Cost: R3 700 Plant
      R1 600 Law
Dates: Via mail, anytime of year

Corporate courses
If you have ten or more students preparing for the GCC exam, courses at your own facilities can be arranged for Plant Engineering. Please contact our office for more information

Subjects: Plant subjects only
Cost: R28 000 for first 10 candidates, thereafter R2700 per person.
(Plus travelling and accommodation if necessary)
Dates: BOOKINGS ESSENTIAL
Please book early to avoid dissapointment.

SYLLABUS

Plant syllabus
Section I: Mechanical Engineering
Chapter 1: Belt drives
Chapter 2: Gear drives
Chapter 3: Conveyor Belts
Chapter 4: Traction
Chapter 5: Rope Haulages
Chapter 6: Bucket Elevators
Chapter 7: Chairlifts
Chapter 8: Elevators
Chapter 9: Winders (only mines)
Chapter 10: Vehicle dynamics
Chapter 11: Brake systems
Chapter 12: Flywheels
Chapter 13: Coiled Springs
Chapter 14: Lubricating
Chapter 15: Bearings
Chapter 16: Welding

Section II: Strength of Materials
Chapter 1: Line Shafts
Chapter 2: Beams
Chapter 3: Retaining walls

Section III: Hydraulics
Chapter 1: Flow measurement
Chapter 2: Flow in pipelines
Chapter 3: Centrifugal and Reciprocating pumps

Section IV: Thermodynamics
Chapter 1: Compressors
Chapter 2: Rotary air compressors
Chapter 3: Refrigeration
Chapter 5: Boilers
Chapter 6: Heat transfer (autoclave)
Chapter 7: Water treatment

Section V: Electrical
Chapter 1: Electrical Circuits
Chapter 2: Power factor correction
Chapter 3: Transmission lines
Chapter 4: Fault calculations
Chapter 5: Circuit Breakers
Chapter 6: Illumination
Chapter 7: Induction motors
Chapter 8: Starting of AC motors
Chapter 9: Synchronous motors
Chapter 10: Transformers
Section VI: Management
Chapter 1: Introduction to risk management
Chapter 2: Risk Management
Chapter 3: Safety Management

Law syllabus

OSHACT
An occupational health and Safety Act and Regulation handbook (Latest Edition)
Typical examination questions
Most recent exam papers (last 4)

MINES
Mine Health and Safety Act and Mineral Regulations handbook (latest ed.)
Typical examination questions
Most recent exam papers (last 4)

REQUIREMENTS
Requirements for acceptance to Government Certificate of Competency

The candidate must be 23 years or older. No person will be allowed to enter for the qualifying examination, unless he/she has been accepted as a candidate by the Commission of Examiners, and no credit will be given for a pass prior to such acceptance.

The University Route
A B.Sc. degree in mechanical or electrical engineering recognised by the Commission of Examiners and at least two years post graduate appropriate practical experience in the maintenance and operations of mechanical and electrical machinery, satisfactory to the Commission of Examiners of which at least one year has been at a mine in the RSA

The Technicon Route
A course in engineering (mechanical or electrical as the case may be), a National Diploma (S4) plus at least two years experience subsequent to the issue of such diploma in the maintenance and operations of mechanical or electrical machinery as the case may be, which is satisfactory to the Commission of Examiners, and of which at least one year has been at a mine in the RSA.

The completion of such course shall include passing all the subjects with a mark of at least 50%. The Technicon must subsequently certify that a candidate for the Government Certificate of Competency, having followed the Technicon route, has -

(i) Completed a curriculum, which covers the syllabus for Plant Engineering
(ii) Acquired a National Diploma with a mark per subject of at least 50%;
(iii) Received the required experiential training; or

Enrolled for the B.Tech. Degree, at a Technikon granted permission by the Commission of Examiners with the undertaking from such Technicon to monitor and control the required experiential training after completion of such degree

The Technical College Route
A course in engineering (mechanical or electrical as the case may be).

The completion of such course shall include passing all the subjects with a mark of at least 50%.
Such person shall also have served an apprenticeship in an appropriate trade and has gained experience in the maintenance and operations of mechanical or electrical machinery, as the case may be. Such experience of which at least one year has been at a mine in the RSA, shall be satisfactory to the Commission of Examiners.

After the completion of the prescripted course, the Department of National Education will be required to certify that a candidate for the Government Certificate of Competency, having followed the Technical College route, has

(i) Completed a curriculum, which covers the syllabus for Plant Engineering;
(ii) Acquired a National Certificate on the N6 level, with a mark of at least 50% in all subjects

ACCOMMODATION
Please note that you are responsible for your own accommodation while attending any of our courses. Refer to the below mentioned website for an updated list of accommodation available in Potchefstroom.

http://www.potchefstroom.co.za/accommodation/accommodation.html

OTHER CONTACTS
Department of Education
• Exam results and revisions
• List of available FET colleges
  Tel: 012 357 3966/45/39

Department Minerals and Energy
• Letter of acceptance for mines
• Issue of GCC certificate for mines
  Tel: 012 444 3504
  Faks: 086 534 5455
  ukhonaye.dotwana@dmr.gov.za

Department Labour
• Letter of acceptance for factories
• Issue of GCC certificate for factories
  Tel: 012 309 4111 or
  Tel: 012 309 4392/84
  matlala.sathekge@labour.gov.za

Lexis Nexis
• OHS act books for factories
• Legal Knowledge books for mines
  Tel: 011 525 9400

Postnet
• Tracking of your registered parcel for correspondence students only.

PREVIOUS PAPERS
We also have CD’s with previous exam paper available for students who are interested please contact our office.

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<thead>
<tr>
<th>MINES</th>
<th>FACTORIES</th>
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<tr>
<td>Plant R100</td>
<td>Plant R100</td>
</tr>
<tr>
<td>Law: Knowledge mines R100</td>
<td>Law: Occupational Health and Safety R100</td>
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<tr>
<td>Postage / Postnet R40 R100</td>
<td>Postage / Postnet R40 R100</td>
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<tr>
<td>TOTAL</td>
<td>R230 OR R300 depending on method of posting</td>
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If you are interested please fill in a form and send it back to us via fax (018 290 9215) or email (gcc1@telkomsa.net) with PROOF OF PAYMENT
CONTACT DETAILS

Postal Address:
PO Box 1823, Potchefstroom, 2520.

Physical Address:
28 Wagner Street, Van der Hoffpark, Potchefstroom.

Tel: +27 (0)18 290 5243
Fax: +27 (0)18 290 9215
Email: gcc1@telkomsa.net
Website: www.potchcollegegcc.co.za

Office Hours:
Mon. - Thurs. 08:00 - 15:00,
Fri. 08:00 - 13:00.

Contact Person:
Tanja Kleyn - Course Co-ordinator