



SAGMA

Southern African Grain Milling Academy

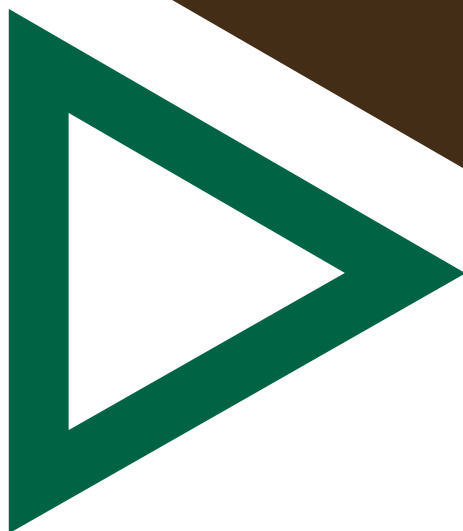
**Courses for
Maize & Wheat Milling Technology**

**Trade Test Certificate
for Would Be Millers**

**Maize, Wheat & Advanced
Technology Course**

**Tutorial Assistance and
Technical Consulting Service**

2023



INFORMATION MANUAL

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REQUIREMENTS TO REGISTER FOR THE NON-ACCREDITED SAGMA COURSES

Previously called "Grain Milling Federation (GMF)" Certificate of Completion

- Grade 10 (Standard 8) certificate required
- Course content is available in English only
- Assistance from a Head Miller/Training Officer would be beneficial
- Certificate of Completion
- Industry Accepted Course
- 2-Year theory (5 modules)
- 6-month preparation period for Trade Test

FUNCTION OF SAGMA

- ✓ Administer theoretical training through correspondence courses (distance education model) for wheat and maize milling technology
- ✓ Administer the practical Trade Test for would-be millers
- ✓ Administer the Advanced Course
- ✓ Administer tutorial assistance and technical consulting services

INTEGRATING THE GMF COURSE INTO THE SAGMA SYLLABUS

The Training Committee decided to integrate the GMF course into the SAGMA syllabus because it is outdated. The following changes/alignments have been made to the SAGMA Non-Accredited course.

The new courses have been implemented since 2021:

- GMF Maize/Wheat Module 1 would become SAGMA 1 & 2
- GMF Maize/Wheat Module 2 would become SAGMA 3
- GMF Maize/Wheat Module 3 would become SAGMA 4
- GMF Maize/Wheat Module 4 would become SAGMA 5

IMPORTANT NOTES:

- Previous GMF students will be required to purchase the SAGMA study material at a nominal fee.
For example, a student studying for their Wheat 3 GMF course would have to purchase the SAGMA Wheat module 1 & 2 and the SAGMA Wheat module 3 study material. Their study material will be included in their registration fee when registering for the SAGMA Wheat module 4.

Note: When a student registers for a module for the first time, the study material is automatically included in the registration fees

- For any Non-Accredited SAGMA/GMF student to convert to the accredited SAGMA course, they would have to complete SAGMA modules 6 and 7 & 8. They will also have to complete the SAGMA Logbook and Portfolio of Evidence, have been Trade Tested and complete the EISA exam.

THEORETICAL COURSES FOR WHEAT AND MAIZE MILLING TECHNOLOGY

The primary aim of these courses is to focus on and establish key competencies and skills for problem-solving and decision-making in wheat and maize milling situations. These courses consist of eight modules each and contain technical information on wheat and maize milling technology.

Tuition is through the medium of distance education, i.e., a correspondence course. SAGMA provides a tutor for each course to assist students with questions regarding the course material.

A SAGMA tutor will be responsible for compiling and marking the progress assignments and semester examinations.

THE TRADE TEST CERTIFICATE

After completing module 5 of the technology course, the student (under mentorship) should spend six months in a programme relieving the shift miller where the theory and practical components are applied in experiential "on-the-job" learning.

Once the mentor (experienced miller/mill manager) is satisfied that the student is competent in all the aspects of milling technology, he can apply to the Course Administrator to have the student Trade Tested.

The Course Administrator will arrange a suitable date for the practical Trade Test that will take \pm two days per student and be conducted by one of the SAGMA Trade Test examiners.

Wheat and maize technology courses are not interchangeable, i.e. the maize technology course will, for example, only give the student access to the practical trade test for maize milling.

The practical Trade Test will be conducted in the mill where the students have undergone training. The student will be issued, well before the actual Trade Test date, with detailed information on the examiner's topics to test their competency.

A minimum of **70% per section** must be obtained to qualify for the certificate.

ADVANCED TECHNOLOGY COURSE (Maize & Wheat)

Students with an average of 70% in all their theoretical modules may apply to register for the Advanced Course.

The Advanced Technology Course in wheat and maize milling has no specific outcome or National Qualification, i.e. head miller or mill manager, and was:

- **Firstly**, introduced for the purpose of upgrading existing general management:
 - to focus on and establish critical competencies and skills to structure the relationship between the business functions;
 - to focus on and establish critical competencies and skills for problem-solving and decision-making in managerial situations; and
 - to establish critical competencies and skills for steering and directing operations.
- **Secondly**, to prepare persons with the necessary skill set (in possession of a wheat or maize trade test certificate) to move into management positions in the wheat and maize milling industry.

Persons with a wheat or maize SAGMA/SAQA Trade Test Certificate can enrol for this course. A letter of approval from the particular general manager or mill manager must accompany the application.

A pass mark of **50%** is required in the progress questions and the semester exam.

Students will have to pass both chapters of a module before progressing to the next module but will be given credit for the one they have passed.

TUTORIAL ASSISTANCE AND TECHNICAL CONSULTING SERVICES

SAGMA can now offer the student on-the-spot tutorial assistance, at their mill/online, during the semester.

- The purpose of this service is to:
 - Prepare the students for the semester exam by ensuring they understand the subject matter covered in the module. This can be done, preferably before the progress questions are due to be handed in or just before the examination and prepare the candidates for the Trade Test (online assistance can also be arranged).
- SAGMA uses a skilled group of tutors who have made themselves available for this work.
 - Tuition will be conducted either at the students' mill or at a central venue.
 - The duration of the tuition would depend on the number of students and the number of modules to be covered.
 - It will be impossible for the tutor to cover the entire content of each

module. It is a requirement for the student to make a list of items they require tuition in and forward it to SAGMA at least two weeks before the training session.

- The above-mentioned should be compiled so that the subjects be listed in order of significance. The list would give the tutor time to prepare the necessary material to present at the session.
 - Course material, such as writing equipment, flipcharts, textbooks, etc., will be the responsibility of the milling company concerned.
 - The students' training officer/manager should request tutorial assistance in advance. The application form should be forwarded directly to the Course Administrator.

FEE STRUCTURE

The fees are reviewed annually in **October** and will be effective from **November**.

Please note:

Only once payment or proof of payment has been received will progress questions and study material be sent to the student. A copy of the proof of payment or remittance can be e-mailed to elmien@sagma.co.za. Please ask your finance department to use the **invoice number** as a reference when paying for the studies.

MODULE 1 – 5:

Registration Fee & Study Material (per module):

NCM Members	R3 814-60
Non-members	R7 629-40
Foreign students	R8 286-60

Redoing a module:

NCM Members	R1 904-30
Non-members	R3 820-20
Foreign students	R4 157-30

TRADE TEST:

Admin fee (<i>NCM Members</i>)	R1 495-00	
Admin fee (<i>Non-members</i>)	R1 573-00	
Admin fee (<i>Outside South Africa</i>)	R1 573-00	
Examiners fee	R5 560-00	Per student
Travel allowance	R163-00	Per hour
Re-test	R1 460-70	Per section
Actual travels	R7-00	Per kilometre

The company/mill will be responsible for:

- the booking and payment of accommodation;
- car hire fees;
- sundries (e.g. embassy fees, visa fees, vaccination fees, etc.);
- parking fees at the airport (where applicable);
- and air tickets (where applicable);
- visas, COVID tests, and malaria vaccinations (where applicable).

No marks will be released before payment has been made in full.

ADVANCED COURSE:

NCM Members	R7 629-20
Non-members	R15 258-50
Foreign students	R16 573-00

Redoing a module:

NCM Members	R1 904-30
Non-members	R3 820-20
Foreign students	R4 157-30

PERSONAL TUTORIAL ASSISTANCE - on-site/online

Administration fee	R314-61	Per student
Examiners fee	R4 101-10	Per day
Travel allowance	R163-00	Per hour
Actual travels	R7-00	Per kilometre

The company/mill will be responsible for:

- the booking and payment of accommodation;
- car hire fees;
- sundries (e.g., embassy fees, visa fees, vaccination fees, etc.);
- parking fees at the airport (where applicable);
- and air tickets (where applicable).

OTHER COSTS:

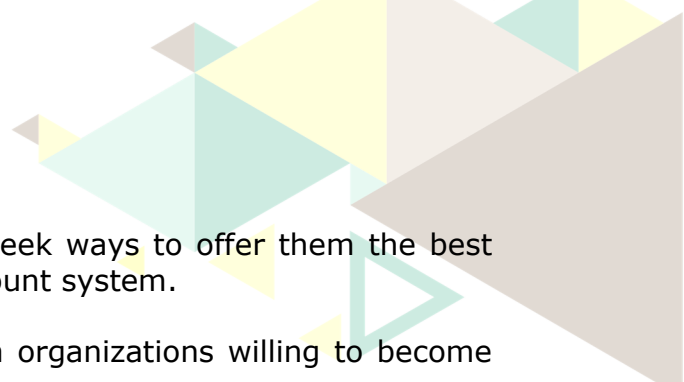
Change and cancellation cost	R1 236-00
Cancellation of Trade Test cost	R1 236-00
Issue a duplicate certificate	R305-00
Marking/remarking of progress questions	R505-62
Study material (per manual), excluding courier costs	R575-00

THE MODULES ARE AVAILABLE FOR PURCHASE BY SAGMA STUDENTS ONLY

DISCOUNT POLICY

The SAGMA course is structured to train a learner to qualify as a miller in theory and practice. The course material has been carefully selected to give the learner miller a good background in all aspects of the milling process.

Milling is an industry that keeps pace with modern technical innovations. No other country has a milling course dedicated solely to maize milling. In most other countries, wheat is the principal grain; other grains, such as maize, are covered very briefly. In this country, as in most of Sub-Saharan Africa, maize milling is second only to wheat milling, and we have some very sophisticated plants. It would, therefore not be possible to combine both wheat and maize milling into one course.



We care about our customers and constantly seek ways to offer them the best value for money. One method we use is a discount system.

We are also open to negotiating discounts with organizations willing to become National Chamber of Milling members.

Note: these discounts only apply to levy-paying organizations based within the republic of South Africa, and the operations are also based within the country's borders.

We offer a 50% discount on registration fees on all modules to organizations that are members in good standing.

EXAM VENUES

Exam venues are available in the following locations:

- Bloemfontein
- Botswana
- East London
- KwaZulu-Natal
- Kroonstad
- Lichtenburg
- Mozambique
- Namibia (Windhoek)
- Paarl
- Polokwane
- Port Elizabeth
- Gauteng
- Swaziland
- Upington
- Zambia
- Zimbabwe

Students will be informed of the exact location of the exam venue via Whatsapp. Students are advised to make prior arrangements for accommodation and travel to the nearest exam venue in their province.

CONDITIONS FOR ADVANCEMENT

Progress questions must be completed and returned to SAGMA. A pass mark of 50% must be obtained to qualify for the examination. If students fail the progress questions, they must re-register for the specific module.

The semester exam is written at the end of each study semester and the student must pass this exam (50% pass mark) to advance to the next module.

SAGMA students who failed one of their modules will have to re-register only for the module they failed. After successfully passing both the modules in that category, will they continue to the next level.

GENERAL INFORMATION

- Candidates can register for the wheat and maize milling technology courses. As this is a technology course, assignments and examinations will contain questions requiring practical experience/exposure in the wheat and maize industry.
- Students must use their student numbers for all electronic correspondence

and enquiries.

- All students have to start at module 1 and progress from there. **The wheat and maize courses are separate technology courses.**
- A Certificate of Completion from SAGMA for the wheat and maize courses in milling technology will be issued to students after completion of these courses.
- Some companies require their millers to complete both the Maize and Wheat Technology courses. In such a case, the student will complete Modules 6 - 8 once, as the course content for the Maize/Wheat modules is the same.

DATES AND DEADLINES: 2023

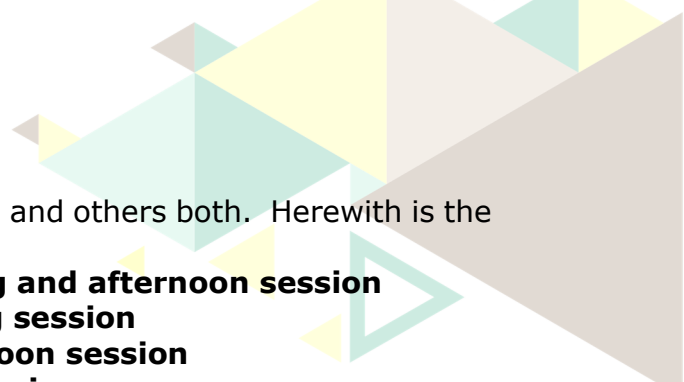
THEORY COURSE	First Semester	Second Semester
Semester starts	16 Jan	3 Jul
Closing date for registration	10 February	28 July
Closing date: changes and postponement to studies	17 February	4 August
Closing date: assignments to be received by SAGMA	8 March	30 August
Assignment results to students	11 April	9 October
Date of semester exam (All modules)	10 MAY	15 November
Results to students	12 June	18 December
Semester finishes	30 June	22 December

PROGRESS QUESTIONS

- Questions are set on each chapter of the study notes, and marks are allocated accordingly. The answers to the progress questions must be submitted to SAGMA in accordance with the instructions forwarded with the questions.
- The minimum qualifying mark is 50%.
- The questions are based on the study notes and practical learning acquired in the milling environment.
- The semester exam will be very similar to the progress questions.
- It is the student's responsibility to ensure that SAGMA receives their progress questions by the specified date. Please allow enough time for the courier service when sending the progress questions.

SEMESTER EXAM

If the students comply with the requirements regarding progress questions as set out above, they will be allowed to take the semester exam. The exams' duration is 3 hours per paper at a designated venue, convenient to most students in a specific province, supervised by an invigilator, and under strict examination conditions.



Some students will write only one exam session, and others both. Herewith is the outline of the sessions:

- Module 1 & 2 students write the **morning and afternoon session**
- Module students write **only the morning session**
- Module 4 students write **only the afternoon session**
- Module 5 students write the **morning session**

Questions for the examination will be based on the theoretical and practical aspects in all the study material (*less than 25% of similar questions set in the progress question paper are included in the semester examinations paper*).

DISABILITY OR ILLNESS DURING EXAMS

SAGMA must be informed in writing, with supporting medical evidence or a doctor's certificate, as soon as possible after the examination date of why the candidate could not write the examination.

A new set of progress questions will be sent to the student, who must pass the assignment to write the exams that semester.

An administration fee will be payable for writing the next semester's examination paper.

Suppose the student is unable to write the examinations on the specified date. In that case, we request the training officer/mentor to contact SAGMA at least a week before the examination date to make alternative arrangements. An administration fee will be payable if the student wishes to continue in the following semester.

- Please make sure that the application forms are completed in full. Each "New Student Application" form must be accompanied by an "Application for an Invoice" form.
- By signing this application, you and your training officer/mentor confirm that you have read and understood the SAGMA rules, policies and procedures.
- No study notes or progress questions will be couriered/e-mailed to students unless SAGMA has received payment or proof of payment.
- An administration fee will be levied for changes or cancellations of studies. No fees will be refunded after the given date. Students can only postpone their studies to the next semester once.

SYLLABUS MAIZE MILLING 2023

MAIZE 1

PURPOSE:

The main focus of learning in this subject is to understand the maize milling industry and process and the applicable legislation.

TOPICS:

- The milling industry
- The importance of maize as a crop and source of food
- Maize production
- The shift miller
- Occupational health, safety and environment in the mill

MAIZE 2

PURPOSE:

The main focus of learning in this subject is to understand maize grading, handling and safe storage.

TOPICS:

- Introduction to maize intake
- Receiving and handling of grain in bulk and in bags
- Silo intake operations
- Food safety
- Grading principles and methods
- Silo stock control and inventory management principles
- Storage of maize and maize products
- Infestation control in the mill

MODULE 3

PURPOSE:

The main focus of learning in this subject is to understand the different methods of blending maize by removing impurities and conditioning by water addition.

TOPICS:

- Grain impurities
- Grain flow control
- Maize blending
- Conditioning of grain
- Quality control

MODULE 4

PURPOSE:

The main focus of learning in this subject is to understand all equipment used in the milling of maize and the efficient operation and maintenance thereof.

TOPICS:

- General principles of assets and asset maintenance
- Control apparatus
- Maize & maize cleaning machines
- Rollermills
- Plansifters
- Concentrators
- Aspirators

- Centrifugal type drum sifters
- Vibratory sifters
- Degerminators
- Mechanical weighing
- Pneumatic conveying

MODULE 5

PURPOSE:

The main focus of learning in this subject is to understand the detail of the milling process, flow principles and the quality assurance of the whole process.

TOPICS:

- The Degermination process for maize milling
- The Aspiration system for maize milling
- The break and reduction systems for maize milling
- The germ roll system for maize milling
- Plansifter internal flow schemes for maize milling
- Product quality for maize milling
- Process controls for maize milling
- The Milling Process for maize milling
- Flow diagram principles and mill balance for maize milling

SYLLABUS WHEAT MILLING 2023

MODULE 1

PURPOSE:

The main focus of learning in this subject is to build an understanding of the wheat milling industry and process and the applicable legislation.

TOPICS:

- The milling industry
- The importance of wheat as a crop and source of food
- Wheat production
- The shift miller
- Occupational health, safety and environment in the mill

MODULE 2

PURPOSE:

The main focus of learning in this subject is to build an understanding of wheat grading, handling and safe storage

TOPICS:

- Introduction to wheat intake
- Receiving and handling of grain in bulk and in bags
- Silo intake operations
- Food safety
- Grading principles and methods
- Silo stock control and inventory management principles
- Storage of wheat and wheat products
- Infestation control in the mill

MODULE 3

PURPOSE:

The main focus of learning in this subject is to understand the different methods of gristing or blending and preparation of grain by removing impurities and conditioning by water addition.

TOPICS:

- Grain impurities
- Grain flow control
- Wheat gristing
- Conditioning of grain
- Quality control

MODULE 4

PURPOSE:

The main focus of learning in this subject is to understand all equipment used in the milling of grain and the efficient operation and maintenance thereof.

TOPICS:

- General principles of assets and asset maintenance
- Control apparatus
- Maize & wheat cleaning machines
- Rollermills
- Plansifters
- Purifiers and concentrators
- Aspirators
- Centrifugal type drum sifters
- Vibratory sifters
- Bran finishers
- Flake breakers (drum detachers) and impact detachers
- Mechanical weighing
- Pneumatic conveying

MODULE 5

PURPOSE:

The main focus of the learning knowledge module is to understand the detail of the milling process, flow principles, and quality assurance of the whole process.

TOPICS:

- The break system for wheat milling
- The scratch system for wheat milling
- The purification system for wheat milling
- The aspiration system for wheat milling
- The reduction system for wheat milling
- Plansifter internal flow schemes for wheat milling
- Product quality for wheat milling
- Process controls for wheat milling
- The milling process for wheat milling
- Flow diagram principles and mill balance for wheat Milling
- Product processing and divides for wheat milling