



UK FLOUR
MILLERS

Course Guide 2021-22



Flour Milling
Training



Distance
Learning
Programme

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UK Flour Millers

For many decades the UK flour milling industry has run correspondence courses for students across the world, always aware of the need to review its training resources on a regular basis and make improvements as and when appropriate. As such, the distance learning programme has evolved into the leading industry standard it is today

Welcome

Welcome to UK Flour Millers, formerly known as nabim, we are the trade association and industry training organisation for the UK flour milling industry. Each year we run our modular correspondence courses to provide millers with an essential knowledge and understanding of the flour milling industry. Each year the courses are studied by hundreds of students from around the world and lead to the Advanced Certificate in Flour Milling. During and beyond the Covid-19 pandemic, UK Flour Millers will continue to deliver its distance learning programme through hard copy and the virtual world.

“Each year, this distance learning programme enhances the knowledge, understanding and career prospects of hundreds of students around the globe, whether they work in production, technical, distribution, administration or elsewhere in the mill.”

**Howard Motley,
Divisional Operations Manager,
ADM Milling
& Chairman, UK Flour Millers
Training Committee**

Flexible Training

The modules may be studied in any order and in any combination; students are not required to have any previous qualifications. Students are encouraged to study between 1 and 3 modules in their first year (approx 12 hours minimum study time per module).

Detailed information about each of the modules and the subjects they cover can be found on pages 6-19.

Details of our programme's tutor support and the role of the mentor can also be found on page 24.

Increase your potential

Whilst our distance learning programme dates back over one hundred years, it continues to meet the training needs of the milling industry. The programme works, so we don't mess around with it too much. Now this tried and trusted programme is backed by 21st century resources such as our virtual flour mill, which has excited tutors, mentors and students alike.

The courses are an excellent training programme for those new to the industry, an indispensable tool for developing the skills of the competent miller and valuable refresher training. The programme is designed and delivered by millers for millers.



Seven Modules

**Developed and
Delivered by
Millers for
Millers**



Modules

Our Flour Milling Training Programme is structured into seven modules, providing a flexible training package that covers the full spectrum of milling subjects.

- 1 – Safety, Health and Hygiene
- 2 – Wheat and the Screenroom
- 3 – Mill Processes and Performance
- 4 – Product Handling, Storage and Distribution
- 5 – Flour
- 6 – Power and Automation
- 7 – Flour Milling Management

For each module, students are allocated a tutor to whom they submit work throughout the course year. The tutors are all experienced in the operation and management of flour mills, providing students with expert assistance in their training.

Past exam papers may be found at
www.flourmillingtraining.com/exam-papers



Module 1

Safety, Health and Hygiene



Module 1 Safety, Health and Hygiene

This course emphasises the importance of health and safety to the individual and the organisation; introduces the student to risk assessment and control; considers specific safety hazards to be found in a flour mill, including fire and dust explosions and the means of avoiding them; and covers good hygiene practice and the dangers of infestation.

Module 1 is an essential course for all new flour millers, health and safety personnel and those working towards the UK Flour Millers Advanced Flour Milling Certificate.



Module 1

Safety, Health and Hygiene



Topics covered

- Environmental impact
- Fire and explosion prevention
- Good health and safety
- Hazards and precautions
- Hygiene strategies
- Infestation prevention
- Legal responsibilities
- Pests
- Risk assessment
- Risk control

Examination

The date for examination on this module is Tuesday 3 May 2022 and will accord with the test specification.

Duration: 2 hours, 8 questions

Test specification

Importance of health and safety - 1 question

Risk assessment and control - 2 questions

Hazards and precautions - 4 questions

Hygiene and pest prevention - 1 question



Module 2

Module 2 Wheat and the Screenroom

From the wheat in the field, to cleaned and conditioned grains, ready for milling, this module covers the structure, characteristics and production of the industry's major raw material.

The module provides a comprehensive tutorial of wheat intake, storage and cleaning procedures; the operation of a modern screenroom; the conditioning, drying and mixing of wheats.

Wheat and the Screenroom





Module 2

Wheat and the Screenroom



Topics covered

- Adjustment and maintenance of plant
- Conditioning and drying wheat
- The screenroom
- The wheat plant
- Treatment and disposal of screenings
- Wheat cleaning
- Wheat damping
- Wheat intake
- Wheat production
- Wheat storage
- Wheat varieties

Examination

The date for examination on this module is Wednesday 4 May 2022 and will accord with the test specification below.

Duration: 2 hours, 8 questions

Test specification

The wheat plant, varieties and production - 2 questions

Wheat intake and storage - 2 questions

Wheat cleaning and the screenroom - 2 questions

Wheat damping, conditioning, drying, mixing and measuring - 2 questions



Module 3

Module 3 Mill Processes and Performance

This course addresses the history and practice of the modern flour milling operation; mill machinery and processes; the manufacture of different flours and co-products; the importance and achievement of mill balance; the measurement and improvement of mill performance.

Students will gain an understanding of break, scratch and reduction systems; scalping and grading; purification; and flour dressing, whilst also being able to demonstrate a working knowledge of general milling principles.

**Mill Processes
and
Performance**





Module 3

Mill Processes and Performance



Topics covered

- Flour processing
- Mill balance
- Milling machines
- Mill performance
- Milling history
- Modern flour milling
- Production of bran, wheatfeed and germ
- Wholemeal and brown flours

Examination

The date for examination on this module is Thursday 5 May 2022 and will accord with the test specification.

Duration: 3 hours, 10 questions

Test specification

Milling - historical and modern - 2½ questions

Debranning and peeling; milling machines - 3 questions

Pneumatic conveying; flour processing and redressing; production of bran, wheatfeed, germ, wholemeal and brown flour - 2 questions

Mill balance and performance - 2½ questions



Module 4

Module 4 Product Handling, Storage and Distribution

This course considers the bulk storage of flour and co-products; the practice of flour blending; handling and storage of packed flour; warehousing; vehicles used to transport finished products and their loading and unloading; pests of stored wheat and flour and their control.

This module provides an indispensable guide to the blending, packing and storage of flour and to its despatch in bulk or bags.

**Product
Handling,
Storage and
Distribution**





Module 4

Product Handling, Storage and Distribution



Topics covered

- Bulk storage
- Despatch
- Flour blending
- Infestation control
- Logistics and distribution
- Packed product storage and handling
- Packing

Examination

The date for examination on this module is Monday 9 May 2022 and will accord with the test specification below.

Duration: 2 hours, 8 questions

Test specification

Materials flow; bulk storage; flour blending - 2 questions

Packing and palletising; packed product storage - 3½ questions

Despatch and distribution - 1½ questions

Infestation control - 1 question



Module 5

Module 5 Flour

This course covers the functionality and types of flour commonly milled; the flour treatments the miller may use; the measurement and control of quality; the numerous laboratory tests a miller may perform on wheat and flour to ensure specifications are met; breadmaking and a wide range of other flour uses.

This module provides a comprehensive introduction to the miller's finished products. Upon completion, students should be able to demonstrate a good understanding of flour types and flour quality.

Flour





Module 5

Flour



Topics covered

- Biscuits, cakes and pastry
- Breadmaking
- Flour grades
- Laboratory tests on wheat and flour
- Quality assurance
- Types of flour

Examination

The date for examination on this module is Tuesday 10 May 2022 and will accord with the test specification below.

Duration: 2½ hours, 7 questions

Test specification

Definitions and types of flour; quality assurance - 1½ questions

Laboratory tests on wheat and flour - 3 questions

Breadmaking - 1½ questions

Other flour products - 1 question



Module 6

Module 6 - Power and Automation

This course studies the sources and transmission of power in the mill; pneumatic and mechanical conveying; instrumentation used for measurement in the mill; the programmable logic controller; process control systems in the milling industry.

Students will gain valuable knowledge of the principles governing electric motors and will be able to explain the importance of efficient use of energy within the mill.

**Power and
Automation**





Module 6

Power and Automation



Topics covered

- Evolution and automation
- Measurement
- Pneumatic conveying
- Process control systems
- The programmable logic controller
- Transmission of power
- Use and application of air
- Utilities

Examination

The date for examination on this module is Wednesday 11 May 2022 and will accord with the test specification to be finalised shortly and to be set out in the course workbook.

Duration: 2½ hours, 7 questions

Test specification

Automation; utilities - 1 question

Transmission of power; use of air; pneumatic conveying - 3 questions

Measurement - 1 question

PLCs and process control systems - 2 questions



Module 7

Module 7 Flour Milling Management

This course studies the sources and transmission of power in the mill; pneumatic and mechanical conveying; instrumentation used for measurement in the mill; the programmable logic controller; process control systems in the milling industry.

The course textbook has been updated in 2020 and students will gain valuable knowledge of the principles governing electric motors and will be able to explain the importance of efficient use of energy within the mill.

**Flour Milling
Management**





Module 7

Flour Milling Management



Topics covered

- Commercial management
- Flour and food safety
- Hazard analysis critical control points
- Mill location and design
- Operations management
- People management
- The flour and wheat markets
- The flour milling industry

Examination

The date for examination on this module is Thursday 12 May 2022 and will accord with the test specification below.

Duration: 3 hours, 9 questions

Test specification

The flour milling industry; flour and wheat markets - 1½ questions

Commercial management - 2½ questions

Flour as a product; mill location and design - 2 questions

Operations management; people management - 3 questions

The first step to success

How to enrol for this year's courses

Enrolments through ATMA can be done via our website www.atma.asn.au, the direct link to the Online registration is:

<https://docs.google.com/forms/d/e/1FAIpQLSewa6WMXTfuIEvh4j58oWKSKa1nafgCjt4opacR2mQSWyKIrg/viewform>

Enrolments must be submitted by 08 August 2021; no late enrolments will be accepted.

NB: All students will be given access to our virtual flour mill.

Course Enrolment

Course Fees

Fees, which include access to our virtual mill throughout the course year, have been increased to cover development costs. The basic charge per module (including UK Flour Millers exam registration) is AUD \$980.00.

Procedures for May 2022

Each module will be examined in one written paper lasting for between 2 and 3 hours; the examination timetable is on page 18. There will be no choice of questions.

Students enrolling on our courses in 2021 will be working towards taking the UK Flour Millers written examination in May 2022. The course enrolment fee includes an exam element and all students enrolled in a course are automatically registered by us for the 2022 examination. However, students must also be registered to sit with ATMA. Exam registrations will be called for in January 2022.

Exam registrations are due no later than 08th February 2022.

Examinations

Re-Sits

Students wishing to re-sit an examination but not re-enrol in the course may register for the examination only and will be charged a fee of AUD \$190.00

The deadline for ATMA to receive exam registrations - and requests from course students to change venue or to defer their exam for twelve months – is 08 February 2022.

Certificates and Medals

Qualifications

UK Flour Millers awards a Record of Achievement to students on passing individual modules. In addition UK Flour Millers also awards two certificates:

- The Intermediate Certificate on passing modules 1, 2, 3 and 4.
- The Advanced Certificate on passing all seven modules.

Two medals, Silver and Bronze, are awarded each year to the leading candidates amongst those who have completed their studies and obtained the Advanced Certificate. These award winners may later be given the opportunity to produce a thesis of interest to the industry and win the UK Flour Millers Gold Medal.

The coursework certificate will be awarded to all students who complete, to a satisfactory standard, all 4 lessons within the module lesson books.

The certificate is awarded to recognise the hard work and effort the student has put in throughout the course year, even if they do not pass the examination.

Did You Know ?

Recently successful students have come from far and wide, including: Australia and Malaysia, Bahrain and Burundi, Fiji, St Vincent and many more.

Written by industry professionals

The students' textbooks and lesson workbooks are sent to mentors once the enrolment has been processed, and should arrive by mid-September, provided that the enrolment was received before 08 August 2021. No enrolments will be accepted after this date.

Lessons and Workbooks

Additional copies of the textbooks, for mentor or mill use, may be ordered from ATMA.

Email: training@atma.asn.au

Each textbook costs AUD \$160.00; a set of seven textbooks costs AUD \$950.00 plus delivery.

Copyright

Please note that photocopying of the textbooks would be a breach of UK Flour Millers' copyright. In such an event, UK our Millers will consider taking legal action to obtain compensation.

Millers supporting Millers

Tutors – appointed by ATMA Inc.

Every student is allocated one tutor per module. When the course books are sent out, the student will be informed of their tutor and be supplied with both email and postal address; the student should send all their work to the tutor allocated to that module, either electronically or by post. The tutor will mark and return the scripts. The tutors' depth of knowledge is reflected in the professional and specialist advice they provide for the student.

Tutors

Dedicated Tutor Support

Our programme provides dedicated tutor support for every student, giving professional guidance and specialist advice throughout the course year.

It is an expectation by ATMA that students attend the 4 lessons per module offered via online delivery and that companies support and encourage their attendance.

Millers supporting Millers

Mentors – appointed by the mill

It is strongly recommended that, for each student who enrolls on the correspondence course, the mill appoints a suitable person to be made specifically responsible for assisting the student in their studies. This person is hereafter referred to as the mentor. Where a mill enrolls more than one student, it may wish to allocate one mentor for all students. The mentor should be indicated on the enrolment form in the space provided.

Mentors

The role of the mentor

The mentor should encourage the student to participate fully in the course and the online training sessions.

For each lesson, the mentor should discuss the subject matter with the student; particularly where the lesson covers subjects outside their normal practical experience, the mentor may also arrange for the student to spend time in the relevant area of the mill and/or to speak to suitably qualified personnel on site.

Mentors should address any difficulties the students may be having by discussing the students' marked coursework.

The mentor should ensure that the student is registered to take their examination at an approved centre and that they are aware of the date and venue for the examination.

Learning Hub

UK Flour Millers is continually seeking new ways in which to assist companies deliver to their employees the knowledge and understanding of the milling process that they need. Our first virtual flour mill has now closed but construction of our second mill will be completed in time for the start of the 2021-22 course session. For several years, students have enjoyed tutorials held in the virtual environment and, this year too, all students will be given access to the virtual mill for tutorials and will be encouraged to use the facility throughout the session. The virtual mill and its website, flourmillingtraining.com, are the hub of all our learning resources, including training videos, using animation, e-learning and past exam papers. Apart from providing a further training resource, helping trainees to look inside the milling machines and process, the virtual mill provides a venue for tutorials and other meetings without the need to travel.

The Virtual Mill

Enter the Virtual Mill

Companies will be provided with the software and technical assistance to load the Virtual Mill on one or more computers for the duration of the course session.

DVD

A DVD containing four videos (wheat cleaning; 1st break rollermill and plansifter; purification and reduction; mill performance), lasting around one hour in total, is priced at AUD \$250.00

Timetable

2021

1 June – Enrolment for the 2021-2022 course year begins.

08 August – Deadline for course enrolments.

September – Lesson workbooks and course textbooks delivered to mentors/students.

2022

08 February – Deadline for registration for UK Flour Millers exam re-sits.

March – Student sponsors should contact their exam centres to ensure administrative arrangements are in place.

May – Examinations at approved exam centres.

July – UK Flour Millers issues examination results to students via their mentors.

Pass lists published on www.ukflourmillers.org.

Events and Examinations

2022 Examination Timetable

Module 1 - Tuesday 3 May, 9.30-11.30am

Module 2 - Wednesday 4 May, 9.30-11.30am

Module 3 - Thursday 5 May, 9.30-12.30pm

Module 4 - Monday 9 May, 9.30-11.30am

Module 5 - Tuesday 10 May, 9.30-12.00 noon

Module 6 - Wednesday 11 May, 9.30-12.00 noon

Module 7 - Thursday 12 May 9.30-12.30pm

Covid-19. The global pandemic has caused a multitude of problems to all involved in study and the delivery of our distance learning programme. During this time, we have tried to be as flexible as possible, for example postponing the 2020 examinations and allowing students to defer their exams at no cost. During 2021 and 2022 we very much hope to see things return to normal. We thank all our students and their employers for continuing to support the programme.

Put the dates in your diary NOW!

UK Flour Millers

UK Flour Millers is the new name for nabim, which has run this programme for many years. Although our name has changed, the content and quality of the training we deliver will not suffer. The tutors, examiners, administrators and content will not change any more than is natural in working life. We will continue to provide a variety of training resources that millers need to develop their employees to the benefit of individuals, companies, cereals supply chain and the final consumer. Our distance learning programme is still the best means to gaining key knowledge and understanding of the milling process and industry.

ATMA and UK Flour Millers

Should you require any further information or assistance, please email us at training@atma.asn.au or visit our website, www.atma.asn.au

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