

Introduction to the Integral online resources

The Integral Mathematics Resources website uses the Moodle Virtual Learning Environment (VLE), which is an open-source software package designed for producing Internet-based courses. It is used by schools, colleges and universities worldwide.



The website is managed centrally by MEI. All resources and documents on the website are the property of MEI.

The site has recently been upgraded to Moodle version 2.4, which allows us to introduce some new features.

In this session we will look at the types of resources included on the site, and some of the special features of the site.

- Course structure and resources
 - The Introduction and overview section
 - Topic overview sections
 - Pdf resources
 - Teaching resources, interactive resources and active learning resources
 - Other resources and external links
 - Tests and assessments
- Other features
 - Forums
 - Messaging
 - The markbook
 - The calendar
- Managing and monitoring students
 - User Management
 - Monitoring student activity
 - Notes
 - The Student Plus role
- The Tutor Area

Course structure and resources

Each course corresponds to one AS/A2 unit. A course is split into sections which are grouped by topic area. For example, Edexcel C3 has topics Algebra and functions, Numerical methods, Trigonometry, and Differentiation. Each topic has up to 4 content sections. In addition, there is an 'Introduction and overview' section.

Introduction and overview section

This includes

- A general introduction to the course.
- An auto-linked glossary which covers the whole course. The glossary can be browsed by category or alphabetically. Highlighted words on each section page are linked to a glossary entry, which in their turn may have links to other glossary terms.
- Textbook information and links

Main topic sections

These include:

- In some cases, a short paragraph about applications of the topic or related information, often including links.
- Links to the content sections within the topic
- A topic assessment, which consists of questions in a pdf file which test an entire topic (e.g. Differentiation). These may include exam-style questions. Worked solutions are available to teachers only.

Content sections

Resources which may be included in each content section are:

pdf resources

- Section overview (for AQA, EdExcel, OCR and WJEC C1-4) – includes the specification content for the section, key points and formulae, and a description of the additional resources available
- Study plan (for all other AS/A2 units) – gives some background and introduction to the mathematics covered in the section, and details what parts of the textbook are covered, together with suggestions for using the Notes and Examples and other resources. It also suggests questions to attempt from the textbook exercises.
- Notes and Examples – supplements the textbook by providing additional examples and sometimes alternative methods and extension material.
- Crucial points – lists a number of points that often need to be emphasised to students. Often these are based on comments from Examiner's reports.
- Additional exercise – extra questions that can be used to supplement the textbook or as revision.
- Solutions to additional exercise – worked solutions, in a handwriting font.

Teaching resources

- This is a page resource which is hidden from students and contains teaching ideas and activities intended for use with classes. Some include links to student sheets, others give suggestions for questions and discussion.

Interactive resources

These may include:

- Interactive questions – short, automatically generated questions on a particular technique. Students enter their answer and it is immediately marked. A worked solution can be seen.
- Flash resources – some of these are automatically generated worked examples on particular techniques, others give the opportunity to explore a particular idea using diagrams or graphs.
- Geogebra resources – these usually give students the opportunity to explore a particular idea using diagrams or graphs.
- Autograph resources – again these give the opportunity to use graphs to explore a particular idea.
- Interactive spreadsheets – these give the opportunity to explore a topic.
- Practice questions which allow students to practice randomised questions on a particular topic. These allow students to modify wrong answers, so they are a learning tool rather than an assessment tool.

Active learning resources

- These are activities which are intended for use with a class, perhaps working in small groups (although they can be done individually as well). Most of these are Tarsia-style jigsaw or domino activities, or matching activities.

Other resources

- These may include PowerPoints, which show worked examples for some of the more complicated techniques. There are a lot of these in Decision Maths modules, but also a few in other modules.

Links to external websites

- These open in a separate window. They include Mathcentre video tutorials, and nrnrich extension activities.

Section test

- In most courses, this is a multiple-choice test of 10 questions covering the work in each section. These will be automatically marked and marks appear in the markbook. There are 3 points for a correct answer and 1 for “I don’t know” (this is to discourage guessing!). Students who obtain 23 or more out of 30 are given a link to the worked solutions.
- In C1 and C2 for each specification, we are trialling a new format for the section test. Some questions are multiple choice, others are numerical or matching. Students may check each answer and have the opportunity to correct their answer for a reduced mark.
- Worked solutions to the test are “hidden” – they are visible to tutors but not to students until they have ‘passed’ the test.
- Students are allowed two attempts at each test. It is expected that students should be able to achieve the required score on the second attempt, as they are given feedback after the first attempt about which questions they have answered correctly and incorrectly. If a student has not achieved the required score after two tests, the requirement to speak to their tutor means that the tutor has an opportunity to investigate the student’s difficulties. Tutors can delete test attempts if they want the student to have another attempt.
- Tutors may view a complete breakdown of the test results for their group, including the group mean total score and the group mean score for each question, and also the overall means (for all users in all establishments. You can also look at the number of students who have chosen each response, so that you can identify any common errors.

Other features

Forums

Each course contains two forums: the News forum and a general forum.

The general forum

The general forum can be used in many ways.

- Teachers can start a discussion on a particular topic, perhaps in preparation for a lesson, or afterwards as homework.
- Students can ask for help on a topic, or a particular question. Students can be encouraged to try to answer questions posted by other students, rather than the teacher doing all the answering!

- By default, students and tutors are 'subscribed' to all forums, which means that they receive an email every time there is a new post. You can unsubscribe from forums (except News forums) or you can choose to receive posts in just one daily email.

News forum

The News forum is intended for giving information, reminders etc to students. It is different from the general forum in two ways:

- Only teachers can post to the News forum. This means that essential information can be posted without the original post being cluttered up with replies.
- Students cannot unsubscribe from the News forum, so they will receive an email with the information posted (unless they do not have an enabled email address on their profile)
- Students and tutors will only see discussions relating to their own group. Tutors can edit or delete posts, split discussions, etc.

Messaging

- Users can message any of the people on their groups list.
- Tutors can bulk message all or some members of their group, e.g. to remind everyone about an assignment that is due, or to inform a subset of students that they have missed a deadline.
- If a message arrives when you are offline, it will be emailed to you (assuming that you have a valid email address enabled in your profile), unless you have changed your Settings to stop this happening.

Markbook

- The markbook (accessed under My tests > Results) lists results of the section tests for each student.

		MEI Core 1								
		Section tests								
Surname	First name	Test A1	Test A2	Test A3	Test C1	Test C2	Test P1	Test P2	Test P3	
	Hermione Granger	100.00	.	.	.	.	.	.	.	.
	Draco Malfoy	76.67	.	.	.	.	.	.	.	.
	Harry Potter	.	.	.	25.00	.	.	.	.	.
	Ron Weasley	.	.	.	.	.	.	.	.	.
Group average		88.33	-	-	25.00	-	-	-	-	-
Overall average		88.33	-	-	25.00	-	-	-	-	-

- There are also spaces for tutors to enter marks and comments for topic assessments or additional assignments (perhaps past papers or mock exams). Click the 'Turn editing on' button to enter marks.
- When students enter the markbook, they see only their own results.

Calendar

- Tutors can add items to the calendar at group level, e.g. assignment deadlines, exam dates.
- Students may create their own user events for the calendar, which will be visible only to themselves.
- The Integral Resources Team can also add events at course level, such as examination dates.

Managing and monitoring students

User Management

- This is a separate part of the site and is used for creating and managing student accounts. Often just one teacher in a school or college will deal with this.
- After accounts have been created, students and tutors can be enrolled into any available course by creating a group within a course and placing users into it.
- Student accounts can be created and enrolled into courses in bulk by uploading data from a spreadsheet.

Monitoring student activity

- Tutors can see what resources a particular student has viewed, or look at the detailed log of their actions.

The Tutor Area

The Tutor Area has two main functions.

Firstly, it is a repository for resources and information for teachers. Its contents currently include:

- Information about using the website.
- Editable versions of the Geogebra files on the website.
- Coursework information relating to the MEI specification.
- GCSE extension materials.

Secondly, the Tutor Area contains discussion forums.

- The **Help and Feedback forum** is for tutors to tell us what they think about the site and let us know about any problems.
- We use the **News forum** to tell tutors about any changes or new features on the site.
- The **Tutor forum** is for discussion between teachers. Tutors use it to ask for help or information, or just to discuss any aspect of teaching