BIC3038-A module descriptor	
Module Title	Further Mathematics
Credit Level	10 credits (RQF Level 3)
Session	2026/7 academic year
BDA occurrence	Semester 1 available at University of Bradford
BDB occurrence	Semester 1 available at University of Bradford
BDA occurrence	Semester 3 available at University of Bradford
BDB occurrence	Semester 3 available at University of Bradford

Transparency notice

This specification for module code BIC3038-A has been generated automatically in advance of the academic year 2026/7. Every effort has been made to ensure that the information is accurate at the time of publication, but changes permitted by our Student Contract Terms and Conditions could be made in the interval between publishing and commencement of teaching; where changes impact the terms and conditions of an applicant's or student's offer, these are communicated to them as soon as possible.

BIC3038-A module aims

This module extends your knowledge of algebra and geometry, and develops your understanding of differential and integral calculus and basic analytical techniques. Students on the engineering pathway will learn how to apply calculus to solve to specific engineering problems.

BIC3038-A module learning outcomes

No.	Students completing the module will be able to:
01	Apply standard algebraic techniques, geometry and trigonometry when solving problems.
02	Demonstrate how different mathematical techniques are needed to solve problems in engineering contexts by using appropriate knowledge, tools, and applications.
03	Apply the knowledge and skills acquired to more complex problem-solving in different contexts

BIC3038-A module outline syllabus

Further algebraic techniques, further trigonometry and further coordinate geometry

Properties of exponential and logarithmic functions.

Introduction to matrices including linear transformations.

Numerical methods: non-calculus methods for finding the roots of equations.

Product, quotient, and function of function rules.

Higher-order derivatives. Use of tables.

Integration: Integration using simple substitution.

First and second-order differential equations. Numerical methods for the evaluation of definite integrals.

For more information, visit the VLE (**Canvas**) page, go to our **Reading Lists webpage for this module** or search **https://bradford.rl.talis.com** for this module.

BIC3038-A module notional learning hours

- 60 hours Directed Study
- 40 hours Lectures

The overall expected hours may include contact time, scheduled learning activity, directed and independent study and any minimum expectations for placement learning. Most learning at the University of Bradford has some online content and sessions which are delivered fully by virtual means are labelled as "online".

BIC3038-A module learning, teaching and assessment

Groups are small and classes are student-centred, task-based and interactive.

The classroom approach is explicitly designed to help international students acquire new knowledge and skills, to build their confidence and enable them to become more independent learners. By doing this consistently and across all modules, the programme provides them with a strong foundation for further study in their chosen subject area.

The approach is inclusive and recognises that students come from different backgrounds with a range of previous learning experiences and associated expectations, beliefs and behaviours. Teaching and learning methods are clearly explained so students understand why (where appropriate) they need to engage in new ways of learning and why those they have used or relied on up to this point may be less suited to supporting their ongoing development and their chances of success in UK Higher Education.

Formative work is an integral part of the approach. In class, students are set tasks that require them to apply their knowledge and skills, to think critically and to solve problems. The level of challenge is gradually increased as the students grow in confidence and Tutors help them to see that experimentation, trial and error are central to the learning process, providing constructive feedback on both what has been achieved and how.

Students are also expected to engage in independent study, to reflect on their own performance and to discuss this with their module tutor or personal academic tutor, who will provide support and advice and, when necessary, draw the attention of the Academic Management Team to a struggling student using the Students of concern process.

Summative assessment activities are designed to test relevant knowledge and understanding and tasks are chosen to reflect what may be required when students progress on to their chosen undergraduate degree.

BIC3038-A mode of assessment

Type	Mode	Assessment description	Weight
Summative	Examination - Closed Book	Unseen exam based on problems to be solved using appropriate mathematical methods and techniques. (LO1, LO2, LO3)	100%

All module specification content is © 2026/7 The University of Bradford