Mathematics Support – in the UK and beyond
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Overview

- What is maths support?
- Why is maths support needed?
- How is maths support provided?
- Developments in maths support
- Resources
What is maths support?

“...a facility offered to students (not necessarily of mathematics) which is in addition to their regular programme of teaching, lectures, tutorials, seminars, problems classes, personal tutorials, etc.” (Lawson, Croft & Halpin, 2003)
Why is maths support needed?

- Decline in mathematical skills of students with same entry qualification
- Greater diversity in the undergraduate cohort
- Changes in school mathematics curriculum
Why is maths support needed?

The chart illustrates the performance in various maths topics for two groups, N91 and B99. The topics include Arith, B.Alg, Lines, Tris, F.Alg, Trig, and Calc. The graph shows a comparison of their performance, with N91 typically performing slightly better in Arith and B.Alg, but B99 showing a stronger performance in Tris and F.Alg. The overall trend indicates a need for support in most areas, with specific areas of potential weakness identified for targeted intervention.
Many students require some additional academic support, especially in the mathematical skills required in science, mathematics, engineering and technology.

National Audit Office report 2007
24 July 2012

The weight of evidence that we have received led us to conclude that post-16 maths and the interface between school and HE study warranted a closer look.

The gap between the mathematical skills of students when they enter HE and those needed for STEM degrees is a problem which has become acute.
How is maths support provided?

Several models – most are variants of the “drop-in” centre – one to one work with students fundamental to this model.
Maths support at Coventry University

1991 Funding from BP to set up BP Maths Centre
2005 Designated by HEFCE as Centre for Excellence in Teaching and Learning
2009 Commissioned by National HE STEM Programme to establish national network
Original Principles

• Early identification of problems
• On-going support
Services Provided

- Diagnostic testing
- Drop-in support
- Outreach desks
- Stats Advisory Service
More Services

- Statistics workshops for PGR and staff
- Numerical reasoning workshops
- Focused workshops
- Specialist dyslexia / dyscalculia support
Student Involvement

- Receptionists
- Proctors
- Ambassadors
- Publicity design
- Summer interns
# What students think

<table>
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<tr>
<th>Service</th>
<th>2011/12</th>
<th>2010/11</th>
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<td>Main drop-in</td>
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<td>6422</td>
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<td>130</td>
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<tr>
<td>Stats appointment</td>
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Student opinion

Over my three years at Coventry University I spent a lot of time in the Maths Support Centre and I do believe that without it I would not have attained the qualification I did.

The Centre’s service is nothing short of excellent. The friendly, welcoming staff are always available to support your studies where no query, question or problem is ever too much.
Maths support at CU
sigma nationally

sigma was originally a collaboration between Coventry and Loughborough Universities

sigma now has a national role
Developments in maths support

- Over last 3 years **sigma** has:
  - helped established centres in 22 universities
  - created a network of six regional hubs covering England and Wales
  - delivered training for maths support tutors
  - awarded annual prizes
  - organised an annual conference (CETL-MSOR)
  - developed and shared maths support resources
More Developments

- Supported the creation of maths support networks in Scotland and Ireland
- Helped establish 1st maths support centres in Switzerland, Sweden and Oman
- Diversified student “customer” base beyond engineering and physical sciences to social sciences, business and health
Resources

- **mathcentre** website [www.mathcentre.ac.uk](http://www.mathcentre.ac.uk)
  contains thousands of resources for students and staff

- **sigma** publications provide guidance for staff delivering mathematics support
sigma publications

- more than the sum of the parts
- tutoring in a mathematics support centre
- gathering student feedback on maths and stats support
- and the winner is … mathematics support
- how to set up a maths and stats support provision
- evaluation of mathematics support centres
- mathematics learning support in HE: the extent of provision

THE AWARDS 2011
AWARD WINNER
Outstanding Support for Students
More information

- The maths support community is highly collaborative – please ask for help
- Please contact:
  - Duncan Lawson
  - d.lawson@coventry.ac.uk