

Bournemouth and Poole College

STEM Manifesto

*A commitment to developing Science, Technology,
Engineering and Mathematics throughout the college*



STEM Pledges

At Bournemouth and Poole College, our call to action over the next 3-5 years is manifested in the following pledges which support our core commitment to foster a culture of innovation, entrepreneurship and enterprise in STEM.

We will:

1. Ensure that we raise the level of numeracy in the community
2. Commit to strengthening the STEM pipeline of learners from schools and into higher education
3. Commit to building a strong STEM capability for the region
4. Provide the capacity and capability in STEM to enable employers to meet business objectives and the region's economic priorities
5. Ensure that STEM is given prominence and status in the college and the community it serves
6. Commit to build understanding, knowledge and expertise to support the sustainability drive in the region

“ We want to see more training tailored to the needs of our company ”
Sunseeker



Introduction

This STEM Manifesto has been created in partnership with the New Engineering Foundation who assisted with the development of our new STEM strategy.

This process has facilitated the college as a whole to produce a STEM strategy¹ and action plan, moving us from the 'here and now' to an integrated and coherent vision that is outward-focused and drives economic growth and prosperity. Throughout this process, our aims have been to ensure our STEM provision:

- improves in quality and drives excellence across the college
- produces fit-for-purpose learners
- generates productive relations with business
- supports the current and future skills needs of the local economy

This work has been carried out with involvement from staff across the college, local businesses, schools and universities and focuses on integrating the STEM curriculum. I would like to thank all colleagues who have played a role in this process.

The STEM Manifesto gives students, staff and stakeholders a summary of the vision we've created and makes specific pledges which we will implement over the coming months and years. If, like me, you want to ensure Bournemouth and Poole College plays a key role in meeting the needs of scientific, technological and manufacturing employers in our region and beyond, I urge you to read it as it will inform our major planning decisions over the coming years.

Preparing students for a successful and sustainable career is central to our work as a college. Equally we have a responsibility to support the economy across the region with staff that possess the right knowledge and transferable skills to meet labour market needs. It is these duties that the STEM Manifesto and pledges are designed to address.

A handwritten signature in black ink that reads "Lawrence Vincent". The signature is written in a cursive, flowing style.

Lawrence Vincent
Bournemouth and Poole College Principal

¹ The full STEM strategy and action plan is available on request

Driving all of our pledges will be the creation of a college-wide STEM Centre

Resources and Investment

Our STEM strategy revolves around the creation of a STEM Centre, concentrating on Sustainability and underpinned by Mathematics, IT, Engineering and Biosciences. Innovation, Enterprise and Employability will be embedded within the teaching and learning of these key themes and disciplines. £1.2m will be invested in the new STEM Centre. In addition, the STEM Strategy and its resources will be prioritised in college capital budgets over the next three years. There will be ongoing investment in STEM-related staff recruitment and development.

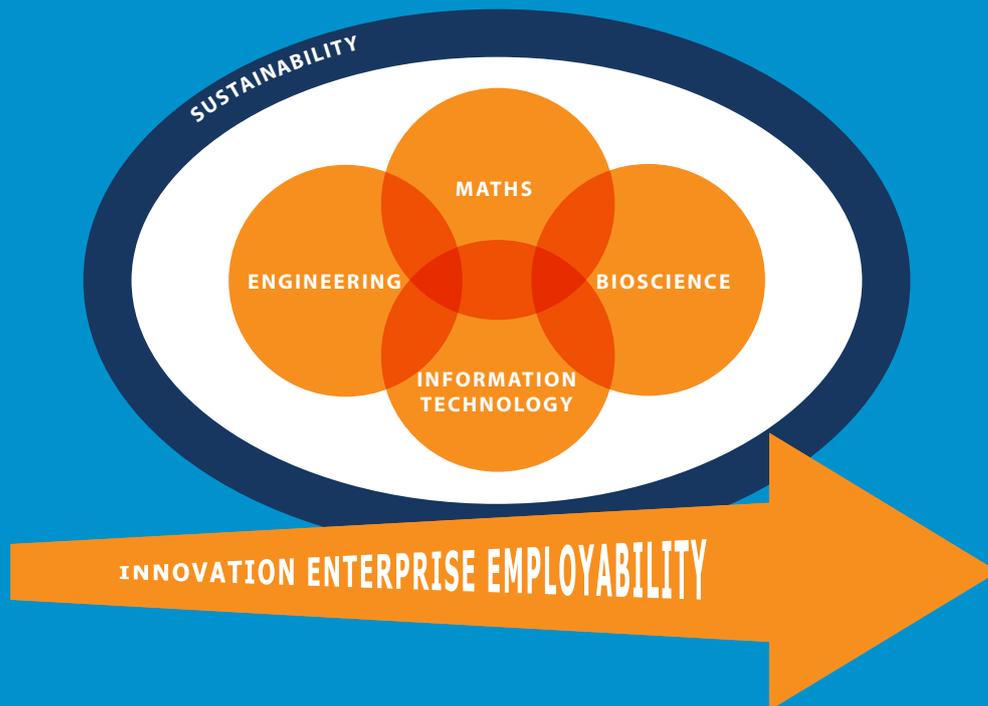


Figure 1: The STEM Centre

“ There are significant skills gaps in practical and theoretical engineering skills. If Bournemouth & Poole College addressed this then it would really help the business ”

Cobham PLC





“ *There is a big deficit in Maths in the job market; if Bournemouth & Poole College really pushed Maths and helped learners develop these skills then it would benefit the economy and the KDC group* ”
KDC Group

The STEM Centre will focus on:

1. Sustainability

Sustainability and Environmental Technologies will be the major new curriculum development in the STEM Centre. We will develop specialist courses for both commercial and domestic markets in:

- Photovoltaics
- Solar thermals
- Heat pumps
- Water harvesting
- Smart metering

We will become a ‘Sustainability Centre of Excellence’ for the South West and, in so doing, help to boost and modernise the local economy.

2. Mathematics

We will create a college-wide capability in Applied Mathematics that strengthens our teaching and learning of mathematics by September 2013. We will ensure that the learning of mathematics is contextualised and supported by real and relevant industrial and business applications.

3. Bio-Sciences

We will extend our range of Biological Sciences courses, focusing on bio-medical science and bio-tech pharmaceuticals. New laboratories will be built in the STEM Centre to create a modern, vibrant and contemporary Applied Science environment.

4. Engineering

Contemporary Engineering provision will be developed. This will include Control Systems as a specialisation in Engineering and Manufacturing. These developments will contribute to the UK’s target to more than double the number of Engineering graduates and technicians by 2017.

5. IT

The college-wide IT provision will be enhanced and the focus will be on:

- Web development and programming
- Network and systems support
- Computer generated imagery
- Visualisation and social media
- Computer forensics

6. Innovation, Enterprise and Employability

The entire STEM Strategy will be supported by a new college-wide approach to Innovation, Enterprise and Employability. These areas will become high profile themes for The College through physical spaces such as ‘Employability Labs’ and ‘Enterprise Zones’.