

# STEM Manifesto







# Future Focused

Edinburgh College will develop its STEM provision with a focus on five strategic curriculum clusters:

## Automation & Intelligent Systems

**Future trends for the region indicate manufacturing output will increase.**

The regional picture is combined with a trend across the wider UK manufacturing sector to diversify into high-value manufacture including composite materials and industrial biotechnology. This will require new resource efficiency methods, control systems, process technologies and materials which will create demand for highly skilled and adaptable learners.



## Health, Wellbeing & Life Sciences

**Employment in the healthcare sector comprises 15.1% of local labour demand in Edinburgh where there is predicted to be large growth in employment.** This cluster represents the inter-connectivity of health and wellbeing with a focus on biological, analytical and sport sciences as well as clinical areas of physiotherapy, sports therapy, nutrition and dietetics. Employer demand towards 2020 suggests the need for high level skills in clinical trials, advanced genetic research techniques, bioinformatics, bi-processing, practical laboratory skills and manufacturing practice as well as analytical chemistry technician skills.

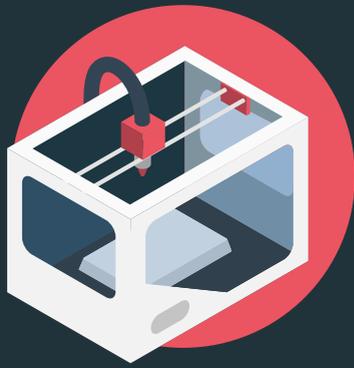


## Design & Digital Technologies

Between now and 2020 the number of digital tech professionals in Scotland is forecast to grow by **1.91% per year to 84,000**. The Scottish Tech sector is healthy and vibrant. It employs 73,000 people, primarily in high value jobs and makes a direct contribution of £3billion per year to the Scottish economy.

Edinburgh is now emerging as the largest technology hub outside London. It has seen an acceleration in the number of digital technology companies basing themselves in the capital.

Arts and other services in design technologies between now and 2022 will see employment demand increase.



## Sustainable Energy & Construction

The renewable energy sector continues to expand in Scotland, with increased demand for energy predicted to grow by more than 50% by 2035.

The power generation sector is still developing and will require a cross-curricular skillset that spans construction, engineering, IT, environmental and design disciplines.

Employment in construction is projected to grow at a rate of 13.1% in Edinburgh and the Lothians, as outlined in the economic assessment forecast to 2022. Forecast drivers of growth within the construction sector are centred on energy and the environment and occupations in the low-carbon/green economy and renewable technologies.



## Computing & Business Analytics

Projected growth in the digital technology sector in Edinburgh Fife and the Lothians to 2022 is **36%**.

The Computing & Business Analytics cluster will focus on the applications of cloud computing, information and communication technologies and their applications including cyber and smart systems and networks, as well as big data and security. Students on programmes within this cluster can gain the skills needed to undertake programming projects, be exposed to the latest trends in software development, design and testing, and be familiar with interface, tools and software development kit (SDK) methodologies and configurations.



For the future you want

## Excellence and innovation past and present

Edinburgh College is one of the largest regional further education colleges in Scotland with around 20,000 students from more than 100 countries. We have developed strong partnerships with employers and universities to ensure our students have the best opportunities for employment or further study.

With its legacy roots firmly established in construction, engineering and science, the college is committed to excellence and innovation and is well placed to deliver on our STEM pledges. The expansive and progressive curriculum has been designed to meet the needs of industry and provides our students with enhanced skills and abilities to ensure they are prepared to meet the demands of the modern workplace.

The college will utilise its employer relationships and industry connections to maintain the relevance of the curriculum and its alignment to current and future skills requirements.

Scotland's colleges make a significant contribution to the Scottish economy, delivering £6.30 for each £1 invested and an annual rate of return of 16.4%\*. The economic impact of Scotland's colleges to the business community in Scotland is £14.9 billion each year.

\*Source: Economic Modelling Specialists International (EMSI) September 2015



 @EdinburghCollege

 @EdinburghColl

 STEM@edinburghcollege.ac.uk

