This STEM manifesto has been created in partnership with NEF (The Innovation Institute) who assisted with the development of our STEM strategy.

This process has enabled the College to produce a STEM strategy and action plan, adopting an integrated and coherent vision that is outward focused and drives economic growth and prosperity. Throughout this process, our aims have been to ensure STEM provision:

- is of the highest quality and drives excellence across the College
- produces skilled and employable students
- generates productive relations with business
- supports the current and future skills needs of the region's economy

This work will involve working in partnership with college staff and students, local businesses, schools and universities and focuses on integrating the STEM curriculum.

The STEM manifesto will ensure the College plays a key role in meeting the needs of scientific, technological and manufacturing employers in our region and beyond. It also gives students,staff and stakeholders a summary of our STEM vision and makes specific pledges which we will implement over the coming months and 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.

Our focus over the next 3-5 years is manifested in the following pledges which support our commitment to foster a culture of entrepreneurship, innovation and enterprise in STEM.

We will:

- commit to building a strong STEM capability for the region
- ensure that STEM is given prominence and status across the College and the community
- promote STEM careers through close collaboration with schools, partner universities, employers and other stakeholders
- provide the capacity and capability in STEM to enable employers to meet business objectives and the region's economic priorities
- contribute to raising levels of numeracy and literacy in the local community

The College's STEM strategy, developed in partnership with NEF (The Innovation Institute), identifies the College's competitive advantages as:

- Engineering & Advanced Manufacture
- Digital Technology
- Sustainable Construction & Building Services
- Applied Science, Health & Well-being
- Agri-Tech, Food & Environmental Technologies

These specialisms are underpinned by transferable and practical skills such as:

- Literacy
- Numeracy
- Critical Thinking
- Problem Solving Research
- Project Management
- Analytical
- Digital & I.T.
- Communication
- Teamwork
- Innovation
- Enterprise

This will ensure that individuals are fully prepared for employment in an increasingly technology driven workplace.

A commitment to develop Science, Technology, Engineering and Mathematics throughout the College.

Herefordshire& LudlowCollege

STEM Pathways

- **Engineering & Advanced Manufacturing**

The College will position itself as a centre of excellence for engineering and advanced manufacturing by investing in technologies such as CAD/CAM and control systems and expanding its offer to include higher education provision. These developments will contribute to the local skills plan to invest in and attract high value-added engineering and manufacturing industries to the area.

- **Digital Technology**

The College will support the growth of the local digital economy by developing and providing training for companies and individuals in technologies such as; cyber-security, website development and programming, e-commerce, cloud and mobile technologies, network and systems support and digital imagery and processing.

- **Applied Science, Health & Well-being**

The College will work in partnership with local employers to develop a higher level programme in beauty laser treatment, accessing the latest industry standard technologies and facilities. In collaboration with the University of Worcester, the College will also develop a Foundation Degree in Mental Health to provide a route into the profession for students wishing to work within the local health and social care sectors to meet the future needs of the region's demographic.

- **Agri-Tech, Food & Environmental Technologies**

The College will work in partnership with such bodies as the National College, the NFU and the anaerobic digestion trust in Ludlow, to position itself as a centre of innovation and facilitator of professional development activities and events for the agricultural industry. The College will build on its unique organic farm status to promote organic farm technologies and techniques to the wider industry and develop and deliver bespoke training courses as well as a programme of industry talks and CPD events.

- **Sustainable Construction & Building Services**

The College will work closely with local industry to support their future skills and training needs through the establishment of a gas assessment centre focusing on training in domestic appliance installation, maintenance and testing. Training programmes will be developed to support green energy and sustainable construction methods and technologies.

- **Mathematics & Science**

The College will promote and embed mathematical and scientific skills across the curriculum by drawing on the expertise of staff and industry. The College will seek to 'STEM enhance' those aspects of the curriculum that have less core STEM through cross-curricular links and projects.