

Universities Mean Business

An Open Door For Business Growth



Cranfield
UNIVERSITY



South East Midlands Universities and Business Schools

Collectively, the South East Midlands Universities (SEMU) generate a combined annual income exceeding £928 million (2012/13) through their higher education, innovation and research activities making them an economically active and vital part of our locality.

Many of our universities have impressive capital investment projects underway, including the £330m Waterside Campus for the University of Northampton, the £16.5m University Campus Milton Keynes (UCMK), the £16m University Campus Aylesbury Vale (UCAV), the £35m Aerospace Integration Research Centre at Cranfield University and the creation by the University of Buckingham of the UK's first independent Medical School.

Collectively SEMU, the South East Midlands Universities group, are a core component of the South East Midlands Local Enterprise Partnership (SEMLEP) with high level representation on the SEMLEP Board and within the SEMLEP Skills Forum. SEMU members have developed strong collaborative working relationships delivering significant outcomes including encouraging growth through enterprise and entrepreneurship, a joint Master's programme, collective funding bids, the world's first undergraduate venture creation programme, plus numerous international linkages.

The particular specialisms and strengths of each university actively contributes to SEMLEP's prioritised growth and investment sectors including through support for the area's unique Velocity business growth programme.

www.VelocityBusinessSupport.com
www.semlep.com/semu





Universities and their associated business schools are key to the UK's economic wellbeing and have the exciting potential to support businesses in becoming more competitive and innovative.

As you read through this introductory prospectus, we are confident that you will be impressed by the breadth and scale of the ground breaking intellectual activities that are widespread across the SEMLEP area. If you are not already engaged with one or more of our distinctive universities, your business may be missing the opportunity to unlock its true potential.



South East Midlands
Local Enterprise Partnership



A The Eight Great Technologies

B Commercial Applications Showcase

C South East Midlands Universities
& Business School Directory



This prospectus provides local **dynamic businesses, and those considering investing in the **South East Midlands**, an insight into the massive potential **benefits** of actively engaging with one or more of our excellent **South East Midlands Universities** and their associated **business schools**.**

Many of our innovative local enterprises have already discovered that the South East Midlands hosts a phenomenal array of world-leading education, learning and research assets that can, and do make a significant impact in improving their product, service development and delivery. With six high performing business schools and seven local university campuses, these are real open gateways for UK based businesses who want to innovate to maximise their potential and also for overseas investors who are seeking the optimum location for a new UK business base.



Facilities and Services

The universities' superb facilities include: special analytical equipment, advanced microscopes, 3D printing, robotic machines and access to bench scale process equipment. In addition, resources include: libraries, business parks and incubators, simulation suites with industry standard facilities, conference and meeting rooms. There are numerous ways that the universities can assist your business with product, service and staff development. Within this prospectus you will find showcased examples of highly successful academic and business partnerships to stimulate your thoughts on how your business might also get involved and benefit from:

- Improving processes and efficiencies
- Business strategy development
- Intellectual property guidance
- Executive and professional development
- Access to specialist funding
- Internships and student placements
- Student and graduate projects
- Market research
- Workforce skills
- Commercial consultancy
- Knowledge transfer partnerships
- Innovation vouchers
- Incubation premises
- Global contacts

However this prospectus can only provide the briefest glimpse into the potential that our universities have to offer your business to become more competitive and innovative, but the projects that are featured here should inspire you to make contact with one or more of the institutions to find out more and discover just how easy it is to start reaping benefits for your own business.

The Eight Great Technologies

The South East Midlands has a fantastic opportunity to fully engage with the “Eight Great Technologies” that the UK government has identified as having the greatest potential to propel the country to future growth by stimulating and expediting the transfer of innovative projects from the laboratory into the marketplace and from scientific discoveries to commercial applications.

Our advanced technology businesses and our pioneering institutions already have particular strengths in Big Data, Cyber-Security, Satellites, Robotics, Synthetic Biology and Advanced Materials as featured in the following highlighted examples, but there remains considerable scope for new alliances and projects in all of the eight fields.

Big Data & Energy-efficient Computing

Mechanisms to control, store, retrieve and analyse “Big Data” or complex datasets are expected to revolutionise how commerce operates in the 21st century as Big Data promises to provide unprecedented insight and improved decision-making, that can be translated into enhancing all business functioning.

Our universities are active in developing web semantics, big data, privacy and security, ubiquitous computing through individual and collaborative programmes that involve The Open University’s Knowledge Media Institute and Computing Department as well as the University Campus Milton Keynes and University Campus Aylesbury Vale. The associated Smart Cities Research Institute links Big Data with Smart Cities, urban economic development and governance.

The Centre for Research in Distributed Technologies (CREDIT) at the University of Bedfordshire covers wide areas of research including computer and information security as well as the mining and optimisation of data.

The era of Big Data also highlights the importance of cyber security. An example is the Cyber-Security Technology Centre at the University Campus Aylesbury Vale (UCAV) that delivers cyber-security and cyber-fraud services with a high level of direct employer engagement where Aylesbury already has major specialist business including Intel Security. The UCAV technology centre and its security education provision are delivered by Buckinghamshire New University and its partners. Through its company Buckinghamshire Education Skills and Training (BEST), jointly owned with Aylesbury College, they specialise in cyber-assurance, cloud, data centre transformation and end-user computing.



Advanced Materials & Nanotechnology

The application of Advanced Materials including composites and specialist alloys are regular spin out benefits from the globally acknowledged expertise and investment of leading South East Midlands companies in the Automotive, Motorsport and Aerospace sectors.

A University of Bedfordshire project "Laser Nanoscale Manufacturing (LaserNaMi)" focuses on the area of researching and developing new maskless laser nanoscale manufacturing technologies for low cost and high efficiency manufacturing of nano structured surfaces and components including periodic structures (nano gratings, anti-counterfeiting security markers, nanoimprint templates, self-cleaning, antireflection surface nano-structures, and nano sensors) and other arbitrary features for both 2D and 3D applications.

The Materials Engineering Group at The Open University has established a global reputation for the quality of its work and leadership in the field of residual stress measurement. Its leading role in the development of the ENGIN-X neutron scattering instrument at ISIS, enabling the efficient measurement of large engineering structures, has been followed by pioneering work on developing the Contour Method, a relatively new and powerful method for mapping two-dimensional distributions of residual stress in engineering components. Through Stressmap, the group offers consultancy, contract research and research collaborations in this area and other residual stress measurement techniques such as slitting, centre-hole drilling, laboratory X-ray diffraction, as well as access to central facilities for synchrotron X-ray diffraction and neutron scattering. In addition, it provides mechanical testing using digital image correlation (DIC) including high temperature creep tests as well as metallography, microscopy and hardness mapping.

The Open University and AREVA have been using ENGIN-X to map residual stress in mock-ups of welded nuclear components for the purpose of validating models simulating their new welding procedures for joining materials in the new Hinkley Point European Pressurised Reactor (EPR) Power Station to meet the exacting levels of qualification and validation required by the nuclear industry and regulators.

High build rate metal additive manufacture is a technology that Cranfield University has been developing for the production of large metallic structural components for aircraft and other applications. This technology is called WAAM, which stands for Wire + Arc Additive Manufacture. It is radically different to other metallic additive manufacture processes by providing substantial cost and lead time savings compared to existing manufacturing processes. The main driver for this has been the manufacture of large titanium or aluminium parts for companies such as Airbus, Lockheed Martin, BAE Systems and Bombardier. Currently such components are machined from solid blocks of metal meaning more than 90% is machined away as waste. By using WAAM, companies expect to save both time and money as well produce high value components in a more sustainable manner.

Satellites & Commercial Applications of Space

The Open University's Research Centre for Physical and Environmental Sciences (CEPSAR) has been involved with the pioneering ESA Rosetta mission comet probing spacecraft and lander project for over 20 years and has developed significant transferrable knowledge and expertise in designing and miniaturising products and instruments for hostile environments; rugged, low-energy, light-weight, autonomous equipment that does not require maintenance and is protected from the effects of radiation. Philae probe landed on Comet 67P/Churyumov-Gerasimenko on 12th November 2014, following an epic 6.4 billion kilometre journey through the solar system lasting ten years. This technology can be readily transferred to other sectors including healthcare and the environment.

UCMK have a Nuffield project to receive signals from the AMSAT-UK satellite which has great potential in the area of 'Internet of Things' and in satellite applications, and has involved working in collaboration with the National Radio Centre.

Cranfield University has world-class temperature-controlled precision engineering laboratories where over 400 space mirror surfaces have been diamond machined to extreme accuracy, for the \$9 billion NASA James Webb Space Telescope.

Cranfield University is one of only two organisations worldwide to have provided mirror segments for the European Extremely Large Telescope (E-ELT), the largest optical telescope in the world. Cranfield has the only facility in the UK with the capability to do so. The telescope which has mirrors ground to within a 20th of the size of a human hair will allow astronomers to address many of the most pressing unsolved questions about our Universe, by enabling detailed studies of planets around other stars, the first galaxies in the Universe, super-massive black holes, and the nature of the Universe's dark sector.

Life Sciences, Genomics & Synthetic Biology

The University of Northampton has an active biosciences-based research group, which includes geneticists, molecular biologists, microbiologists and physiologists with research laboratories. The group has links with local, national and international industry, universities and health communities and key expertise in Microbiology, Genomics and the ethical, legal and social impact of new genetic technologies.

The University of Bedfordshire has developed biosensor technologies for improved environmental monitoring, particularly with respect to ecological protection, health and wellbeing. The concept of using biological whole cells for environmental monitoring was developed with sponsorship from (amongst others) Astra Zeneca, ICI, Severn Trent Water and Shell with support from the Environment Agency due to their interest in toxicity assessment. This work highlighted the challenges in cryopreserving immobilised biological whole cells and resulted in the formation of a world-class Cryobiology Research Group.

The Open University is investigating autism and Alzheimer's disease. Its current research covers the areas of cognition and behaviour in autism, cellular and pathological changes affecting the brain and tackling mental health problems whilst the University of Buckingham also has specialisms in the field including Health Science Technologies.

The University of Bedfordshire's Institute of Biomedical and Environmental Science and Technology (iBEST) focuses on postgraduate research, basic research, applied research and product development in collaboration with industry. iBEST have expertise in a range of areas that span cell biology, biochemistry, molecular biology and genetics, proteomics and bioinformatics. Main research areas include molecular and cellular mechanisms underlying neurodegenerative disorders including Parkinson's disease, epilepsy and Alzheimer's disease.

The University of Buckingham Institute of Translational Medicine is housed in the Clore Laboratory and is undertaking ground breaking research into new molecular targets for the treatment of Type 2 diabetes mellitus and obesity. Much of its work is done with collaborative partners and is aimed at developing pioneer treatments as either therapeutic agents or as nutraceuticals. The Institute also undertakes research on skin from various angles including cancer and the structure of skin in relation to metabolic disease with the ultimate aim of therapeutic or cosmeceutical development of new products. In addition, the Institute has bioinformatics and bioimaging platforms, the latter in partnership with the Sanger Institute in Hinxton, Cambridge and the Applied Computing Department at Buckingham.

Buckingham's new Medical School opens its doors in 2015 with long-standing academic, clinical and pharmaceutical collaborations translating key research themes into clinical studies and therapeutics.

Buckinghamshire New University's Centre for Excellence in Telehealth and Assisted Living (CETAL) supports the development and implementation of telehealth in the community by providing expertise in the impartial evaluation of new technologies for commissioners, research into new applications and dissemination of knowledge and best practice throughout the health and social care community. Research has a particular practical focus with the aim of bringing together users with technology providers to promote useful and useable technology. Research includes evaluations of the use of telehealth to support patients with long term pulmonary and heart conditions.

Robotics & Autonomous Systems

The University of Bedfordshire Robotics Group has particular strength in the development of cognitive capabilities, including learning, emotion, natural language processing, perception, motion planning and logic reasoning, for homecare/healthcare robots. Their recent development of a robot head that is able to start emotional conversations with humans is a perfect example of a human companion robot.

Recent involvement in a European project SRS (Multi-Role Shadow Robotic System for Independent Living) with Hewlett-Packard, RobotNik Automation SLL and Profactor GMBH will allow the development of a personal robotic solution to help older people at home. Yet another project is the European and Chinese Platform for Robotics and Applications focuses on the development of new technologies and applications in the field of robotics on the macro, micro and nano scales.



Commercial Applications *Showcase*

Silane Synthesis

Silicone touches our everyday lives. Open University Professors Peter Taylor and Alan Bassindale's research group is one of only three in the UK carrying out academic research into types of silicones known as organo-silicones and are the only group in the UK to specialise in a versatile form of silicone known as silsesquioxane, studied by only a handful of research teams in the world.

The Open University's Faculty of Science worked with Hichrom Ltd over a three year period to develop capabilities in the synthesis of silanes that provide new bonding techniques to silica and to produce novel HPLC phases to meet commercial demands, through a Knowledge Transfer Partnership (KTP).

"This KTP project provided us with the opportunity to develop our knowledge of the chemical industry. It gave us credibility when talking to other industrial research partners. It is also rewarding to see our 'academic research' turned into valuable products." Dr Stuart McKay, MD (Hichrom Ltd)

"This KTP has enabled us to gain a greater understanding of the business drivers in commercial chemical companies. Whilst we developed a lot of interesting chemistry, we also created some really good products that we can be proud of." Prof. Peter Taylor, Professor of Organic Chemistry

Dr James Bruce, a member of The Open University's research group, is academic supervisor on a new KTP with Buckinghamshire firm Ambridge Thermoplastics Ltd which manufactures road marking materials. Road marking technology has remained almost unchanged since the 1970s. The project will develop using novel technologies to make white lines more durable, visible and self-cleansing.

Another firm benefiting from The Open University chemists' expertise is Cornelius Specialties Ltd. Cornelius manufactures intermediates, the basic silicone material from which contact lenses are made and has embarked on a 33 month KTP with the OU to create new formulations.

The KTP scheme is funded by Innovate UK and other public sector funding organisations.

Sustainable Marine Energy

Sustainable Marine Energy Ltd is one of the many entrepreneurial businesses that CUBIC, the Cranfield University business incubator, has assisted to grow and develop through comprehensive support. The team at Sustainable Marine Energy are developing an innovative offshore platform called PLAT-O which substantially reduces the costs and risks associated with deploying tidal energy devices. The platform will be moored in highly energetic tidal stream sites and in the deeper water locations where over 60% of the UK's extractable tidal stream energy resource is concentrated.

Through its access to Cranfield University expertise, Sustainable Marine Energy Ltd has built up confidence in its technology and has enabled the company to raise private funding and secure an Energy & Climate Change Energy Entrepreneurs award of £760,000 to fund the design, build and test of a PLAT-O sea demonstrator.

MK:Smart

MK:Smart is a large collaborative initiative, partly funded by HEFCE (the Higher Education Funding Council for England) and led by The Open University, supported by UCMK, part of the University of Bedfordshire, and utility providers including BT. MK:Smart is developing innovative solutions to support economic growth in Milton Keynes.

“This exciting project will not only directly benefit Milton Keynes, but will also demonstrate ways forward for other cities right around the world” Martin Bean, Vice-Chancellor, The Open University

The MK:Smart transport demonstrator focuses on Cloud Enabled Mobility (CEM). This concept seeks to connect users with information and other cloud-based services such as booking and billing systems, to facilitate spontaneous public transport decisions.

Central to MK:Smart is the creation of a state-of-the-art ‘MK Data Hub’ with servers located in UCMK, which supports the acquisition and management of vast amounts of data relevant to city systems, including energy and water consumption, transport data, satellite technology, social and economic datasets plus crowd-sourced data from social media or specialised apps.

Problem Oriented Engineering

Problem Oriented Engineering (POE) allows industry to take design risks with confidence. Researchers Dr Jon Hall and Dr Lucia Rapanotti at The Open University are helping to save industry time and money through the use of this new engineering approach, which is a theory and methodology that bridges the gap between the worlds of software and traditional engineering.

POE allows engineers and industrialists to work together to model development processes and to reason about the effects of design choices before implementation. The Open University has defined a range of techniques that provide guidance to practitioners and a toolset to analyse, synthesise and improve everyday engineering processes and activities.

POE has improved the store management system design for military aircraft for General Dynamics, UK; established safety assurance criteria across a complex supply chain for Royal Navy vessel control and improved defect elimination in customer mortgage repayment software for Bank of America customers.

Spintronics

The Open University's Andrey Umerski and George Mathon of City University are active in the field of 'spintronics' and developed the theory that lies behind and has led to, the modern-day hard-disk read-head which exploits the spin and magnetic moment of electrons in solid state devices.

Their predictions directly influenced the design of all hard disk read heads commercially manufactured since 2009 and has led to more than a thousand-fold increase in hard disk storage capacity in an industry with annual sales exceeding \$28 billion. Their publication is regarded as a seminal paper in spintronics, giving birth to the explosion of interest in magnesium oxide (MgO)-based systems. Such systems are also the basis of magnetic random access memory (MRAM), a new type of non-volatile memory that is being actively developed and may someday replace both hard disks and existing random access memory.

The Open University is actively looking for new research challenges in the areas of materials science and coatings.

Logistics and Supply Chain Management

Cranfield University is home to the largest specialist logistics and supply chain management faculty in Europe and is renowned as a centre of excellence in this field. Recently Cranfield's performance improvement toolkit has reduced product return rates for 40 major retailers and manufacturers in the UK. The toolkit improved efficiency and customer service, reducing costs and waste.

"The project had a major influence in the introduction of new reverse logistics processes within Halfords, and led to a 40% reduction in returns – representing an annual reduction of £5.4 million per year."
Chris Hall, Head of Quality and Cost Reduction, Halfords.

The University of Northampton is home to the Centre for Excellence in Logistics and Supply Chain (CELAS), which was created with the mission of advancing knowledge in the areas of logistics, procurement and supply chain management as well as making relevant contributions to the sector by generating capital intelligence and skills necessary in the industry.

The research undertaken at CELAS is based upon rigorous scientific methods and multidisciplinary approaches that generate valuable knowledge to academics and practitioners. Our extensive local and international links with academic and industry organisations, close relationships with partners, comprehensive library resources and innovative research methodologies place the centre on a solid position to raise the standards of excellence in this exciting and fast moving area.

Buckingham Business School's Centre for Automotive Management (CAM) has a thriving consultancy activity across a number of industry sectors. Professor Peter Cooke's Annual Used Car Market Report, in association with BCA, is a prime example. The Centre is currently researching trends in the automotive finance markets and provides industry specific survey, research, consultancy and a series of Automotive Forums highlighting topical and emerging industry issues.

Astrimar

Astrimar provides assurance, verification and training services in the specialist areas of technical risk, integrity management and reliability in both the oil and gas and wider energy industry.

Astrimar progressed from the Cranfield University Business Incubation Centre (CUBIC) and now has premises in the Cranfield Innovation Centre as well as offices in Inverurie, Scotland, and Houston, Texas.

Taking out a tenancy in CUBIC presented Astrimar with an exciting opportunity to establish the company and maintain close links with Cranfield University staff and research facilities, including employing Cranfield graduates. The facilities at the Innovation Centre enabled the company to readily expand with on-going support and networking.

Non-Medical Interventions and Health Policy

The University of Bedfordshire's Institute for Health Research has particular focus on the development of public health and preventative care models. This concerns both the organisation of Chronic Disease Management (CDM), changing professional roles to support preventive care, and users' experiences of services. Projects include: developing infant weaning models of care among South Asian women; the role of peer educators in diabetes care; evidence-based rehabilitation; musculoskeletal injuries, and exercise for diverse populations.

The Institute of Applied Social Research brings together research within the Faculty of Health and Social Sciences, producing work which both anticipates and shapes key changes in policy, administration and practice in the areas of social care, child care and protection, work with vulnerable young people and youth justice. As a result, in November 2013, the University of Bedfordshire has won the Queen's Anniversary Prize for Higher and Further Education for its pioneering research into child sexual exploitation.

Improving patient care through technology

The Institute of Integrated Care at Buckinghamshire New University brings together the University's strengths in applied research and practical consultancy in the areas of health, social care and social policy. It acts as the overarching institute for Bucks' research and expertise allowing easy access by outside bodies to Bucks' knowledge and expert base. Research and consultancy areas covered by the Institute include telehealth and assisted living, communications in healthcare, nursing and mental health, training and development needs of care workers and social policy with a particular expertise in excluded communities.

Providing healthcare at reasonable cost to a growing and ageing population, many living with chronic long-term conditions, is one of government's biggest challenges. Telehealth, the use of technology to provide remote monitoring and management of a person's health by a trained individual, will play an important part in meeting this challenge. The government target is for three million people to benefit from telehealth by 2017 making England the leading centre for telehealth outside the US.



Executive Development and Professional Education

SEMU offer an attractive range of short and professional courses to help managers and employees acquire and maintain higher level skills. For example the University of Bedfordshire's programme includes the APMG Prince 2 Foundation and Practitioner qualifications, and the much sought-after Lean Six Sigma Green and Black belt qualifications, as well as a range of business and technology-related short programmes, such as ITIL, Business Analytics, Medicines Development and languages for business including Mandarin and Arabic.

Buckingham Business School's Centre for Professional and Executive Development offers qualifications at both Certificate and Diploma level with the Chartered Institute of Marketing, with standalone courses focusing on Digital Marketing and Marketing Communications as well as management related workshops such as Creative Thinking which play an important part in business development. Our Lean Enterprise Unit covers all aspects of lean enterprise operations, supporting its leading MSc's in Lean Enterprise and Continuous Improvement in the Public Sector with practical courses on topics such as Lean Healthcare, Leadership & Culture Change and fun learning events around Lean and KATA games.

The Open University Business School and Cranfield School of Management are triple accredited, placing them among the top 1% of business schools in the world. In addition, Cranfield School of Management is ranked as number one in the UK for Customised Executive Education.





National Support for Social Enterprises

Inspire2Enterprise, is a social enterprise operated by the University of Northampton and Exemplas, that provides a unique free-to-access national support service for social enterprises, public sector bodies, third sector and corporate organisations seeking to create social value, it supports organisational start-up, sustainability and growth, and measurably contributes to social impact and the creation of social value, and is currently the only national social enterprise support service.

As the leading university for social enterprise, the University of Northampton promotes entrepreneurship in a wider context to support students, staff and the local community by helping them to start and grow the right business solutions to meet their needs. The university provides a range of business support services including one-to-one business advice, mentoring, business skills training, access to funding opportunities and networking.

Computing and Software Entrepreneurship

The University of Buckingham's Applied Computing department works closely with local businesses and entrepreneurs to develop web and mobile solutions for data collection, visualisation and analysis. The department also offers a new and distinctive BSc degree in Computing and Software Entrepreneurship. The programme is designed to prepare entrepreneurial graduates who will be able to establish their own start-up IT/Software businesses during the programme or on graduation.

With computing playing an integral part in today's society, the programme is intended to bridge the gap between students' academic knowledge in computing and the real-life world of computer science. This will be done through hands-on projects which provide opportunities to engage with potential customers. This programme will offer prospective students the unique opportunity of developing a thorough understanding of computing as an entrepreneur.

The programme aims to develop students' theoretical knowledge and practical skills enabling them to develop and test innovative, computer-based systems, including apps for smart mobile and wearable devices. Students will develop software systems of their own and research ways to commercially market their ideas to specific areas of business, outlined in the latest approaches to developing a professional business plan. Projects will be guided by mentors in the field and students will participate in lectures from notable software and business entrepreneurs, encouraging a creative and business-minded focus.

Biometrics and Medical Image Analysis

The University of Buckingham's Applied Computing Department has particular expertise in face biometrics based person identification from a distance and privacy-preserving multi-factor user authentication on mobile devices. Researchers in the department who took part in the European Framework project SecurePhone developed efficient face recognition algorithms for mobile devices. Researchers in the department are working with DeepNet Security Ltd. to commercially exploit the more recent advances made in privacy-preserving biometrics, through on a Knowledge Transfer Partnership. Furthermore, the application of biometrics and behaviour/emotion recognition techniques are being explored in the context of assisting older people in their activities of daily life.

In collaboration with the University's Buckingham Institute of Translational Medicine (BITM) and Wellcome Trust funded Sangor Institute in Cambridge, researchers in the department are developing automated high-throughput medical image analysis tools.

A nighttime photograph of a modern glass building, likely a university or business school. The building is illuminated from within, and the sky is a deep blue. A sign on the building features the Open University logo, which consists of a blue square with a yellow circle inside, and the text "The Open University" below it. The building has a complex, multi-level structure with many windows and balconies. Bare tree branches are visible in the foreground, partially obscuring the building.

South East Midlands Universities & Business School *Directory*

Much more information on our universities and business schools is available on their websites or via SEMLEP, but the following section provides a brief introduction to their capabilities and first points of contact.



Cranfield University
Cranfield School of Management

www.cranfield.ac.uk

Ian Chapman - Corporate Relations
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Cranfield is the postgraduate specialist for research and teaching in science, engineering, technology and management.

As one of the top five research-intensive universities in the UK, Cranfield University is making a significant difference in the world, achieved by working in partnership with some of the world's greatest organisations; research that is focused on turning theory into reality. This pioneering work leads to economic growth, business success and global innovation.

From entrepreneurial performance and leadership, to supply chain management and corporate social responsibility, Cranfield is making a significant contribution to the industry facing sectors of Aerospace, Agrifood, Defence and Security, Energy, Environmental Technology, Leadership and Management, Manufacturing, and Transport Systems.



The Open University
The Open University Business School

www.open.ac.uk

Dr. Malcolm Stokes – Enterprise and Knowledge Exchange Manager
enterprise@open.ac.uk



The Open University (OU) is a world leader in providing high quality online education at scale and offers a wide variety of routes to engage with local business and enterprise. These include seminars, events such as breakfast briefings, targeted campaigns, collaborative projects, and academics' own networks and collaborations. The Open University uses some of its Higher Education Innovation Fund to part-fund Knowledge Exchange Vouchers to engage with businesses. Projects must demonstrate a high level of technology transfer and public engagement activities.

The Open University also promotes the Knowledge Transfer Partnerships (KTP) scheme and through this have developed closer links with a number of local businesses. The Open University also leads MK:Smart, a large scale research collaboration to support economic growth in Milton Keynes by capitalising on big data technologies.

The Open University runs the Santander Internship Programme for its postgraduate students, giving them the opportunity to gain valuable commercial experience and enabling SMEs to benefit from highly motivated OU students who can make a real impact on their business.

Over 30,000 employers have sponsored their staff to undertake study at The Open University. 80% of FTSE 100 companies have developed their staff with The Open University. The Open University's Business Development Unit delivers innovative and profitable learning solutions, for students, businesses and partners in the UK and across the globe.

In addition, the OU offers vocational training and CPD. It founded Open Learn and pioneered FutureLearn. OpenLearn offers FREE bite-size taster courses on a variety of subjects many of which are vocationally relevant and designed to meet the needs of busy, working, people. FutureLearn offers FREE, high quality Massive Open Online Courses (MOOCs) which are available to everyone.



The University of Bedfordshire
The University of Bedfordshire Business School

www.beds.ac.uk/knowledgehub

Dr Nicholas Lancaster - Director of Enterprise
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At the University of Bedfordshire, we have big ambitions for current and future generations of students. To help realise these ambitions, we have a major programme of investment in our facilities which amounts to £90m at our Luton campus and £25m at our Bedford campus over the next five years as well as investment in a newly created university campus in central Milton Keynes.

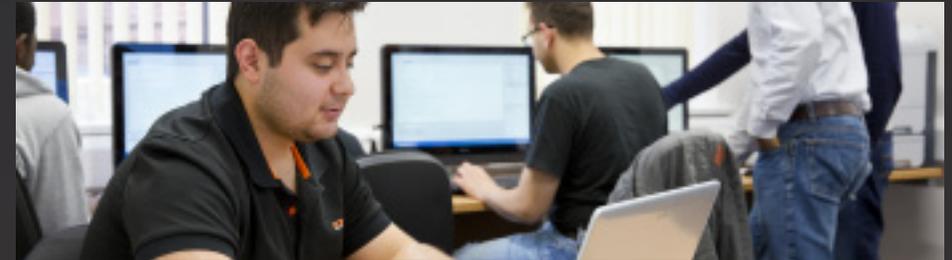
The University of Bedfordshire Innovation and Enterprise Service is the gateway for academic and business interaction at the University, offering organisations of all sizes the chance to develop enterprising initiatives to develop and spread innovation of commercial value and promote our city regional economy. We have a variety of tools available to businesses, a wealth of experience in delivering business support and we are dedicated to helping companies become more competitive through innovation leading the way to sustainable growth.



The University of Buckingham
Buckingham Business School

www.buckingham.ac.uk

John Spoerry - Head of Professional and Executive Development
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The University of Buckingham was founded in 1976 by a group of Oxford academics and is the only independent university in UK with a Royal Charter. The University's motto - 'flying on its own wings' (Alis volans propriis) describes the ethos of Buckingham perfectly. The University has a number of collaborative partnerships and links with other educational institutions around the world.

The University is recognised as having started the first undergraduate Venture Creation Programme in the world in 2006 and provides hands-on and academic entrepreneurship education. Students learn to be entrepreneurial by doing it in real-life, as they start their own real business as part of their education.

In addition to the usual Business School subjects, three specialist business areas have been developed in the University, which are: Service Management, Lean Management and Finance and Investment. Undergraduate honours degrees are achieved in two intensive years of study (8 terms) in classes with small numbers, having a student/academic staff ratio of 11.3:1 and the Oxbridge style tutorial groups.

Britain's first independent medical school, the University of Buckingham Medical School, will open in January 2015. Being a new school, the Medical School will embrace the very latest in technology and simulation techniques and is a teaching model which puts patient care at its heart. "We are creating a medical school with a difference. Dynamic and inspirational, our course begins and ends with the patient." Professor Karol Sikora.



The University of Northampton Northampton Business School

www.northampton.ac.uk

Clive Lawrence-Forbes - Senior Partnerships Manager
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The University of Northampton is a Top 50 UK University*, offering a unique blend of vibrant campus life, superb facilities and academic excellence. At the heart of all that we do and offer is our commitment to transforming lives and inspiring change.

We are proud of our ground-breaking new areas of study and our growing reputation for research excellence, with state of the art facilities we ensure all our students have access to extensive libraries, IT suites, studios, innovative learning spaces and laboratories. University life is spread across two linked campuses, with restaurants, shops, bars, Students' Union and a range of accommodation options.

To ensure students get the very best, we have invested millions of pounds in facilities and buildings on both campuses. The University of Northampton is ranked in the Top 20 for Student Satisfaction within the Complete University Guide 2015. At the University of Northampton we offer all our students an outstanding academic experience, filled with learning and teaching excellence, cutting edge facilities, supporting an exciting and stimulating life both on and off campus, and excellent opportunities to develop employability skills. The University of Northampton is one of just nine UK universities in the top 30 for both student satisfaction and employability, with 96% of our graduates employed or completing further studies within six months of graduating**.

Work will shortly start on our landmark £330m new Waterside Campus (to be built on SEMLEP's Waterside Enterprise Zone) which will place the University in the heart of the Northampton community and is set to open to students in autumn 2018.

*Guardian League Tables 2015

** HESA Destination of Leavers from Higher Education Survey 2012-13



Buckinghamshire New University

www.bucks.ac.uk

Ian Harper - General Manager BEST
ian.harper@bucks.ac.uk



Bucks New University offers cutting edge support to businesses by applying technology to areas such as for example telehealth, creative industries and cyber-security. These sectors fit with our LEPs 'Plan for Growth' sectors and complement the local economic strategy.

Being located within an economy that enjoys a high proportion of entrepreneurial start-ups, Bucks New University has set up its own innovative joint venture working in collaboration with businesses as well as our partner, Aylesbury College, to provide a one-stop shop for Buckinghamshire education, skills and training (BEST). BEST combines the reputations and expertise of each partner with a new approach to working with industry, organisations and individuals to provide flexible and creative education and training solutions as well as opportunities for effecting knowledge exchange and innovation. As part of the BEST concept we will occupy modern, professional and flexible learning spaces at a newly developed University Campus Aylesbury Vale which will be equipped with technologies for teaching, learning and research, including an assisted living laboratory and a cyber-security facility for the courses and degrees which will be hosted there.

Bucks New University is well known by the industries we serve for being good people to do business with.



University Campus Milton Keynes (UCMK)

www.beds.ac.uk/ucmk

Dr Paul Sant - Associate Dean (UCMK)
paul.sant@beds.ac.uk



Inspiring students, transforming lives

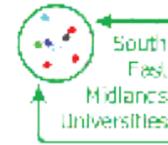
UCMK is the new University campus for Milton Keynes backed by the University of Bedfordshire and Milton Keynes Council.

Located in the centre of Milton Keynes close to shops, businesses and local amenities, the campus is well equipped with the latest facilities including:

- high specification teaching rooms with top-quality audio visual and ICT equipment
- two special purpose electronics and telecommunications laboratories
- large general purpose computer lab
- extensive Learning Resources Centre providing computing facilities
- Continuing Professional Development suite
- student social space

Our courses are relevant to business, education and health, the needs of the Milton Keynes knowledge economy and local and national businesses. We offer foundation degrees, Honours degrees, Master's degrees and Doctorates, as well as Continuing Professional Development (CPD).

Supporting UCMK is a local, dynamic and varied business and education community giving employment and placement opportunities, as well as strong networks. The business community is embracing UCMK as a great addition to the city.



South East Midlands Universities

www.SEMLEP.com/semu

Matt Clifton - Regional Partnership and Innovation Manager
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The South East Midlands universities are Cranfield University (CU), The University of Bedfordshire (UoB), University Campus Milton Keynes (UCMK), University of Buckingham (UB), University of Northampton (UoN), The Open University (OU) and Bucks New University (BNU).

The South East Midlands Universities (SEMULEP) group creates a unique higher education environment across the geographic footprint of SEMLEP.

Individually each university is very distinctive and together their complementary strengths contribute towards a regional economic and technological development model that reflects the strategic importance of the South East Midlands.

SEMULEP meet regularly and actively seek out opportunities to collaboratively support business and jobs growth across key sectors, including aerospace, automotive engineering, bioscience, defence and security, energy, environment and manufacturing sectors, creative arts, leather technologies and logistics.



The Velocity Business Support service delivers professional advice and practical support to enable small- to medium-sized businesses to grow thereby maximising their potential. Velocity offers a range of opportunities including grant funding, free business workshops and access to business advisers to help businesses increase productivity and create jobs.

James Stancombe – Programme Manager
enquiries@velocitybusinesssupport.com





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