

# BCS Learning & Development SG

## Early Careers: Entering A Digital Or ICT Career



THIS WEBINAR WILL BE  
RECORDED



PLEASE PUT QUESTIONS  
INTO QUESTION BOX OR  
CHAT



WILL BE STARTING AT 7PM

# Early Careers

## Entering A Digital Or ICT Career

- Upskilling and reskilling landscape
- Role of Institutes of Technology

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Associate Professor Of Information Systems  
Associate Head Of School Of Computer Science And  
Informatics

# Coping With An Increasing Digital World

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# What is an Early Career?

- 16 – 19 year's old on full-time course or apprenticeship?
- 19+ on apprenticeship or Higher Education programme?
- Anyone starting out learning about Digital and ICT?
- Anyone moving from support roles to engineer or developer roles?
- Anyone changing career from anywhere to Digital and ICT?
- Anyone moving to a totally different area of Digital and ICT?
- Anyone moving into managing people in Digital and ICT?
- ALL OF THE ABOVE

**BCS mission of Making IT Good for Society is rooted in Royal Charter**

**“To promote and advance  
the education and practice  
of computing for the  
benefit of the public”**

# Digital literacy and inclusion

What we know about the problem

**11.3M**

UK adults don't have the 5 basic digital skills defined by government  
(4.3m have none)

**11%**

of 18-29 year old's say they developed their digital skills at school

**75%**

of employers won't consider a candidate with no IT skills

**£5.5Bn**

cumulative benefit of boosting digital inclusion of 694,000 individuals each year

**~25%**

of users aged 8-15 believe that if a website is listed by a search engine it can be trusted



# Issues

- **By 2023, the number of active citizen developers at large enterprises will be at least four times the number of professional developers** (MuleSoft)
- **60% of LoB users admit that failure to overcome challenges associated with connecting IT systems, applications, and data will hinder automation initiatives** (MuleSoft)
- **Data breaches have double over the last year due to web application vulnerabilities** (Contrast Security)
- **BT to take on 7,000 cable installers**
- **Growth of AI**
- **Ransomware attacks in the UK continue to grow at an alarming rate** (Contrast Security)
- **Focus on Digital Literacy!!!!**





# Government initiatives

- **Restart programme**

- Upskilling/reskilling unemployed – must stay in job for 6 months
- Funded by Department of Works and Pension (DWP)

- **Adult Education Budget – 2021-22**

- Earns less than £345 a month - learner is sole adult benefit claimant
- Earns less than £552 a month for learners on a joint benefit claim.

- **Apprenticeship incentives**

- Employers will receive £3,000 for new apprentices of any age.

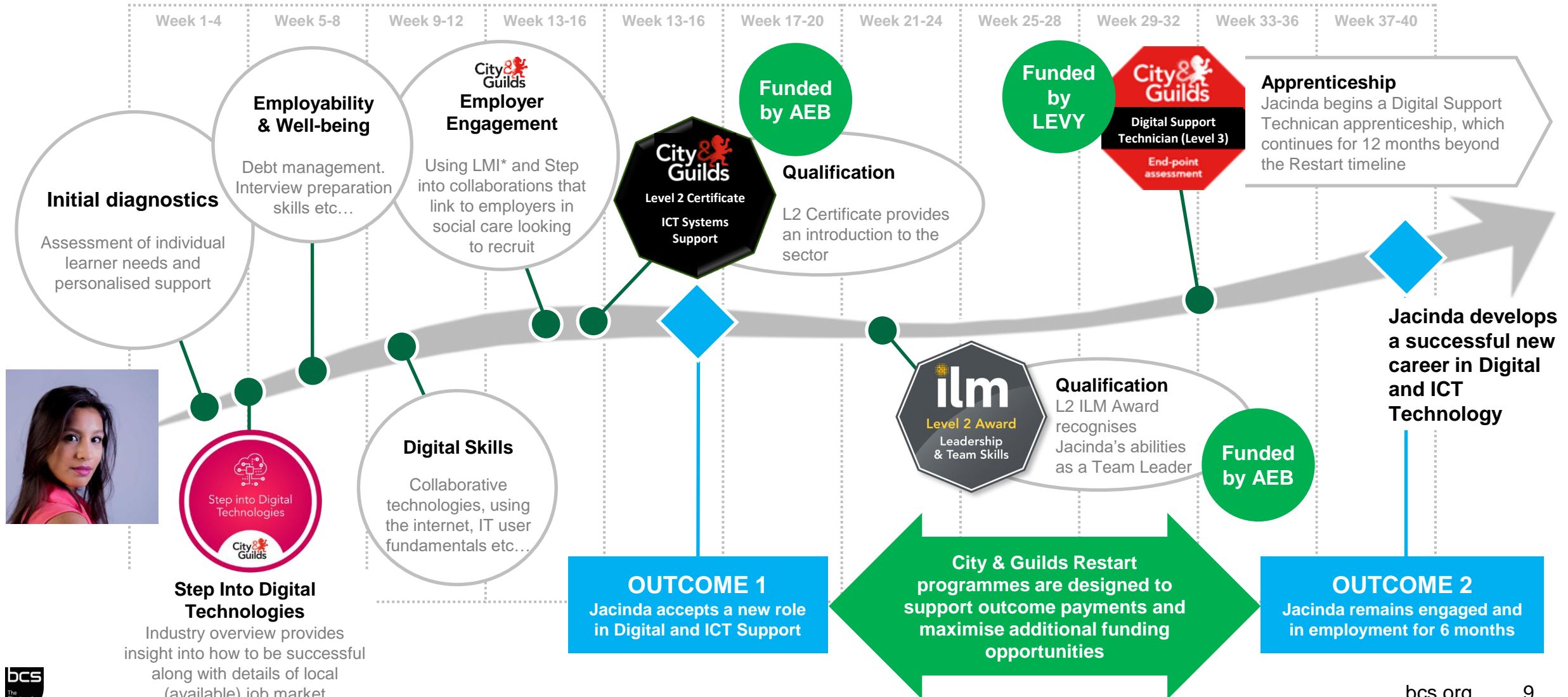
- **Lifetime Skills Guarantee and Level 3 Adult offer**

- **New adult offers and Mayoral Combined Authority**



# Restart

Supporting her retraining and reskilling to create a bridge back into employment



# Find out more about Adult Skills funding and needs



## Step Into Digital Technologies

Industry overview provides insight into how to be successful along with details of local (available) job market

<https://www.futurelearn.com/courses/step-into-digital-and-it>

## Adult Skills - Funding

<https://www.cityandguilds.com/delivering-our-qualifications/funding/adult-skills>

## Restart - Funding

<https://www.cityandguilds.com/delivering-our-qualifications/funding/restart>

## Digital poverty

<https://cityandguildsfoundation.org/digital-poverty/>

## Shifting Skills: reskilling key to post-Covid recovery

<https://cityandguildsfoundation.org/2020/10/shifting-skills/>

## New bursary launched to help Londoners get back into work

<https://cityandguildsfoundation.org/2021/05/new-bursary-launched-to-help-londoners-get-back-into-work/>

## Cisco Talent Bridge

<https://www.netacad.com/careers/talent-bridge>

# The Role Of The Institutes Of Technology

**Dr Ismini Vasileiou**

Associate Professor Of Information Systems  
Associate Head Of School Of Computer Science And Informatics

De Montfort University





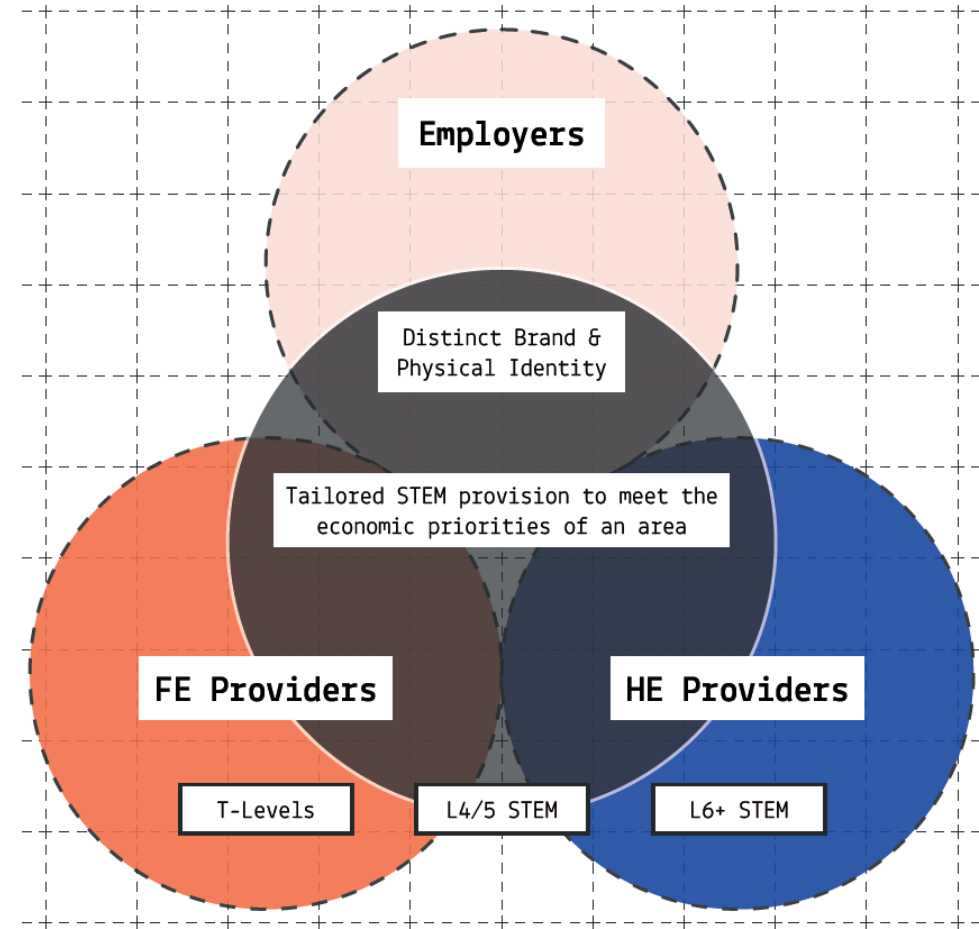
# Institute of Technology (IoT)

## Purpose and model

- IoTs combine FE, HE and employers through a new prestigious distinct entity to deliver STEM-focused technical knowledge and practical skills in state-of-the-art facilities to address local, regional and national skills/productivity gaps.
- Aimed to engage those progressing from T Levels, A Levels and workers of all ages wishing to upskill and retrain.
- All new IoTs will need to achieve the high-quality standards demonstrated by those successful in Wave 1.

# IoT more than just qualifications

**Governance,  
leadership and  
curriculum  
design/delivery**







# IoT Objectives

- Significantly increase the number of learners with higher technical skills which are crucial to national, regional and local productivity growth;
- Attract a wide range of learners to maximise the social as well as the economic impact of this new type of institution; and
- Improve the occupational competency of learners to meet the needs of employers now and in the future.



# IoT success factors

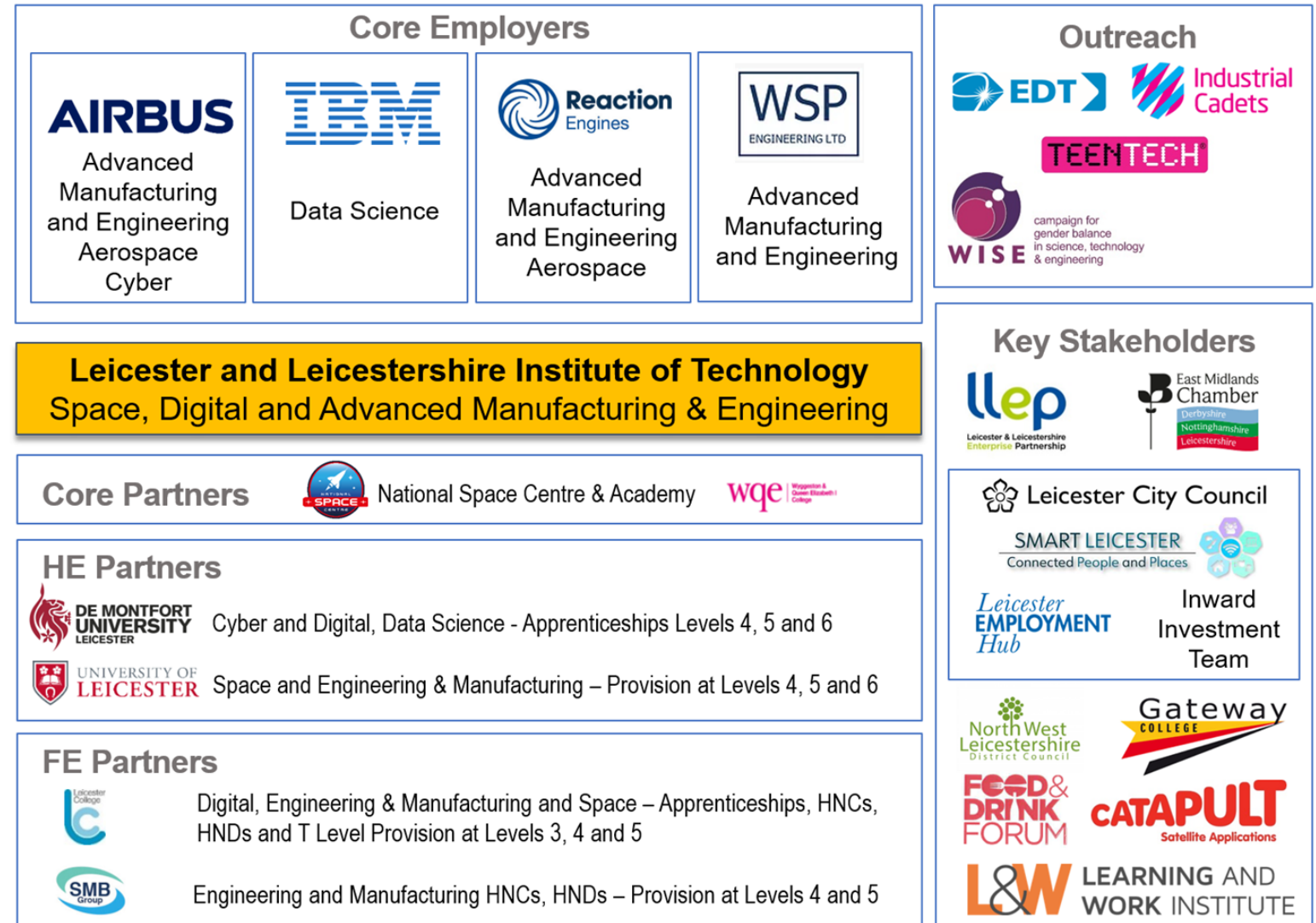
All IoTs must meet the following factors:

1. Strong employer engagement in governance and leadership as well as the design and delivery of the curriculum.
2. Specialise in teaching technical STEM disciplines, at Level 4 and above, creating a technical education pathway to high skilled, high wage employment.
3. Offer high quality industry-relevant teaching, using industry-standard facilities and equipment.
4. Be responsive and agile in meeting the current and future needs of local, regional and national industries, including upskilling the current workforce.
5. Create a prestigious and distinct identity for both the institution and the offer to learners.
6. Work collaboratively to harness the assets, resources and expertise of employers and FE and HE providers.
7. Be financially viable, resilient and credible.
































































# Leicester & Leicestershire IoT model



# Leicester & Leicestershire IoT offer

Digital	Level	Engineering / Space
Data Technician UoL  27	3	T Level: Design and Development for Engineering and Manufacturing LC  32
		T Level: Engineering, Manufacturing, Processing and Control LC  64
		Engineering Manufacturing SMB Group  60
Data analyst DMU  90	4	Automation and controls engineering technician DMU  70
DevOps engineer DMU  70		Design, construction management and initial verification of electrical installations LC  40
IS business analyst DMU  70		Engineering Manufacturing Technician LC  56
Software tester DMU  70		Space Engineering Technician LC  31
BTEC Higher National Certificate in Computing LC  48		BTEC Higher National Certificate in Engineering SMB Group  82
Cyber Security Technologist LC  47		BTEC HNC Diploma in Mechanical Engineering SMB Group  110
HNC in Cloud Computing LC  36		HNC in Aerospace Engineering UoL  40
HNC in Information Technology LC  36		HNC in Instrumentation and Control Engineering UoL  40
Network Engineer LC  28		HNC in Mechatronics Engineering UoL  40
Software Developer LC  35		
BTEC Higher National Diploma in Computing LC  48	5	BTEC Higher National Diploma in Manufacturing Engineering LC  32
HND in Cloud Computing LC  36		BTEC Higher National Diploma in Mechanical Engineering LC  32
HND in Computing (Software Engineering) LC  32		BTEC Higher National Diploma in Operations Engineering LC  32
HND in Information Technology LC  36		BTEC HND Diploma in General Engineering LC  32
		BTEC HND Diploma in Electrical and Electronic Engineering SMB Group  40
		BTEC HND Diploma in Mechanical Engineering SMB Group  50
		HND in Aerospace Engineering UoL  40
	6	HND in Mechatronics UoL  40
Data scientist (integrated degree) DMU  85		Aerospace Engineer UoL  55
Digital and technology solutions professional (integrated degree) DMU  50		Aerospace Software Development Engineer UoL  55
	7	Space Systems Engineer UoL  15
Artificial intelligence (AI) data specialist DMU  50		Systems Engineer UoL  15

Digital	Level	Engineering / Space
BTEC Higher National Diploma in Computing LC  48	5	BTEC Higher National Diploma in Manufacturing Engineering LC  32
HND in Cloud Computing LC  36		BTEC Higher National Diploma in Mechanical Engineering LC  32
HND in Computing (Software Engineering) LC  32		BTEC Higher National Diploma in Operations Engineering LC  32
HND in Information Technology LC  36		BTEC HND Diploma in General Engineering LC  32
	6	BTEC HND Diploma in Electrical and Electronic Engineering SMB Group  40
		BTEC HND Diploma in Mechanical Engineering SMB Group  50
		HND in Aerospace Engineering UoL  40
		HND in Mechatronics UoL  40
Data scientist (integrated degree) DMU  85	7	Aerospace Engineer UoL  55
Digital and technology solutions professional (integrated degree) DMU  50		Aerospace Software Development Engineer UoL  55
	7	Space Systems Engineer UoL  15
Artificial intelligence (AI) data specialist DMU  50		Systems Engineer UoL  15

# Questions

Kevin Streater  
Chair



# Thank-you