



Higher Apprenticeship in Space Engineering

Dr Martin Killeen
Head of Technology
Loughborough College

Apprenticeships today

- Appreciation of apprenticeship as significant vocational route to employment in recent past
- Volume and value diminished with decline in UK manufacturing
- Preserve of aerospace, nuclear, automotive & craft-based sectors
- Employer resistance – “not for us”
- Government response – higher apprenticeships



Higher Apprenticeship

Balanced, rigorous academic and vocational development programme for

- New employees
- Employees wanting new skills
- Employees seeking a change of direction

Credible alternative to university degree course

Industry defines the skills taught with an emphasis on employability skills

Why Higher Apprenticeship

Hiring apprentices helps businesses to grow their own talent by developing a motivated, skilled and qualified workforce.

- Increased employee satisfaction
- Building skills capacity
- Greater productivity
- Attractive to customers
- Reduced staff turnover
- Lower recruitment costs

Higher Apprenticeship in Space Engineering

Successful Joint bid for Loughborough College and
National Space Academy

Loughborough College

- Track record in hi-tech engineering apprenticeships

National Space Academy

- Track record in space education & industry relationships

Higher Apprenticeship in Space Engineering

Programme developed over 18 months



QinetiQ



“Priority” – Space Innovation & Growth Strategy &
Space Leadership Council

Level 5 Foundation Degree Space Engineering

- Introduction to Space Engineering
- Research Methods/Study Skills
- Engineering Mathematics
- Space Eng. Electrical Principles
- Space Eng. Material and Thermal Principles
- Space Eng. Mechanical Principles
- Software and Digital Principles
- Advanced Engineering Mathematics
- Design Modelling Analysis
- Quality Assurance
- RF and Ground station Hardware
- Engineering Project Management
- Manufacturing Planning
- Strengths of Materials
- Electrical Power
- Operational Management

NVQ Level 4

Level 4 Extended Diploma in Research and Development

- Performing Engineering Operations,
- Practical hands-on Engineering workshop skills.

Or

Level 4 Extended Diploma in Engineering Manufacture

- Performing Engineering Operations,
- Practical hands-on engineering workshop skills.

Higher Apprenticeship Space Engineering

- Start any time of the year to fit with your business
- 2 year Part-Time study
- Residential study at Loughborough College
- Full Tutor Support

Outcomes

- Tailored Approach to Learning
- Develop apprentices employability skills
- Employment as a technician in space engineering
- Progression to a range of Honours Degrees
- Preparation towards professional registration as an Engineering Technician
- Progression to Incorporated Engineer registration

Free Recruitment Service

- Vacancy specifications
- Advertise the vacancy
- Shortlist applicants
- Interviews and assessments centres
- Offer letters
- Feedback and unsuccessful letters

