



Head of Mathematics / Mathematics Teacher

Role Pack

1. Our Mission

To work with industry to design and deliver an institution that provides the education and support needed for all its students, especially young women and those from low-income backgrounds, to progress into highly skilled, computing-related roles.

Ada will be:

- A centre of excellence for the teaching and learning of advanced digital skills
- Offer a high quality, aspirational alternative to university
- Be a beacon of best practice

Our Theory of Change:

Through achieving our mission we will be an engine for social mobility. It will achieve this by recruiting 50% of its students from low-income backgrounds and 40% as young women by 2021.

Our Patron, Baroness Martha Lane Fox echoed these sentiments when she said –

“The digital revolution and the world wide web, invented by Britain’s own Sir Tim Berners-Lee, are transforming the UK’s economy. However, the benefits are not distributed evenly and digital businesses do not reflect the diversity of their users.

This is especially disappointing because women have been so important in the development and creation of internet and computing technologies such as Ada Lovelace and the female codebreakers at Bletchley Park in World War 2.”

Our Values:

We believe all our students and staff should exhibit the following 5 values:

Curiosity, Creativity, Resilience, Rigour and Collaboration

Ada Lovelace (1815 – 1852)

We named the college after Ada Lovelace as she represents many of the defining traits we seek to foster in our students. She was a British computing pioneer who defied convention. She was a collaborator who combined her numerical ability with creative flair.

Ada was the first person to recognise and communicate the potential of computers to help solve many of the world’s problems and improve people’s lives. Equally, we aspire for our well-rounded students to be equipped to use technology to have a positive impact on the world.

2. Summary of the role

Ada, the National College for Digital Skills is looking for an outstanding maths teacher to design and deliver the maths curriculum. This will include A-level maths, further maths and potentially GCSE maths if any students do not receive a C or above in their GCSE exams.

The College will start with only one maths teacher but the candidate has the opportunity to grow with the role and potentially build the maths department. An evidenced expertise in delivering the maths A-level is critical to the role. Candidates may apply for the role as solely a maths teacher or as a head of a maths department with the expectation that they will be the head of a growing department.

The college has a focus on digital skills but much of this is underpinned by a strong mathematical ability. The right candidate will have a collaborative mindset who is open to working closely with others, often across disciplines or with volunteers from industry, to co-design and co-deliver aspects of the curriculum. Frequently, this will be working on industry briefs which are based on real life problems which often have a positive social purpose.

We have a strong focus on digital skills but much of this is underpinned by a strong cross-curricular ability. The right candidate will have a collaborative mindset and open to working closely with others, often across disciplines or with volunteers from industry, to co-design and co-deliver aspects of the curriculum. Frequently, this will be working on industry briefs which are based on real life problems which often have a positive social purpose.

The right candidate will be expected to contribute to the broader College community and help embed many of the unique features of the College into its day-to-day functioning. These include:

- A continuous learning environment in which everyone seeks to share their experiences and improve
- Industry partnerships based on meaningful, tangible interactions with students on a regular basis
- Students experiencing work life through the projects they undertake and the approach required to complete them successfully
- Instilling the empowering use of technology in the College's curriculum and methods of delivery

Importantly we are looking for someone with energy and determination who believes that learning is about developing the student as a whole, giving them the toolbox to develop; someone that is able to motivate students and colleagues and is passionate about getting students into meaningful digital careers.

3. Person Specification

Qualification criteria

- Qualified to at least degree level
- Qualified Teacher Status
- Permitted to work in the UK
- Evidence of relevant and substantial CPD

General - experience of:

- Delivering outstanding teaching and learning post 16 (as well as other years).
- Having led a team in the development and implementation of a programme, which relates to excellent attainment and progress.
- Tracking and monitoring identified groups and designing intervention programmes which have shown a positive impact on behaviour and progress.
- Understanding what outstanding teaching practice looks like and how to improve practice in yourself and others.
- Implementing and sustaining effective behaviour management strategies.
- Passionate about the use of technology in society, business and education.
- Believe that digital skills can be an empowering tool for social mobility for young people with a passion and enthusiasm for the subject.

Leadership and management – the ability to demonstrate:

- Genuine passion and belief in the potential of every student.
- A desire to innovate and try new approaches and reflect and learn from mistakes and failure.
- Strong interpersonal, written and oral communication skills.
- Strong organisational skills: the use of effective time management and prioritise
- A love of using technology to improve efficiency and ease of working.
- An educational vision aligned with the College's high aspirations and high expectations of themselves and others.
- A clear understanding of the strategies required to establish consistently high standards of results and behaviour in a complex inner city college and commitment to relentlessly instilling these strategies.

Additional opportunities

As a member of the Founding team of the College, you will want to contribute to its growth. Examples might be:

- CPD for teachers at other schools and colleges
- Input into the technology and design of the buildings
- Help input into the online learning environment
- Run extracurricular clubs
- Support outreach and community events
- Support fundraising opportunities and events

4. Provisional Curriculum

16 – 19

The 6th form curriculum at Ada will be a mixture of a vocational learning qualification (BTEC) and A Levels. It has been designed to enable a wide range of students to access and benefit from its provision.

We are aiming for 80 students in Year 12 and another 80 apprenticeships in the first year.

All students will study a Computing focused BTEC, equivalent to 2 A Levels as the core 'digital skills qualification'. This will provide scope for the College to design a curriculum that goes beyond the level 3 qualification gained by the student. It is intended that the assignments and content of the course will prepare the students for the work environment through its content and methodology. This will enable us to stretch our gifted students and prepare them fully for the next steps in their career.

All students will also select another option. This will be either an A Level or a continuation of their vocational qualification.

More able students will be able to select a further A Level to complement their studies, however this will be restricted to only three options.

All students will also study for an Extended Project Qualification, equivalent to half an AS Level. This will allow the students to work on their own projects, either individually or within a group. Students may be able to form their own start-ups from this qualification and the College facilities will support the incubation of these ideas, potentially post sixth form.

It is likely that students will be both literate and numerate, especially if they are intending to pursue a technical career, but there may be other reasons why they have not achieved at level 2. Students who have not achieved their grades in English and/or maths grade C or above at GCSE will be provided with learning through discreet lessons.

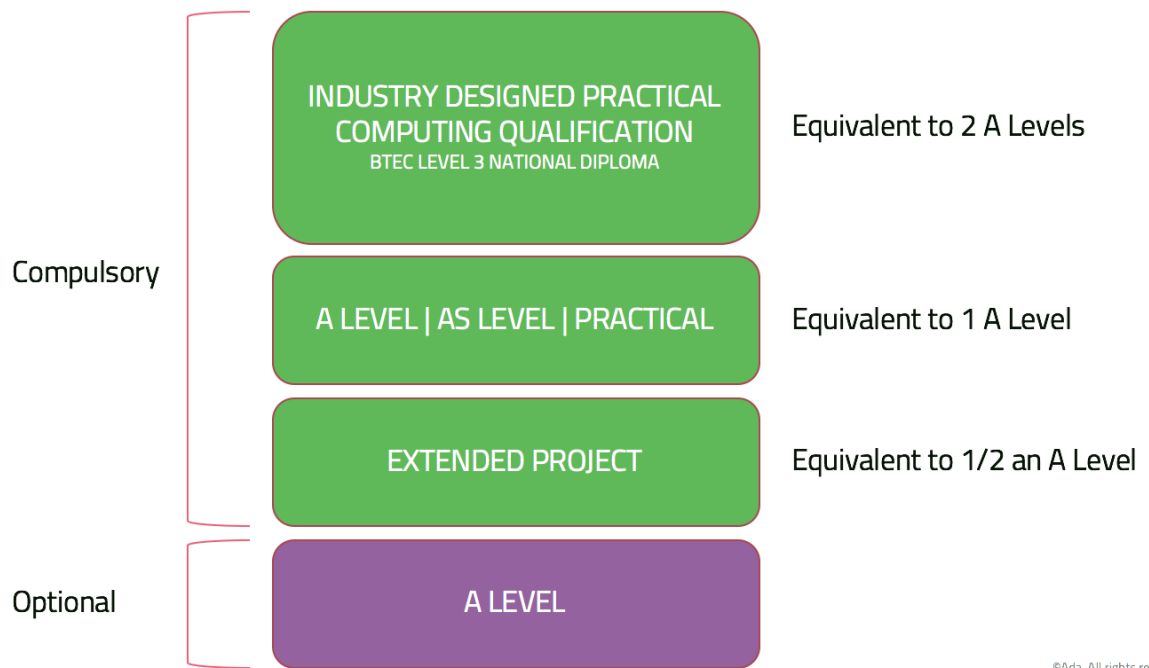


Figure 1 – All students will follow the green, the more able will follow the purple

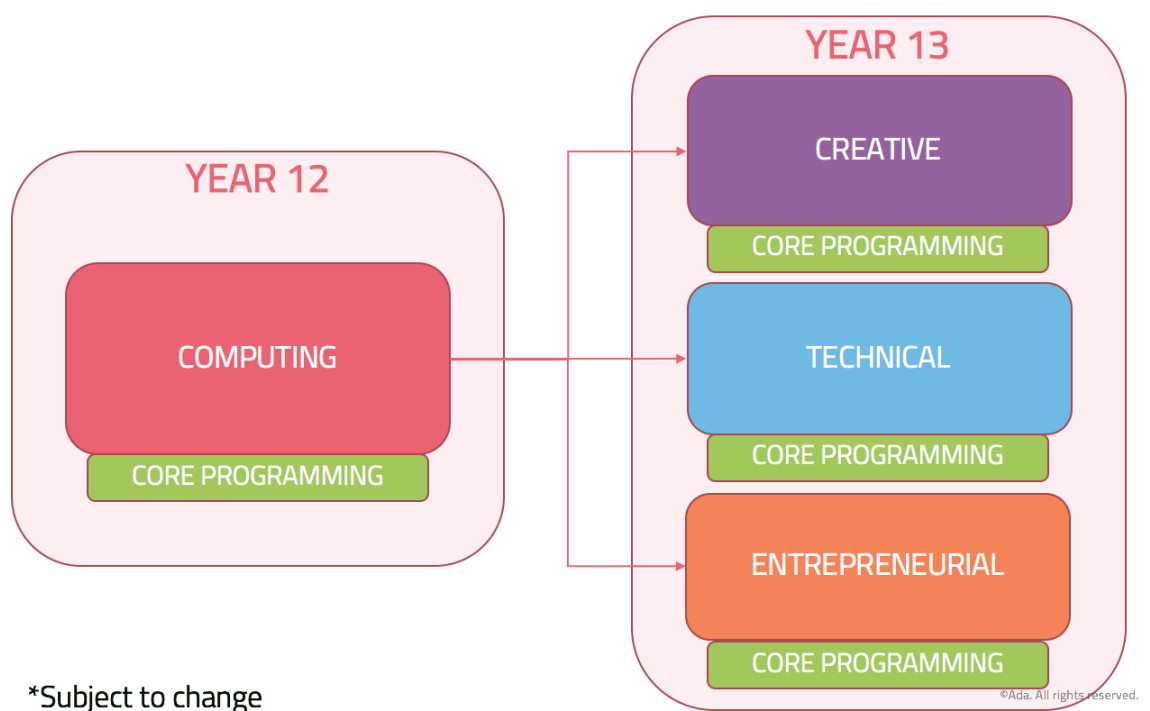


Figure 2 – Practical Qualification

Students in Year 12 will follow a generic course in order that they experience all aspects of the computing curriculum; Creative, Technical, Entrepreneurial. Towards the end of their year 12 they will select the route that they wish to follow. Their year 13 will be more tailored to their personal skills and ambitions. There will be excellent digital careers advice throughout their college experience.

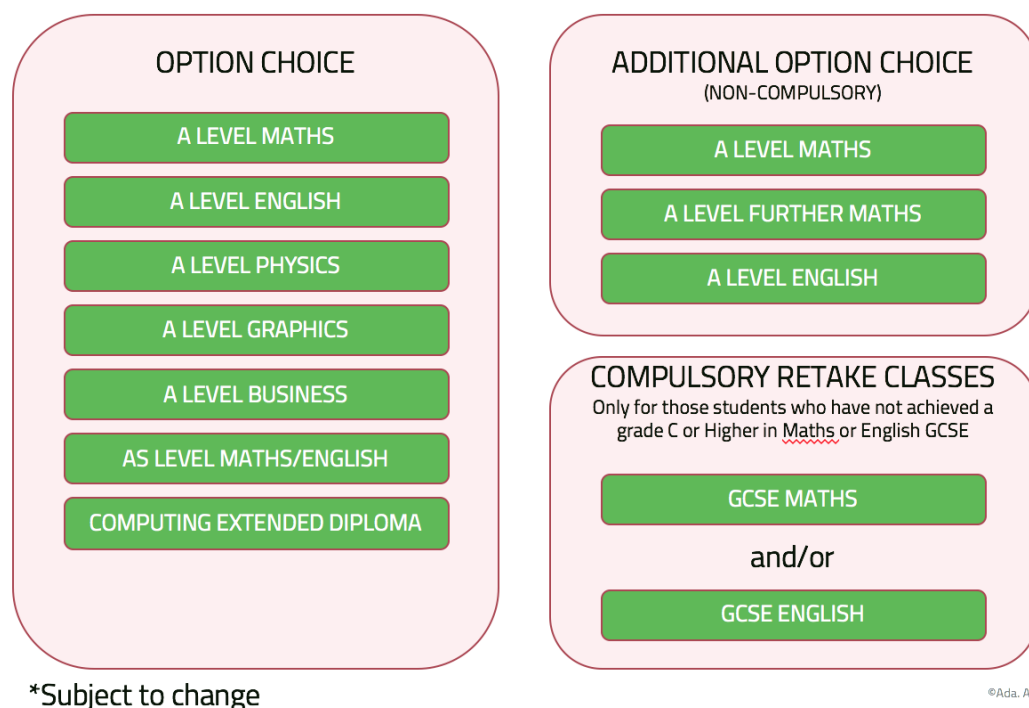


Figure 3 – Option Choices and compulsory classes

The current offer allows students to mix and match their curriculum based upon their need and ability.

Examples

Student 1 – Computing Qualification (Vocational 2 A Level Equivalent)
A Level Maths
Extended Project

Total 3.5 A Level Equivalent

Student 2 - Computing Qualification (Vocational 2 A Level Equivalent)
Computing Qualification Extended Diploma (Vocational 1 A Level

Equivalent)
Extended Project

Total 3.5 A Level Equivalent

Student 3 - Computing Qualification (Vocational 2 A Level Equivalent)
 A Level Maths
 A Level Further Maths
 Extended Project

Total 4.5 A Level Equivalent

Extended Project

The extended project must be completed by all students and supported by all staff. Students will be given 2 hours of their curriculum time to complete the course. The content of this will be dictated by the interests of the students. This may take the form of a game, web site, app, physical technology or anything else that relates to technology. The staff at the college, along with industry professionals, will be expected to act as mentors and guides for these projects. All staff will have at least an hour of their week attached to a student project. There is an intention that the majority of these projects will be group based.

The extended project will allow students to gain a qualification equivalent to an AS.

Additional Offer

Pastoral Support will be made available weekly through a one-hour slot but also through other channels, including registration sessions.

The College will provide a programme of Physical and Mental Wellbeing, allowing students the opportunity for volunteering, personal development and fitness including team and individual sports.

Where needed, all students will have access to learning support through a dedicated SEN department.

It is important that the College support all of its students to succeed in the technology industry. Incubation space for students will be provided for students, allowing them to develop ideas in a safe and relatively risk free environment.

For reference, we are developing a new Foundation degree in Digital Innovation. This will form the key learning component of the College's flagship qualification, a Foundation Degree Apprenticeship in Digital Innovation (FDADI) and in time we hope to offer this qualification full time.

This role does not have direct responsibilities for the post 19 curriculum; however, if they wish to contribute to the design and delivery of aspects of this course then they are welcome to become involved.

The basic overview of the Foundaton Degree is:

(O) Optional and (M) Mandatory modules

Technical Strand (9)	Creative Strand (6)	Entrepreneurial Strand (7)
(M) Programming	(M) Interaction Design	(M) Business Modelling
(M) Database Systems	(M) Creative Problem Solving	(M) Presenting with Impact
(M) Testing, Integration and automated	(O) Web Design & Authoring	(M) Ethics & Moral Reasoning
(M) Maths for Programming Discrete and Statistics	(O) Digital Media and Social Networks	(O) Business Management
(O) Computer Systems & Networks	(O) Games Design	(O) Entrepreneurship and Innovation
(O) Cloud Computing & Infrastructure	(O) 3D Modelling, Animation & Environments	(O) Data Analytics & Business Insights
(O) Artificial Intelligence		(O) Business Risk Analysis
(O) Advanced Programming Algorithms & Data Structures		
(M) Software Engineering Project		

5. Facilities and the College

Campus: The College is organised over two campuses. For the initial two years of operation the College will operate from the Broad Lane Campus, just 5 minutes walk from Tottenham Hale tube station.



Figure 4: Broad Lane Campus Design

In 2018, the new build will open, 5 minutes from the tube station. As a National College, there are plans to have further campuses elsewhere in the country.

Technology:

As befits the National College for Digital Skills we will provide both students and staff with appropriate technology, together with training and ongoing support. We will have fast Wi-Fi access throughout the site, with cloud based storage of data, including our MIS to facilitate anytime, anywhere learning and assessment. There will be an emphasis on the innovative use of mobile and handheld technologies to enhance learning. All staff would be expected to share ideas and resources with colleagues to help improve the student experience.

College Day and Year:

The College Students will work 40-week year, split into three terms, Autumn, Spring and Summer. Terms are separated by Christmas, Easter and Summer holidays respectively.

Travel: Getting to the Broad Lane campus is a short walk from Tottenham Hale transport hub with links to central London, the West End, the City of London, Stratford, Stansted Airport and Cambridge. Improvement plans for the hub are due to be complete in 2017, making access to the College even quicker.



Figure 5: Tottenham Hale Transport Hub 2017

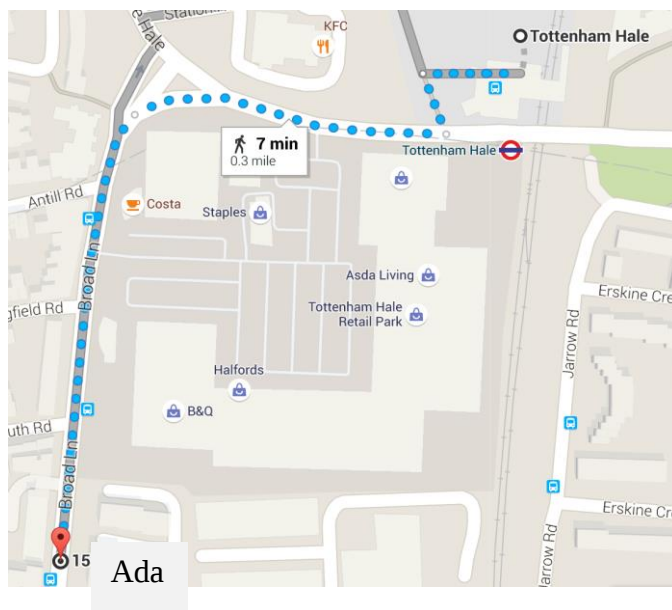


Figure 6: Location of Broad Lane Campus

6. What's on offer and how to apply?

Highly competitive salary package: Depending on experience

Closing date for applications: 9th May 2016

Selection process: 2 x Formal interview and teaching observation

Hours: a minimum of 37 hours per week

Holidays: TBC

Medical: A medical questionnaire must be completed, and the appointment will be subject to medical clearance.

DBS: Ada is committed to the safeguarding of all students. All employees undergo an enhanced Disclosure and Barring Service (DBS) check.

Pension: Access to the teachers' pension scheme as of Summer 2016

Benefits: A benefits package will be offered as of summer 2016

How to apply: Please fully complete the attached application form. Your application should include full contact details (address, daytime, home and mobile telephone numbers where applicable and email addresses) and details of 2 referees. For each referee please provide names, position, organisation, telephone numbers and email addresses where known. One of these must be your current/recent employer. If you do not wish us to contact referees at this stage please make this clear.

Further information: If you would like a confidential and informal discussion about this post, please email Tom@AdaCollege.org.uk

Please return your electronic completed application to:
Tom@adacollege.org.uk

All appointments are subject to satisfactory references.