AI & Computer Science





d'Overbroeck's, pg. 47

Key Facts:



Age range: 13-17



Location: d'Overbroeck's



Class size:



Certificate:

External industry certificate from trusted UK provider



Minimum language level:

B1 (intermediate)



Tuition content

Academic subject studies, Industry workshops and Capstone Industry Project



Weekly excursions:

2 full-day, 1 half-day



Hours per week:



Dates: 8 July - 5 August



Duration:

2 weeks



Price: £2,595 per week

The course is intended to provide a comprehensive foundation in both artificial intelligence (AI) and computer science. Students will gain a solid understanding of AI concepts and techniques, as well as develop essential programming and problemsolving skills necessary for building intelligent systems. The course will foster creativity and innovation by encouraging students to explore and develop their own Al projects.

Learning outcomes

- Develop knowledge of reading, writing and debugging code using programming software such as Java and Python
- Learn systematic approaches to problem solving, including analysis techniques and how to implement data structures and code problems in a way that computers can understand and process.
- Explore different approaches in machine learning and developing an understanding of stochastic algorithms, game theory, automated theorem proving, computer and human learning, and more.

Example Industry Workshops

The National Museum of Computing -

Located in Bletchley Park, the principal centre for Allied code-breaking during the Second World War, the National Museum of Computing is home to the world's largest collection of functional historic computers. Machines. Students will take part in a full-day activity schedule such as Robotics & Al which explores the ethical implications of AI programming and barriers to inclusive legislation. Students will also have the opportunity to build their own 8-bit computer in the practical physics workshop.

Horizon of Khufu VR Experience -

Students will embark on an engaging VR experience and explore one of the Seven Wonders of the Ancient World - an archaeological treasure trove and a monumental testament to Egyptian architectural genius. Students will interact within a shared virtual reality space, providing a deeply emotional and engaging dive into the heart of Egyptian culture.

Capstone Industry Project

The AI & Computer Science industry project is developed, delivered and assessed by ComputerXplorers, a dedicated computer education company delivering engaging computer lessons across schools in the UK.

The project provides students with an opportunity to leverage the Unity platform. On completion of the course and submission of the final projects the students will receive a Certificate of Completion and a written assessment of their project.

Capstone Industry Project in collaboration with:





Discover our AI & Computer Science course



Architecture & the Built Environment





Key Facts:



Age range:

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Class size:

12



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B1 (intermediate)



Tuition content

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Weekly excursions:

2 full-day, 1 half-day



Hours per week:

25



8 July - 5 August



Duration: 2 weeks



£2,595 per week

This course covers the history of architecture, architectural concepts, and design methods through practical exercises. It introduces techniques for conceptualising, analysing, and defining surroundings through the eyes of an architect. Students will explore and document their surroundings, practicing drawing techniques relevant to contemporary urban contexts. Ideal for those interested in art, design, urban planning, and sustainable development.

Learning outcomes

- Provide theoretical understanding to support creative problem solving and research
- Develop knowledge of historical, theoretical and cultural issues
- Build independence in research methods and idea communication
- Understand influential artists and art of key historical movements, periods, styles and types of art
- Create a contextual awareness of different perspectives and approaches with art and design fields

Example Industry Workshops

Design Museum - Students engage with the museum's collection of contemporary design objects to foster experiential learning. Workshops will support students to gain new perspectives on the role of designers and the impact of design in everyday life. Additionally, students will delve into material exploration and the ethical responsibility of designers to actively seek novel and environmentally sustainable materials.

Insider London - Students will embark on a Sustainable Architecture Tour examining London as a sustainable city as well as highlighting green initiatives from the private sector. Find out if London is a truly sustainable city!

Capstone Industry Project

The Architecture and the Built Environment industry project is developed and delivered by Class of Your Own, a UK social enterprise that has inspired voung learners to experience the Built Environment through Design Engineer and Construct! (DEC) learning programme.

Upon completion of the programme, students will receive a DEC award, which is a Training Qualifications UK and industry-endorsed certificate.

Capstone Industry Project in collaboration with:





Discover our *Architecture & the* **Built Environment** course



Business and Marketing





d'Overbroeck's, pg. 47

Key Facts:



Age range: 13-17



Location: d'Overbroeck's



Class size:

12



Certificate:

External industry certificate from trusted UK provider



Minimum language level:

B1 (intermediate)



Tuition content

Academic subject studies, Industry workshops and Capstone Industry Project



Weekly excursions:





Hours per week:

8 July - 5 August

25

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Dates:



Duration:

2 weeks



Price:

£2,595 per week

This course equips students with essential skills and knowledge to become a successful business entrepreneur or marketeer. Students will explore idea generation, market research, business planning, marketing strategies, financial management, and problem-solving. Engaging discussions, case studies, and real-world examples will deepen theoretical understanding, while hands-on activities and group projects will allow practical application. By the end, students will have the confidence and tools to turn their creative ideas into viable businesses and make a positive impact.

Learning outcomes

- Analyse world-leading businesses, understanding their success and strategies across different departments including marketing, finance and HR
- Explore effective leadership practices globally and examine case studies of leadership in different countries
- Develop a critical understanding of organisations, the markets they serve, their value-adding processes, and evaluate business behaviour from various stakeholder perspectives
- Explore historical and contemporary themes in trade and business, and the influence of national governments and cultural changes

Example Industry Workshops

Museum of Brands - Students learn about the purpose of packaging and the development of supermarket brands from Victorian times to the present day. After undertaking research from the Museum's collection, students work to improve packaging designs in relation to consumer habits and market trends.

Insider London - Students are guided through London on a Retail Design Tour, visiting the most iconic Mayfair streets to analyse the great success of the British heritage brand and the strategies of world flagship stores. Students will consider the changing world of high street shopping and how brands use technology, sustainability, and visual merchandising strategies to get consumers through the door.

Capstone Industry Project

The Business and Marketing industry project is designed and delivered by GoCreate Academy, a learning provider offering university accredited and industry endorsed qualifications across the creative arts.

Students will develop a comprehensive business plan and establish a compelling brand identity for an innovative product, event or festival launch. At the end of the course, students will be assessed based on their participation in discussions and the final presentation including a podcast episode and video project.

Capstone Industry Project in collaboration with:





Discover our
Business &
Marketing course



Engineering





d'Overbroeck's, pg. 47

Key Facts:



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Tuition content

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Weekly excursions:

2 full-day, 1 half-day



Hours per week:





Duration:

2 weeks



Price: £2,595 per week This course will guide aspiring engineers to gain a better understanding of the engineering industry from commercial and technical perspectives. Students will understand the different areas of engineering and learn to evaluate the social, economic, and environmental impact of projects in different global contexts. Possible topics areas for each week may include: the principles of design, planning and prototyping, sustainable engineering and the varying roles of an Engineer.

Learning outcomes

- Understand the properties and processing techniques of various engineering materials
- Explore the role of engineers, how they differ from scientists and mathematicians, the ethical considerations in engineering projects, and the importance of innovation.
- Develop the ability to read, interpret, and create engineering drawings, understand project planning, and grasp the principles of engineering product development and manufacturing.
- Examine renewable energy sources, the future of the energy sector, the development of biofuels, fuel cells and electric cars, and the challenges of creating sustainable and long-lasting products using recycled materials.

Example Industry Workshops

RI Crash Testing, L'Oreal Young Scientist **Centre -** Students will become engineers for the day, testing their own ideas by designing creative experiments. In the Crash Testing workshop, students will learn how vehicles are designed to keep us safe in a collision and use their knowledge in a real-life crash test. The workshops aim to ignite a passion for scientific discovering and encourages

Silverstone Museum - Students will eniov a tour of Silverstone itself to learn about the history of motorsport. The various exhibits allow students to explore the wider aspects of racing, including medical support, the mechanics, safety, and via the Tech Lab, the technology and engineering. Students will also take part in an interactive session where they can get hands-on with genuine motorsport items.

Capstone Industry Project

curiosity-driven learning.

The Engineering industry project is developed and delivered by Class of Your Own, a UK social enterprise that has inspired young learners to experience the Engineering and the Built Environment through Design Engineer and Construct! (DEC) learning

Upon completion of the programme. students will receive a DEC award. which is a Training Qualifications UK and industry-endorsed certificate.

Capstone Industry Project in collaboration with:





Discover our **Engineering** course

