

TECHFEST

Promoting Science, Technology, Engineering and Mathematics

Scottish Charity No SC010349



NCR
FOUNDATION

INNOVATION
MASTERCLASS
PROGRAMME

2024



TECHFEST STEM

into



Innovation



ABERDEEN

SATURDAY, 5 OCTOBER

Venue: Robert Gordon University,
Sir Iain Wood Building

Time: 10:00 - 11:00



[REGISTER NOW](#) 

Algorithms and Generative AI on Social Media and the Internet: How Computer Scientists Use Evolutionary Neuropsychology to Control Your Feelings and Actions.

By John N. A. Brown, Lecturer, PhD, Robert Gordon University School of Computing

There are reasons why we all have a hard time putting down our phones. This masterclass will reveal some of the secrets used by social media and technology companies to make their products addictive. It will then provide some simple tricks to help you escape their clutches. The presenter has come to Aberdeen from Silicon Valley, where they solved problems for Google, Facebook, Amazon, YouTube and LinkedIn.

SATURDAY, 5 OCTOBER

Venue: Robert Gordon University,
Sir Iain Wood Building

Time: 11:30 - 12:30



[REGISTER NOW](#) 

Crafting Products with Purpose Using the Theory of Change – How to Create Impact with Your Ideas?

By Caroline Laurenson, TLTechSmart Home Solutions

Are you a young visionary with a product idea to make the world better? Join Caroline Laurenson from TL Tech to find out more about how to use the Theory of Change framework to clearly define your intended impact and develop a roadmap to get there. In this interactive session, you'll apply the Theory of Change to a real-world case study, using hands-on exercises to experience this impact planning process firsthand. Perfect for those interested in social entrepreneurship, mission-driven businesses and making a difference!



DUNDEE

SATURDAY, 26 OCTOBER

Venue: Michelin Scotland
Innovation Parc

Time: 10:00 - 12:00



[REGISTER NOW](#) 

Innovate and Create: A Journey Through Manufacturing, Design and Engineering

By Michelle Quadrell, Scott & Fyfe Ltd

Join us for an exciting STEM masterclass where you'll explore the fascinating world of design innovation, manufacturing, and engineering. This interactive experience will take you through the various stages of product development, from initial concept to final production.

Participants will hear about the journey of Scott & Fyfe Ltd, a 160-year-old, employee-owned materials technology company, and the importance of creativity and innovation in the design and manufacture of their products. Following this, you'll engage in a hands-on activity to learn about the principles of lean engineering and how efficient production processes can lead to sustainable and high-quality products.

NOVEMBER 2024



EDINBURGH

SATURDAY, 9 NOVEMBER

Venue: The National Robotarium

Time: 10:00 - 12:30



REGISTER NOW



Design & Innovation - Engineering Robotic Solutions

By The National Robotarium

Delve into the world of Robotics at the National Robotarium as the team take you through the engineering design process of creating a robotic solution to a real-world problem. Working in small teams, participants will get hands-on experience at rapid prototyping a robot of their own design to solve a challenge on the day.



INVERNESS

SATURDAY, 16 NOVEMBER

Venue: UHI House (formerly the Centre for Health Science)

Time: TBC



REGISTER NOW



Doing Business Online

By Kirsty Pryer

Exploring each stage from having an initial business idea to taking it online and being successful. Activities and discussions will include choosing a business idea, picking a domain registration to suit, web hosting and design options, SEO (search engine optimisation), social media and promotion. Looking at the use of technology throughout the process.



ABERDEEN

SATURDAY, 23 NOVEMBER

Venue: Sir Ian Duncan Rice Library, University of Aberdeen

Time: 10:00 - 13:00



REGISTER NOW



Engineering design and innovation

By H2GP Foundation

In this masterclass you will learn how to approach design as a problem-solving process rather than focusing solely on aesthetics. We will start with root cause analysis to help you identify the actual issues behind a problem. Then, you'll explore various solutions and objectively determine the best one. You'll learn how to define boundary conditions—such as dimensions, materials, and safety requirements—that shape the design choices. The course will guide you through an iterative cycle of designing, testing, and refining, equipping you with the skills to create effective and functional products.

VENUE DETAILS

📍 ABERDEEN

Venue: Robert Gordon University,
Sir Iain Wood Building

Address: The Sir Ian Wood Building, Robert Gordon University, Garthdee Rd, Garthdee, Aberdeen AB10 7GJ, United Kingdom



📍 ABERDEEN

Venue: The Sir Duncan Rice Library, University of Aberdeen

Address:
Bedford Rd, Aberdeen AB24 3AA, United Kingdom



📍 DUNDEE

Venue: Michelin Scotland
Innovation Parc

Address:
Baldovie Rd, Dundee DD4 8UQ, United Kingdom



📍 EDINBURGH

Venue: The National Robotarium
Address: Boundary Rd N, Third Gait,
Edinburgh EH14 4AS,
United Kingdom



📍 INVERNESS

Venue: UHI House (formerly the Centre for Health Science)

Address: UHI House, Old Perth Road, Inverness IV2 3JH, Scotland



TECHFEST STEM

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Innovation

LEARNING OUTCOMES

This programme has been aligned with Literacy, Maths and Science experiences, but mostly with technology Outcomes.

Learning in the technologies enables children and young people to be informed, skilled, thoughtful, adaptable and enterprising citizens, and to:

- develop understanding of the role and impact of technologies in changing and influencing societies
- contribute to building a better world by taking responsible ethical actions to improve their lives, the lives of others and the environment
- gain the skills and confidence to embrace and use technologies now and in the future, at home, at work and in the wider community
- become informed consumers and producers who have an appreciation of the merits and impacts of products and services
- be capable of making reasoned choices relating to the environment, to sustainable development and to ethical, economic and cultural issues
- broaden their understanding of the role that information and communications technology (ICT) has in Scotland and in the global community
- broaden their understanding of the applications and concepts behind technological thinking, including the nature of engineering and the links between the technologies and the sciences
- experience work-related learning, establish firm foundations for lifelong learning and, for some, for specialised study and a diverse range of careers.

The framework develops knowledge, skills, attributes and capabilities around the following aspects of learning in the technologies:

- Awareness of technological developments (Past, Present and Future), including how they work.
- Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
- Designing & constructing models/products
- Exploring uses of materials
- Representing ideas, concepts and products through a variety of graphic media
- Application of Engineering Within each of the key concepts/significant aspects of learning learners will develop and demonstrates
- Knowledge and understanding of the key concepts in the technologies
- Curiosity, exploration and problem solving skills
- Planning and organisational skills in a range of contexts
- Creativity and innovation
- Skills in using tools, equipment, software, graphic media and materials
- Skills in collaborating, leading and interacting with others
- Critical thinking through exploration and discovery within a range of learning contexts
- Discussion and debate
- Searching and retrieving information to inform thinking within diverse learning contexts
- Making connections between specialist skills developed within learning and skills for work
- Evaluating products, systems and services
- Presentation and communication skills.
- Awareness of sustainability

CANCELLATION PLAN

In the event of the masterclasses being cancelled or a delayed start TechFest will contact you on the contact details you provided. Please keep an eye on TechFest's social media for the most up to date information. Please note all talks are subject to change.

WHAT YOU WILL NEED

To ensure you are fully prepared for each masterclass please bring along:

- pens
- pencils
- paper
- water
- snacks



TECHFEST TEAM



Wendy Findlay



Gabija Blazyte



Martha Gavan



Jenny Taylor



Sarah Chew



Julia Chew



Yashka Smith



Eve Nebbiolo



Kirsty Cranna



Yvonne McLellan

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