Oxford Cyber Security for Business Leaders Programme

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About the Oxford Cyber Security for Business Leaders Programme

In the last two decades, as digital adoption has spread across the world and radically transformed how organisations, governments and citizens interact, securing cyberspace has become a global, multi-billion dollar challenge. Cyber attacks have grown exponentially in frequency, complexity and sophistication, disrupting business, costing billions in damage, and sowing deep distrust. The problem continues to accelerate. As more business is conducted online and processes are automated, the more vulnerable organisations are to attack.

Businesses and leading executives, however, are looking beyond fear to create a competitive cyber strategy.

The Oxford Cyber Security for Business Leaders Programme prepares leaders from all industries for the increasingly complex future of cyber security. Participants will gain a full understanding of the challenges and potential of cyber, along with the frameworks and vocabulary enabling them to make strategic decisions to help secure their organisation's cyber-resilient future.

Over six modules, participants will access key ideas, principles and frameworks from thought leaders and academic instructors. Participants will learn how to build a cyber security strategy based on growth and trust, creating competitive advantage for their organisation.

Designed specifically for working executives, the programme design incorporates cognitive and neuroscience research to help busy professionals learn faster and more efficiently, and uses next-generation artificial intelligence (AI) technologies to enhance the collaborative learning experience and build rapport among programme participants.

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What you will learn

The programme examines cyber security from a proactive viewpoint, educating participants on cyber security's risks and benefits. The programme explores cyber from the basics of cyber hygiene to advanced concepts and applications.

In particular, the programme will cover:

- The foundations of cyber security, digital privacy, net neutrality, data governance, AI and digital ethics and how they alter and impact the way society and businesses operate
- Multiparty computation (MPC), personal privacy using distributed ledger, biometrics and other cutting-edge topics
- New software architecture to gather insights without exposing data
- New business opportunities and models that are emerging in the cyber future and how to apply them
- Harnessing cyber security as a growth strategy
- Utilising cyber security in a positive way that builds trust in the system and gives consumers confidence
- How new channels can be designed and built with security and privacy as a competitive differentiator

Participants will form teams to discuss and reflect on class material, and engage in cyber defence simulations to better understand practical application of theoretical concepts. They will obtain guidance from programme instructors and tutors, including discussions and webinars outside of core videos and exercises.

> "How can disruptive technologies like AI, biometrics, big data and blockchain establish themselves positively? Along the way, what can be done to ensure that we carry consumers with us on our journey and advance trust in innovation? We need to address not only the risks, but also the potential for good."
>
> **— David Shrier**, Programme Director, Oxford Cyber Security for Business Leaders Programme

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Key programme objectives: LEAP

Learn frameworks for effective strategies to create a cyber resilient business model that builds trust in the system.

Examine cyber security from the basics of cyber hygiene to advanced topics and its risks and opportunities.

Access a network of world-class academics, industry experts, and peers to collaborate and develop ideas, and to put theory into practice.

Procure a certificate of attendance from Saïd Business School, University of Oxford.

Is the Programme right for you?

You will benefit from the programme if you:

- Are a business leader, executive, or director in a private or public sector organisation who wants deeper insight and practical knowledge to employ cyber security for both short and long-term business strategies
- Interact with consumer data, and/or are responsible for compliance with data privacy regulations such as the General Data Protection Regulation (GDPR) or the California Consumer Privacy Act (CCPA)
- Are transitioning to a new job, or are considering a career move in which strong cyber trategy skills would be useful
- Want to learn alongside and build a professional network with like-minded executives whose titles include:

- Chief Executive Officer	- Managing Director	- Vice President
- Chief Information Officer	- Digital Innovation Officer	- Project Manager
- Chief Security Officer	- Senior Manager	- Digital Product Director
- Programme Manager	- Financial Analyst	- Compliance Officer

The learning journey

Each week you will engage in a mixture of:

- Digital videos or audio content, augmented by material which you can download in full to review as you have time

- Quizzes and exercises designed specifically to help you understand and retain new information

- Dialogue with expert instructors and your peers via discussion forums and small group sessions

- Real-life examples that help you understand how concepts delivered in the course material can be applied to your work environment

- AI-assisted coaching to improve your and your team's collaboration

Technical requirements

A modern desktop or laptop computer with the following features:

- Operating System: Microsoft Windows or macOS

- Browser: the latest version of Google Chrome, Mozilla Firefox or Microsoft Edge

- A working camera and microphone

- An internet connection with a minimum speed of 3 Mbps for both upload and download (10 Mbps is recommended)

Please note, devices other than a desktop or laptop computer are not supported.

ID verification

To be eligible for a certificate of attendance from Saïd Business School, University of Oxford, upon successful completion of the programme, you will need to verify your identity from within the online platform. Students will need to complete a ISO 27001-certified verification process, and will need a government-issued ID and a mobile phone or laptop with a camera.

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Programme curriculum

Orientation:	An overview of the programme, the next-generation AI-platform used to deliver it, and your community of fellow cyber security innovators and leaders.
Module 1:	Cyber Foundations I. Examine current cyber trends and learn the basics of keeping your business safe in the digital world. Analyse recent cyber attacks and explore mitigation options as part of a team. Begin identifying cyber challenges with an innovative, consumer-centric mindset.
Module 2:	Cyber Foundations II. Build skills to reimagine your business in a rapidly changing world. Gain an understanding of core cyber concepts such as identity, verification, access, biometrics, trust, and security by design. Analyse new threats. Team activity: as part of your team, explore ways to outthink the competition and address cyber challenges in creative ways.
Module 3:	Advanced Cyber Concepts. Dive deeper into the challenging issues of digital privacy, data governance, and the self- sovereignty of data. Explore new business opportunities in the data-driven world, and shift your mindset towards the cyber future. Team activity: exercise collaboration and leadership skills as your team responds to a simulated cyber attack.
Module 4:	Responsible Innovation I. Self Sovereignty and Identity: Confront cyber issues with complex technical and social implications, such as net neutrality, cyber inclusion, digital identity, and AI. Learn about cutting- edge developments around tokenising access and biometric identity solutions. Team activity: refine your team's proposed venture with a staged innovation plan.
Module 5:	Responsible Innovation II. Cyber Ethics and Impact: explore the ethical dimensions of the new cyber world, and how to innovate responsibly for the benefit of all. Exercise persuasive skills to position your cyber venture for positive future impact. Team activity: apply all you've learned with your team in a second, more complex, cyber attack simulation.
Module 6:	Cyber Opportunity. Complete the programme to create a safer, fairer and more profitable cyber future. Team finale: discuss your team's venture proposal and share insights with industry experts.

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Who you'll learn from

Our programme faculty brings together leading faculty from across the University of Oxford with industry experts, to facilitate the application of theory to practice.
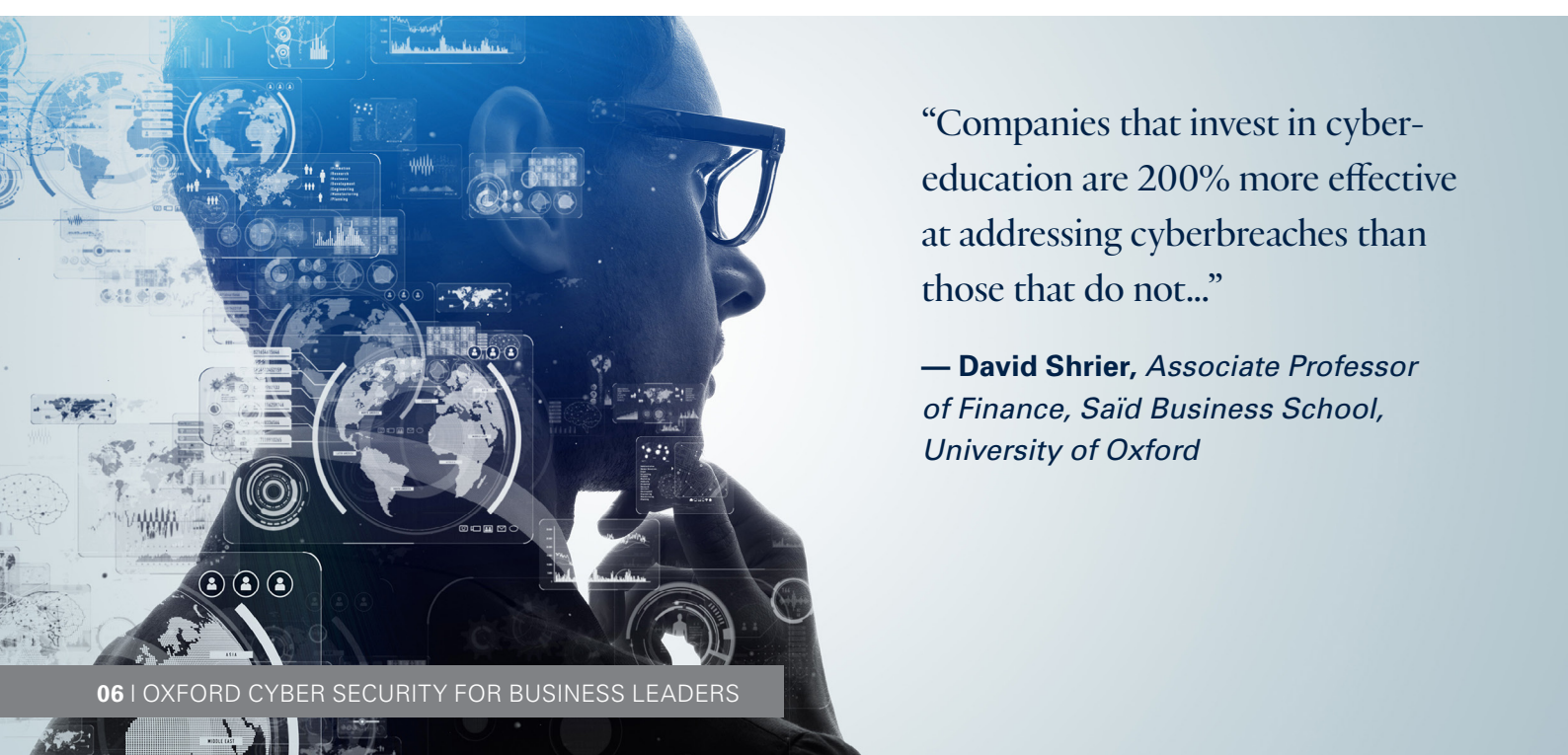
Your programme director

David Shrier

Associate Fellow, Saïd Business School, University of Oxford

David Shrier is a globally recognised authority on technology-driven innovation, a corporate innovator, and author. At Saïd Business School he is part of the Oxford Future of Finance and Technology Initiative, and has been integral to the development and leadership of online programmes addressing the opportunities and challenges around fintech, blockchain and cyber security.

David's work is featured in numerous publications including Forbes, CNBC, Newsweek, and The Asian Banker. He is the author of various industry reference books, including New Solutions for Cybersecurity, and co-edits the MIT Connection Science imprint of MIT Press. As a serial entrepreneur, he has co-founded several AI-enabled spinouts, and is an advisor on technology to the European Parliament, Her Majesty's Government, and the US Government. He also was principal author on the Commonwealth Fintech Toolkit, providing policy guidance to 53 nations.

"Companies that invest in cyber-education are 200% more effective at addressing cyberbreaches than those that do not..."

— David Shrier, *Associate Professor of Finance, Saïd Business School, University of Oxford*

Your programme instructors

Luciano Floridi

Professor of Philosophy and Ethics of Information and Director of the Digital Ethics Lab, University of Oxford

Luciano Floridi is a Professor of Philosophy and Ethics of Information at the University of Oxford, where he directs the Digital Ethics Lab of the Oxford Internet Institute, and a Fellow of Exeter College. He is also a Faculty Fellow at the Alan Turing Institute and Chair of its Data Ethics Group. His areas of expertise include digital ethics, the philosophy of information, and the philosophy of technology, and he has published over 150 papers in these areas in many anthologies and peer-reviewed journals.

Ivan Martinovic

Professor of Computer Science, University of Oxford

Ivan Martinovic is a Professor at the Department of Computer Science, Universityof Oxford, where he leads the Systems Security Lab and acts as Head of Security Research Theme in the department. Most of his research interests are in the area of cyber-physical system security and network security, and include authentication and intrusion detection, wireless network security, and the analysis of trade-offs between security and importance.

Pinar Ozcan

Professor of Entrepreneurship and Innovation, Saïd Business School, University of Oxford

Pinar Ozcan specialises in entrepreneurship and strategy in technology markets and directs the Future of Fintech Initiative at Saïd Business School. Her current research includes the open banking project, where she examines the industry disruption in banking through regulation and entry of fintechs, as well as the development of the sharing economy. In 2019, Pinar was chosen as a British Academy Mid-Career Fellow for her work on the disruption of banking in Europe and the UK.

Your programme instructors (continued)

Alex "Sandy" Pentland
Visiting Professor, Saïd Business School, University of Oxford

A founding scholar in the field of computational social science, Alex "Sandy" Pentland is a world-renowned professor, researcher, author, speaker, innovator, entrepreneur, and advisor. His research focuses on social physics, big data, and privacy, and he holds multiple academic and professional positions, including the Toshiba Professor of Media, Arts, and Sciences at MIT. Recognised by Forbes among "The World's 7 Most Powerful Data Scientists", Sandy's work has featured in global publications, and he has authored two books. He is a member of advisory boards for the UN Secretary General and the UN Foundation, and the American Bar Association.

Martin Schmalz
Associate Professor of Finance, Saïd Business School, University of Oxford

Martin Schmalz is an Associate Professor of Finance at Saïd Business School, where he is part of the faculty team for the Oxford MBA. His research areas include entrepreneurship, corporate finance and governance, behavioural finance and asset pricing, and various studies of the asset management industry. He has contributed to a range of global publications, and co-authored the book , The Business of Big Data: How to Create Lasting Value in the Age of AI.

Andrew White
Associate Dean for Executive Education, Saïd Business School, University of Oxford

Andrew White is the Associate Dean for Executive Education at Saïd Business School, and is responsible for forging connections between the research, resources and expertise of the School and the wider university with senior leaders in organisations throughout the world. He leads the development and delivery of custom, open and accredited executive programmes that serve as the primary platform for the School's communication with those facing the demands of leadership in the 21st century.

Guest experts

Ajay Bhalla
President, Cyber & Intelligence Solutions, Mastercard Executive in Residence, Saïd Business School, University of Oxford

Koral Anderson
Group Chief Security Officer, Deutsche Bank

Henri Arslanian
Global Crypto Leader, PricewaterhouseCoopers

Tal Bar Or
Founding partner and CEO of OCTOPUS

Lodrina Cherne
SANS Instructor, Cybereason

Tey El-Rjula
The Invisible Man and CEO, Tykn

David Fergusson
Executive Managing Director, M&A, Generational Equity

Johan Gerber
Executive Vice President, Security & Decision Products, Mastercard

Ron Green
EVP, Chief Information Security Officer, Mastercard

Patty Hatter
SVP, Global Customer Services, Palo Alto Networks

Jeremy Hitchcock
Co-Founder and CEO of WiFi management and IoT security startup, Minim

Simon Hunt
Executive Vice President, Cybersecurity Solutions Unit, Mastercard

Kaihan Krippendorff
Founder, Outthinker

Caroline Louveaux
Chief Privacy Officer, Mastercard

Allie Mellen
Security and Risk Analyst, Forrester Research

Guest experts (continued)

Catherine "Kitty" Parry
Founder and CEO, DeepView

Conor White
President of the Americas & Former CTO, Daon

David Rich
EVP, Vocalink (Mastercard)

Kelly White
Senior VP & CEO, RiskRecon

Frank Ricotta
CEO & Co-Founder, BurstIQ

Greg Woolf
Founder & CEO, Coalesce.ai

Amit Serper
VP, Security Research, Guardicore

Yves-Alexandre de Montjoye
Associate Professor, Data Science Institute and Department of Computing, Imperial College London

"After a very strict consent process, third parties will be able to access my data and use it for artificial intelligence purposes in order to analyse it and offer me better services."

— Pinar Ozcan, Professor of Entrepreneurship and Innovation, Saïd Business School, University of Oxford

The Esme Learning Advantage: AI-enhanced collaboration for superior learning outcomes

Using live interaction tools and AI, Esme Learning is transforming the experience of group collaboration through our proprietary, breakthrough technology platform.

The most effective learning experiences occur in small groups engaged in problem solving, creative tasks, or complex decision making. In an online work environment, when people lack conversational cues, it's hard for teams to build rapport and be successful.

Esme Learning's platform changes the way team members interact in real-time, while video calls are happening. It uses AI to analyse online conversation dynamics and provide real-time personalised feedback to each participant to ensure that the exchange of ideas is not dominated by a single person, and that the conversation is as inclusive as possible.

Simple on-screen cues guide participants to more effective team interactions.
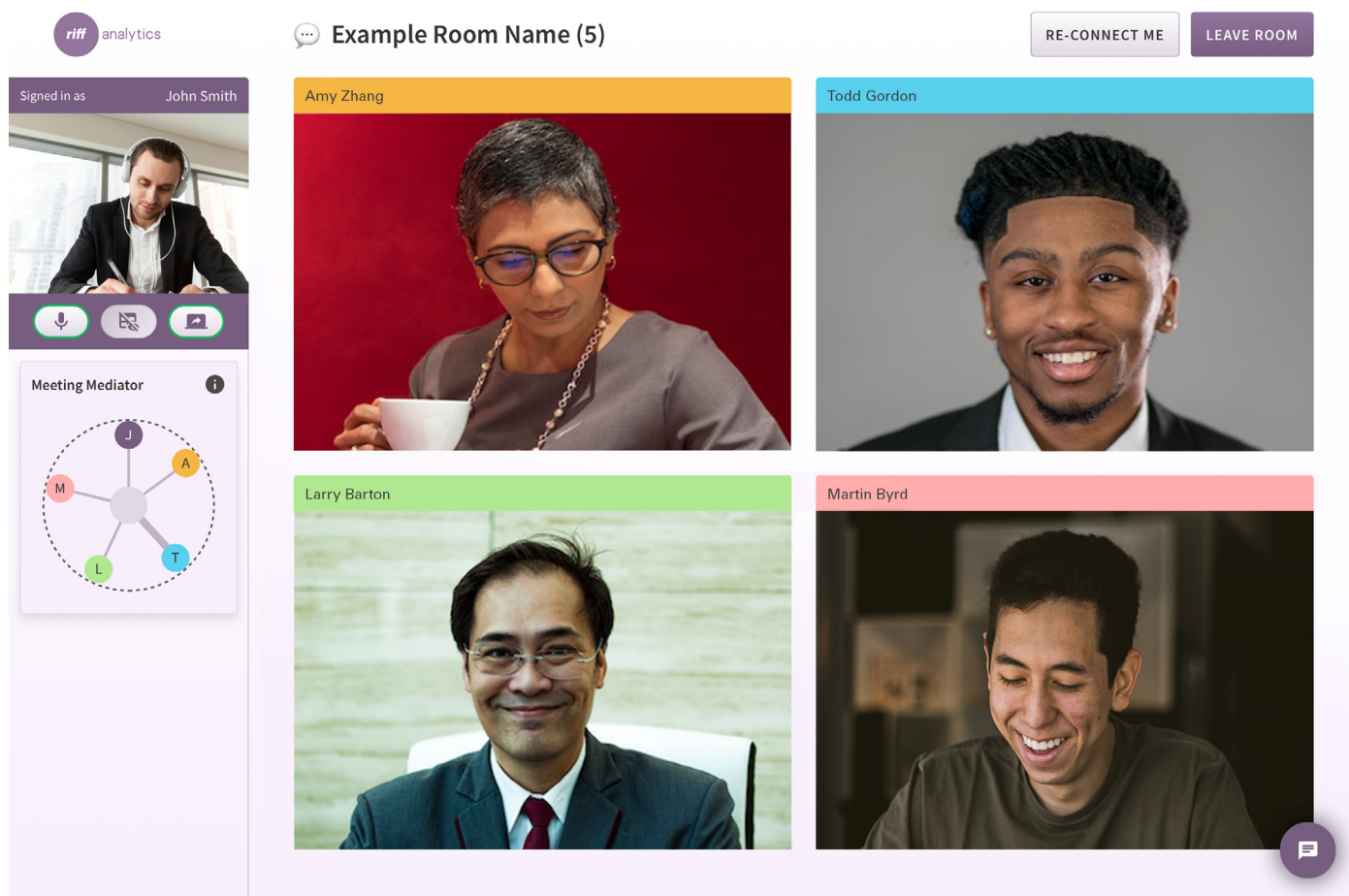
Personalised feedback

The Esme Learning platform analyses interactions to create a confidential, personalised dashboard that you can use to assess your own work. This report will not be shared with anyone, but allows you to better understand your work, interactions and group dynamic.

A word on privacy

Esme Learning doesn't record any content. Research reveals that the pattern of communications between individuals and within a group are far more predictive of outcomes than the content. So, Esme Learning tracks who speaks, not what they say, to help optimise group performance while preserving personal privacy.

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A transformational collaboration

Saïd Business School, University of Oxford has joined together with education innovators Esme Learning to completely reshape online learning. Grounded in cognitive and neuroscientific research, and using next-generation AI technologies, the programme delivers a highly effective and efficient learning experience for the busy professional.

About Saïd Business School, University of Oxford

Saïd Business School blends the best of new and old. Deeply embedded in an 800-year-old world-class University, Oxford Saïd strives to educate people for successful business careers. As a community, Oxford Saïd seeks to use business acumen and global networks to address long- horizon phenomena like demographic change, new technologies and natural resource scarcity. Saïd Business School is committed to delivering cutting-edge education and ground-breaking research that transforms individuals, organisations, business practice and society.

About Esme Learning

Esme Learning is helping executives and professionals reinvent themselves for the AI-enabled future. This is to meet the need to learn cutting-edge topics and skills, as the pace of technological transformation is impacting the future of work. Having already pioneered the short-course, tightly engineered model of learning that has revolutionised how tier one universities deliver online classes, our founders have formed Esme Learning to reinvent learning once again. We are bringing advanced tools and technologies to improve the learning experience, demonstrating completion rates above 90%, while delivering greater satisfaction ratings from 50% to 1,800% than other digital short courses and Massive Open Online Courses (MOOCs).

Saïd Business School, University of Oxford and Mastercard have collaborated to deliver an online programme that provides executives with critical cyber knowledge, insight and tools.

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