

## Physics Part III Minor Option Foundation Course in Entrepreneurship

### Programme

This course combines the practical aspects of how to create new business ventures with the underpinning theories behind innovation and entrepreneurship. It will consider the role of an entrepreneur in finding and creating opportunities to take new science through to marketable products, examine the key stages of developing a sound business proposition, and consider the challenges of growing the business venture. A particular feature of this course will be its emphasis on how new technology based businesses are financed.

#### Session 1: 16<sup>th</sup> January - The Role of the Entrepreneur in Making Science Useful to Society

*Shai Vyakarnam and Jo Mills, CEC*

- As well as providing an overview to the course, this first session will assess the impact that entrepreneurs have in facilitating the development of novel science and technology into products for the market place. It will introduce some of the classical theories and relate them to some well-known examples of real entrepreneurs and the ventures they have created.

#### Session 2: 20<sup>th</sup> January - Principles of Economics – Finding and Creating Opportunities

*Paul Kattuman, JIM*

- When is an idea more than an idea? This session will consider how to evaluate ideas to determine if they are real business opportunities or just wonderful technological or scientific ideas. It will also look at some of the economic theory that lies beneath the creation of new opportunities and how they generate revenues.

#### Session 3: 23<sup>rd</sup> January - From Ideas to Intellectual Property

*Pilgrim Beart, Seedcorp*

- Protecting your idea and generating value from intellectual property is a key part of venture creation. This session will provide an overview of the practical steps that an entrepreneurial company might take to protect ideas within the start-up venture. It will also provide an understanding of patents, copyright, trademarks and other methods of IP protection and how to select the appropriate one for a new business idea.

#### Session 4: 27<sup>th</sup> January - Determining the Resource Requirements

*John Snyder, CEC*

- What do you need in the way of resources to start planning and building your company? This session which will be lead by an entrepreneur and using their story as an illustration will provide an outline of what's required at the early stages and some practical steps on how to gather these resources together.

**Programme Director** – Dr Shai Vyakarnam ([shai.vyakarnam@cec.cam.ac.uk](mailto:shai.vyakarnam@cec.cam.ac.uk))

**Programme Manager** – Dr Jo Mills ([jo.mills@cec.cam.ac.uk](mailto:jo.mills@cec.cam.ac.uk))

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**Session 5: 30<sup>th</sup> January - Writing a Business Plan**

*Shai Vyakarnam, CEC*

- How do you construct a business plan to persuade people to back an idea? This session will start by providing a model which will help to clarify a business idea and prepare the groundwork for writing a business plan. It will then consider an overview of the framework for an effective business plan, and will provide an insight into what venture capitalists will look for when deciding whether to invest in a new business.

**Session 6: 3<sup>rd</sup> February - Getting a Team Together**

*Shai Vyakarnam, CEC*

- This session will cover the formation of a top management team. It will consider alignment of personal vision and values, social integration and forming a team with the right levels of knowledge, skills and connections.

**Session 7: 6<sup>th</sup> February - Networking as an Essential Skill**

*Louise Norton and Shai Vyakarnam, CEC*

- Networking is a key skill for entrepreneurs as they start to develop their business ideas. This will be a practical session in networking.

**Session 8: 10<sup>th</sup> February - Financial Statements 1**

*Peter Hiscocks, CEC*

- Companies use financial statements both as a management tool and as a method of reporting their performance to investors and others with an interest. Understanding financial statements and what's involved in developing them will be the focus of this session, however it will also help to define more of the vocabulary of business.

**Session 9: 13<sup>th</sup> February - Financial Statements 2**

*Peter Hiscocks, CEC*

- This session will build on the previous one, by considering which of the financial statements will need to be incorporated within the business plan. It will also consider how to determine how much you need to start up, as well as the possible sources of finance for new ventures.

**Session 10: 17<sup>th</sup> February - Markets and Marketing**

*Shai Vyakarnam, CEC*

- Understanding of who the customers are and why they might want to buy a new product are crucial to the success of a new venture. This session will examine the use of key marketing tools such as segmentation within an entrepreneurial context and will consider routes to market. It will also stress the importance of knowing what's different about the product concerned, what the customer needs and how the product might address those needs. Finally the session will consider how market research can provide a basis for financial projections within the business plan.

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**Session 11: 20<sup>th</sup> February - Business Models to Meet Unmet Needs**

*Shai Vyakarnam, CEC*

- This session will build on the earlier session on intellectual property to consider the business model or how revenues might be generated from new technology. The session will also consider the link between business models and the strategic direction of the company as well as the impact on financial projections.

**Session 12: 24<sup>th</sup> February - Making your Pitch to Investors**

*Alan Barrell, CEC*

- Communicating your idea clearly, concisely, convincingly and with enthusiasm is an essential skill when persuading others to become involved in your venture whether as an employee or investor. This session will cover the preparation and delivery of elevator pitches and will provide some key tips and examples of how to do this effectively. The session will also feature a real pitch from an entrepreneur.

**Session 13: 27<sup>th</sup> February - Venture Finance 1 - Valuing Your Venture**

*Peter Hiscocks, CEC*

- This session will consider some of the financial techniques frequently used to help assess the value of start-up companies. It will build on the earlier sessions which have built towards the generation of financial forecasts, by looking at discounted cash flow techniques both for investment appraisal and valuation. It will also consider other methods of company valuation, such as those using key financial ratios and industry sector norms.

**Session 14: 3<sup>rd</sup> March - Venture Finance 2 – Deals with Investors**

*Michael Ledzion, Polight Technologies Limited*

- Now that you have some idea of the value of your business, you will be ready to consider making deals with potential investors. This session will consider share ownership and parting with equity in return for finance. In addition it will consider the costs of this type of capital and the dilution of equity ownership through successive rounds of financing as the business grows.

**Session 15: 6<sup>th</sup> March - Managing the Exit: Trade Sale or the Stock Market**

*Jack Lang, CEC*

- Venture capitalists and other investors will ultimately want to see a return on their initial investment in the start-up venture. Frequently this happens by either a trade sale of the venture to a larger business or by flotation on a stock market. This session will consider the options and will look at a case example.

**Session 16: 10<sup>th</sup> March - How I did it**

*Richard Friend*

- This session will draw together the elements of the course from the perspective of the entrepreneur. Based on a real example it will provide additional insight and an opportunity to review the key concepts of the course and how they apply to new technology ventures.

**In addition there will be three supervisions to take place during the afternoons of 29<sup>th</sup> January, 19<sup>th</sup> February and 12<sup>th</sup> March with Jo Mills of CEC.**

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