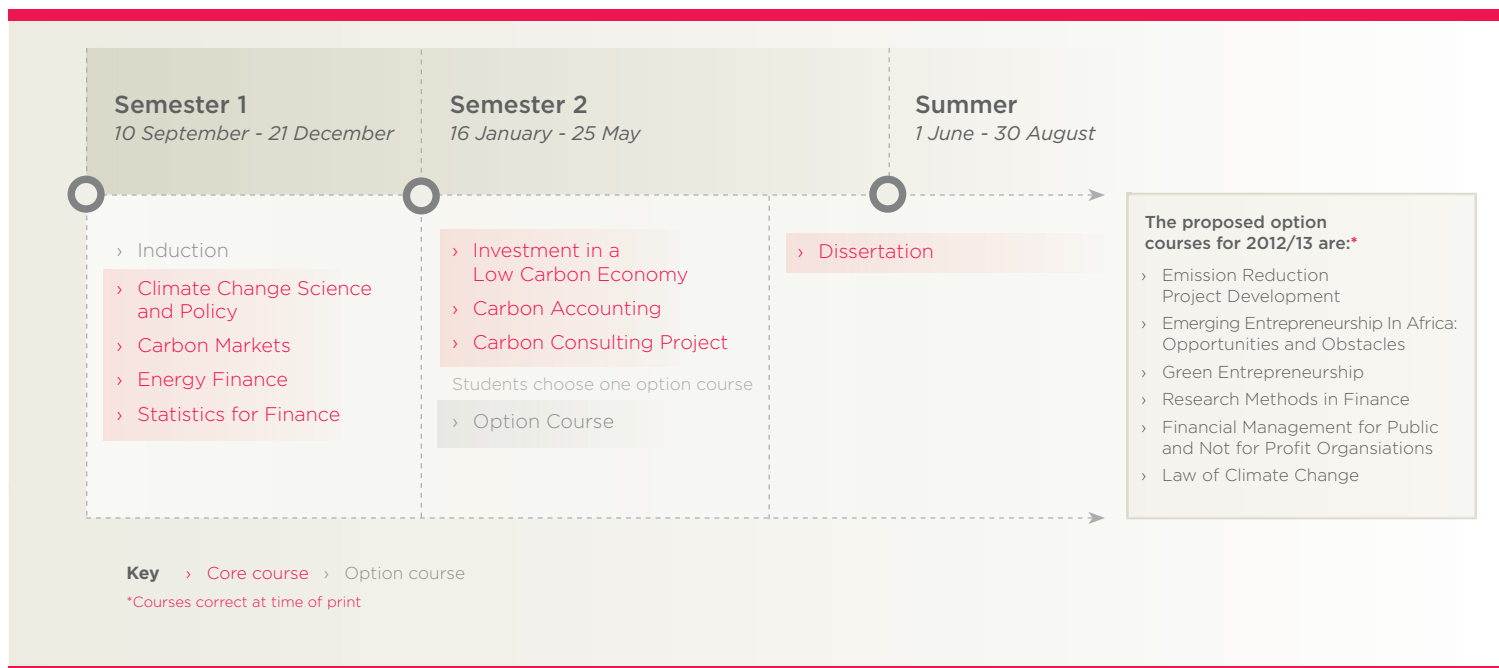


# MSc in Carbon Finance

## Programme Structure



## Details of core courses

### Climate Change Science and Policy

The course aims to introduce the underlying science of human-induced and naturally-occurring climate change. It examines predictive models of climate change and projected impacts. It also explores the politics and economics of climate change and policy responses at different scales.

### Statistics For Finance

This course will train students in the basic tools of Statistics for Finance. "Statistics for Finance" builds on such topics as elementary probability, simple sampling theory and statistical inference. Moments, Quantiles and distributions are introduced. Lectures are supported by weekly problem solving classes.

### Carbon Markets

The global carbon market was worth \$125 billion in 2000 and could reach €1.4 trillion by 2020 (Bloomberg New Energy Finance, 2010). These markets have been described by Commissioner Bart Chilton of the US Commodity Futures Trading Commission as "... clearly the next great frontier in the commodities trading world." There is an urgent need to develop a graduate skills base that can serve growing employer demand for expertise in this area.

### Energy Finance

The course aims to integrate conventional finance with energy finance, and to provide a basis for understanding the links between these and carbon finance. The Course Organiser will draw on both theoretical and applied concepts and will be taught by experienced practitioners, with knowledge of structured and energy finance. In addition to

introducing the students to the wider literature on energy finance, Dr Kretzschmar's publications and case studies will be used to ensure that students will come away from the course with specific skills in the evaluation of risks and opportunities associated with energy finance.

### Investment in a Low Carbon Economy

The 2009 Copenhagen Accord promises to deliver new, additional resources from developed to developing countries to mitigate and adapt to climate change, of US\$30 billion/year over 2010-2012, scaling up to US\$100 billion/year by 2020 (UNFCCC, 2009). At the same time, the IEA estimates that new, additional investment of, on average, US\$500 billion/year will be required to 2030, mainly in developed countries, to move to a global low-carbon economy (IEA World Energy Outlook, 2009). While carbon markets will undoubtedly continue to play a very important role, these substantial financial flows will not be created and delivered by carbon markets and internalising the price of carbon alone. A variety of different mechanisms, including both public and private sector finance, will be required for different technologies, sectors and countries. This course aims to provide students with an understanding of the nature of these new financial flows and the implications and opportunities for business.

### Carbon Consulting Project

The course aims to provide students with an opportunity to put theoretical learning into practice, and in doing so, to develop a wide range of transferable skills, such as team-working, leadership, presentation skills, problem formulation and solving, information retrieval and research skills, time

planning and project management. The course also aims to provide host organisations with a useful contribution to their own climate change-related objectives.

### Carbon Accounting

The course aims to provide students with an understanding of the range of measurement, calculation, reporting and auditing – in short, accounting – requirements and challenges imposed by climate change and the policy responses to climate change, in particular, market-based emissions trading schemes. Students will come away from the course with specific skills in the calculative practices associated with carbon accounting.

### Dissertation

The student will conduct a piece of original research over the summer block on a topic relating to Carbon Finance. Various types of dissertation are acceptable. A dissertation may critically review theoretical work, analyse problem-specific data or evaluate new modelling approaches. Examples of the aims of the dissertation are; to give the student the opportunity to practise and gain confidence in the use of skills which s/he has acquired in the preceding courses; to provide an opportunity to study a particular topic in depth.