

Data Science and Entrepreneurship



Data Science and Entrepreneurship

Offered by	Department Tilburg University
Language	English
Primarily interesting for	All students, but most relevant for students with background in Major Data Science.
Prerequisites	Required courses: Recommended courses:
Contact person	jbds@tilburguniversity.edu

Content and composition

During the minor courses, students are introduced to all aspects of independent and corporate entrepreneurship that are especially relevant to data scientists, from entrepreneurial finance to data protection risks. The minor is relevant for students who are considering starting their own company, but also for students who rather want to work for a (larger) corporation as it offers an allround business minor program.

Course code	Course name	Level classification
JBM110	Introduction to Entrepreneurship and Business for DS	2
JBM120	Business contracting	1
JBM130	Finance and entrepreneurship	2
JBM150	Risk management and data protection	3
JBM145	Business Value and Entrepreneurship	3
JBM165	Entrepreneurship; Theory and Practice	3

Course description

Note 1: Please note that this minor takes place in Tilburg. If you are a bachelor Data Science student you need to register for this course by sending an email to jbds@tilburguniversity.edu. For non-Data Science students: to participate in these courses you need to register as an individual 'bijvak' student at Tilburg University [Initial registration - minors | Tilburg University](#)

Note 2: select at least 3 out of these 6 courses (at least 15 ECTS).

Introduction to Entrepreneurship and Business for DS:

This course is intended to provide students with a basic understanding of entrepreneurship, businesses and business law. The course follows the life cycle of the company from business idea to a start-up and from a start-up to an IPO and discusses the related business and business law aspects in each stage. In the first (introduction) part of the course, an introduction to entrepreneurship is provided. In the second part of the course, we continue with launching the venture and its organization. Topics that are covered in this part of the course are the economics of organizations, the differences between several business forms including partnerships and corporations, the internal organization of corporations and corporate governance.



Data Science and Entrepreneurship



Part three of the course focuses on exit strategies, thereby completing the firm's lifecycle. Topics that are covered include M&A and the liquidation of companies.

JBM120 Business contracting

This course is intended to provide students with basic knowledge and understanding of a variety of business contracts. The course starts with an introduction to contract law and to business contracting, and it evolves to address the steps to enter into a contractual relationship and the different parts of the contract. Then, students are introduced in the world of contract negotiation and drafting and are required to negotiate and draft a contract. Next, different contract clauses in contracts at the start of a venture (COC, drag along, tag along, divorce clauses, etc.), and during the life span of a venture (force majeure, EAC, severability, etc.) are assessed and discussed. Lastly, students will gain familiarity with contract clauses in the venture in transaction (including the M&A process, with eg. Earn-out, MAC, non- compete).

JBM130 Finance and entrepreneurship

This course is intended to provide students with a basic understanding of entrepreneurial finance, exploring the intersection of the fields of (corporate) finance and (corporate) entrepreneurship. Important topics in the course are for example entrepreneurial financial contracting and term sheets, but also corporate finance and business valuation. The course is divided into two blocks. The aim of block I is to familiarize students with the essential knowledge in finance. Students will be equipped with the key concepts of finance, among which the time value for money, the capital structure of a corporation and the related problems, and corporate valuation. Differing considerably from corporate finance in a number of key assumptions, entrepreneurial finance will be the focus of block II. Students will learn about start-up financing and crowdfunding. The course ends with a termsheet analysis, both from the perspective of a venture capitalist and the entrepreneur.

JBM145 Risk management and data protection

Businesses face many uncertainties and risks, especially data science companies that usually have to manage and protect large amounts of data. It is of utmost importance to think about what could go wrong with your business and how to mitigate risks in an efficient way. This course discusses risk management from the perspective of data science companies, focusing on the internal control and responsibilities of companies and the role different (corporate) actors play. It starts with a clear identification of the different sources of risk data science firms are exposed to. An important source stems from the nature of data science firms; therefore this course provides an introduction to privacy and data protection issues and regulations data science firms face. Afterwards, students will be introduced to a case to establish a risk management system themselves.

JBM150 Business value and entrepreneurship

This course deals with some of the techniques for modeling and optimizing systems under uncertainty. It aims to increase the capability of analyzing managerial problems under uncertainty which occur, for example, in inventory and production control, telecommunications, maintenance, and insurance. The emphasis is on providing insight in the theory, on formulating an economic situation into a mathematical model and on providing practical examples in which the discussed models can be applied

JBM165 Entrepreneurship: Theory and practice

Entrepreneurship Theory and Practice introduces you to insights that will serve as a basis for you to develop an evidence-based approach to data sciences based "entrepreneurship." To understand entrepreneurship you need to understand how entrepreneurs discover or create opportunities, how they match that opportunity with a viable business model, how they (prepare for the) launch the venture, and how they mobilize the resources to start-up and grow. The course concludes by exploring how entrepreneurial ventures can be scaled. Along the way you may also learn why some engage in entrepreneurship.