## BUSINESS INFORMATION MANAGEMENT (NON-IE) elective package

TU/e EINDHOVEN UNIVERSITY OF TECHNOLOGY

BUSINESS INFORMATION MANAGEMENT (NON-IE) (This flyer will be updated soon)		
Offered by	Department of Industrial Engineering and Innovation Science	
Language	English	
Primarily interesting for	All non-IE students Major Industrial Engineering	
Prerequisites	Required courses: - Recommended courses: -	
Contact person	Robbert Reijnen (r.v.j.reijnen@tue.nl)	

## **Content and composition**

As information volumes increase, organizations are challenged with managing this information in an effective, efficient and systematic way. In this elective package, you learn the principles of information management through the use of information systems in modern businesses.

Information systems are the primary enabler of digital transformation in business. Organizations increasingly depend on their information systems to align internal organization structures and deal with the complexity and changeability of markets. As overseeing operations becomes too complicated for humans, business requirements related to information systems are growing exponentially. Up-to-date, complete and accurate information from big data has become a necessity to survive in an increasingly competitive world. Rapid developments in information technology enable application types unimaginable a few years ago. Increasing complexity and dependence on information systems are driving significant changes across many sectors, from logistics, mobility services and hitech manufacturing to healthcare.

In this specialized elective package, you will get a deeper understanding of the role of business information and information systems in the era of digitalization. In the Fundamentals of Business Information Systems course, you will learn how business information systems support modern organizations, and how data and processes models form the basis of the design of such systems. You will also learn how programming statements can be specified to manage business data. In the Design of Business Information Systems course, you will take a further step on the design of complex information systems in organizations based on the process and data models. In the Business Information Systems Management course, we will discuss the strategic importance of the effective use of business information systems. We will focus on the fundamental concepts related to their acquisition, implementation and management to drive the digital transformation efforts in organizations.

Course code	Course name	Level classification
1BV00	Fundamentals of Business Information Systems	1.
1BV10	Design of Business Information Systems	2.
1BK70	Business Information Systems Management	3.

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## **Course description**

#### Fundamentals of Business Information Systems (1BV00)

Modern organizations need business information systems to support their internal operations and their interactions with external parties (suppliers, customers, competitors, government, etc). As such, basic knowledge on the concepts of business information system development and management is essential. Business processes and information systems are interwoven: changing a business process results in changing the information systems supporting it and vice versa. It is therefore also important that students -as future practitioners- are able to model the complex relation between business processes and information systems. In this relation, data and process models play a key role. A data model specifies which data of the business process the supporting information systems should collect, store and manipulate. A process model specifies the steps in the business process and their interdependencies that have to be supported by the information system. Both types of model can be used to develop or configure information systems that support business processes. In this course, students also learn how programming statements can be specified to query, manipulate, define, and (access) control business data.

### Design of Business Information Systems (1BV10)

At the process level, information systems can be used for support and management of business activities, as well as for storage and transport of information (e.g. documents) regarding products and services. In this course, students learn how process and data modelling knowledge can be applied to create specifications of information systems that support business activities and how such specifications can be used to build a prototype of the system.

#### **Business Information Systems Management (1BK70**

To operate in the modern business ecosystem, organizations require a range of business information systems, such as Enterprise Resources Planning (ERP), Customer Relationship Management (CRM), Business Intelligence and Performance Management, Supply Chain Management (SCM) systems. This course starts with a discussion on the way digital technologies have influenced the business landscape. It continues with the introduction of some key concepts around information systems to provide a solid understanding of business information systems management. We then focus our attention on the main types of enterprise systems, basic issues related to the selection, implementation, architecture, and use of such systems. The students also get a hands-on experience on widely-used enterprise systems.