Breda University of Applied Sciences

Academy: ABEL

Program: Logistics Management / Logistics Engineering
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Contactpersoon

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1. Important dates

4 September, 2023	Start of Semester 1 courses
16 October –22 October, 2023	Autumn break
23 December –7 January, 2024	Winter break
2 February, 2024	End of Minor
5 February, 2024	Start of Semester 2 courses
10 February – 18 February, 2024	Spring break
27 April – 5 May, 2024	May holiday
21 June, 2024	Last day of Semester 2 courses
Monday, 3 July – Friday, 14 July, 2023	Year 2 Semester 2 re-sit period
6 July, 2026	Start of summer vacation

2. Program

Code	Title	ECTS	Semester
Year 1 Semester 1			
BLGE1.BOSCM-01	Basics of Supply chain management	5	1
BLGE1.BOSCM-01	Basics of Supply chain management	5	1
BLGE1.ESCM-01	Experience Supply chain management	10	1
BLGE1.MODPL-01	Modelling and planning	5	1
Year 1 Semester 2			
BLGE1.MLB-01	Material Logistics – Basics	5	2
BLGE1.MLII-01	Material Logistics – Improvement &	10	2
BLGE1.SLBI-02	Service Logistics – Basics & Innovation	5	2
Year 2 Semester 1			
BLGE2.INTOM-01	Introduction to Operations Management	5	1
BLGE2.OMPE-01P	Project: Operations Management in a Production Environment	10	1
BLGE2.CBSC-01	Cross Border Supply Chains	5	1
Year 2 Semester 2			
BLGE2.RSTB-01	Running sustainable Businesses	5	2
BLGE2.ENT-01	Entrepreneurship	5	2
BLGE2.SCRD-01	Project: Supply Chain Redesign	10	2

*Please note – the course descriptions, assessment methods, and required literature included in this document are from the 2022-2023 academic year and are subject to changes.

Year 4 Semester 1			
BMSC.20MINOR	Minor: Designing a future proof supply chain	30	1
BLC.22MINOR	Minor: Last mile and the city	30	1
BCW.20MINOR	Minor: The art of change in an era of transformation	30	1
ACS.20MINOR	Minor: Crowd Safety in Hubs and Events	30	1
BPGM.20MINOR	Minor: People and Goods on the Move	30	1
BUR.20MINOR	Minor: International urban redevelopment	30	1

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Year 1 Semester 1

OSIRIS-code:	BLGE1.BOSCM-01
Name study component:	Basics of supply chain management
Study load:	5 EC (=140 hours)
Coordinator:	Jan van Elderen
Lecturer(s):	Jan van Elderen, Sijbren Hogewerf, Simone Jacobs, Peter Kole, Vacature Logistiek, Thato Motloung, Jaap Smink, Arna van Strien, Raechel Torner
Learning objective(s):	Upon completion of this study component you are able to: - recognize all basic elements of Supply Chain Management; - recognize the different type of chains (e.g. Care Logistics, Event Logistics, Service Logistics, Human Logistics); - explain the concept of circularity in supply chains; - recognize the relation between the different flows within Supply Chain Management and Logistics; - recall the different parts, functions and roles within a logistic supply chain, in a way that gives a visual representation of the supply chain; - recall and relate the different possible 'values' of Data; - apply the basic functions of Spreadsheet software (Excel e.g.) in a practical situation; - distinguish between costs and expenditures on the one hand and revenues and receiving's on the other; - identify the various financial flows within a company and recognize the link between these flows and the other flows (physical, information); - apply financial statements as part of the financial component of the business plan, for budgeted as well as realized results: * Investment plan; * Financing plan; * Income statement; * Cash flow statement; * Balance sheets (opening and closing); - process the impact of various taxes on financial statements. E.g. VAT (calculation with percentages); - write a clear, detailed text in English related to the field of logistics synthesizing and evaluating information and arguments from a number of sources.
Content description:	In this study component, the following content is covered: In this study component you learn the different elements of entire End-to-End Supply Chains (SC). Starting with the customer and his or her demand, all activities in the Supply Chain are illuminated. The way in which a company can design the SC: Procurement and supply, warehousing, production, distribution, e-commerce & reverse logistics are topics that are dealth with. In addition, attention is given to the elaboration of the financial flows within the company, expressed in relevant financial statements such as the income statement and cash flow statement. Each topic will be introduced by a lecture and you will then elaborate a case related to that

	topic. Next to that, you are able to elaborate an individual case that will be the central theme during the whole study component.
Language:	EN
Type of study component:	Case
Teaching activity:	Lecture, Workshop, Fieldtrip
Examination:	Written exam 50% Written exam 50%
Mark:	Marks, F, MO
Required literature:	H. Visser, A. van Goor. Logistics: Principles and Practice: a demand and supply chain management approach. Hessel Visser BV (ISBN 9789081649117), B. Groenendijk. Getting More Out of Excel 2019: Essential Topics for the Professional. Boom Uitgevers Amsterdam (ISBN 9789024402281)
Required other materials:	Reader, e-book, Edubook Finance & Control year 1 (Purchase via buas.myedumundo.com); Reader, e-book, Supply chain management, Via Teams.

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OSIRIS-code:	BLGE1.ESCM-01
Name study component:	Experience supply chain management (blokko 2.0)
Study load:	10 EC (=280 hours)
Coordinator:	Jan van Elderen
Lecturer(s):	Jan van Elderen, Rosa Hagenaars, Sijbren Hogewerf, Azadeh Irajifar, Peter Kole, Luuk Koopman, Thato Motloung, Justin van de Pas, Paul Schuurmans, Arna van Strien, Rutger Thielen, Raechel Torner
Learning objective(s):	Upon completion of this study component you are able to: - deploy the basic elements of supply chain management; - translate text- and other practice based information sources into a visualisation of a Process, by means of the most commonly used language of Process Modelling; - recall and use the basic functions of software on Spreadsheet /Data management (Excel e.g.) and Visualisation software (Visio, Bizagi e.g.) in the contecxt of the project; - recall and reproduce the basics of descriptive statistics/data analysis; - intepret results with different types of (KPI) dashboards and explain how to use/apply these in practice; - recognize the potential impact of Blockchain on a supply chain; - create financial statements as part of the financial component of the business plan, for budgeted as well as realized results (e.g. in Excel): * Investment plan; * Financing plan; * Income statement; * Cash flow statement; * Balance sheets (opening and closing); - give insight into the relation between operational activities and profitability of a company (e.g. by means of tools like DuPont chart); - translate the basic legal aspects of a company to a decision on the legal form of this company; - identify the position/role of Sales and Marketing in the suppy chain and apply a marketing/sales strategy in the project context; - set-up a functional organization and create a strategy for dealing with the organisation's environment; - recognise collaboration and inter-relations between the different departments within a (virtual) company and define the position of each department within the Supply Chain; - deploy the basic elements of procurement; - respect the existence of ethical dilemma's within HRM; - apply appropriate tools to perform more effectively within intercultural groups; - present a structured, goal- and target group-oriented business plan; - write a structured goal and target group oriented business plan which makes appropriate use of visuals; - participate in a target oriented meeting; - write a well-structured, target-group oriented improvement plan; - explain the essence of theory in a project and application of content oriented theory;

- create a project plan and project charter in which you recall all steps and elements of a project based work approach;
- recognise (the importance of) data gathering and analyses within Project based working and apply this in the context of the project;
- recognize the (value of) breaking down a project in a systematic step-wise project approach and apply this in the context of the project;
- use written tools to structure a meeting or project.

Content description: In this study component, the following content is covered:

In this 'Serious Gaming' project, your group will start a new production company to experience all the elements of Logistics & Supply Chain in practice. You will be overloaded with different sources of (unstructured) information. From customer, strategy, sales, procurement, production, transport and distribution of the final products. You have to create your own structure. Your company will be faced with (the complexity of) Physical, Financial and Information Flows, and you will learn how to work in a multi person organisation. This also includes the setup, control and execution of all activities within- and outside of your company. Your goal is to work together, with all different roles and responsibilities, and to make sure that - even though sometimes there are conflicting interests - you build up a smooth organisation to serve the customer(s). Finally, your company must be able to determine and present their profits and/or losses. In the final weeks of this project, this will all come together in two reallife simulation games.

Language: EN

Type of study component: Case

Teaching activity: Project with coaching, Lecture, Workshop

Examination: Group assignment 50%
Individual assignment 50%
Process (obligatory)

Mark: Marks, P, F, MO

Required literature: B. Groenendijk. Getting More Out of Excel 2019: Essential Topics for the Professional. Boom Uitgevers Amsterdam (ISBN 9789024402281),
H. Visser, A. van Goor. Logistics: Principles and Practice: a demand and supply chain management approach. Hessel Visser BV (ISBN 9789081649117)

Required other materials: Reader, e-book, Website Blokko, Via Teams;
Reader, e-book, Reader composed of different sources, Via Teams;
Reader, e-book, Foundations of Finance & Control (Year 1 & 2) (Purchase via buas.myedumundo.com).

OSIRIS-code:	BLGE1.MODPL-01
Name study component:	Modelling and planning
Study load:	5 EC (=140 hours)
Coordinator:	Jan-Willem Boskaljon
Lecturer(s):	Jan-Willem Boskaljon, Imad Boulakhrif, Jan van Elderen, André Gijsberts, Sijbren Hogewerf, Peter Kole, Semi Torun

Learning objective(s): Upon completion of this study component you are able to:

- map processes in practice in a simple organization;
- recognize supply and demand concepts;
- recognize the concept of chain-integration;
- apply different ways to model supply chains;
- state the most commonly used function(s) of automation of information and processes;
- outline the possible functions and capabilities of an ERP-system;
- recognize the different main concepts and context of (Sales and Operations) Planning;
- recognize and compare the different possible (manual and automated) interfaces, and give practical examples;
- explain the function and aspects of Requirement management, and give practical examples;
- summarise the basic structure and processes within S&OP and relate them to a forecasting and inventory plan;
- translate text- and other practice based information sources into a visualisation of a Process, by means of the most commonly used language of Process Modelling;
- recognize the information flows in the supplychain / end-to-end processes by means of different forms/documents (invoices, packingslip e.g.);
- recognize the different hardware and software possibilities for an automated system (On Premise, Cloud e.g.);
- recognize the importance of business communication in gaining understanding of a manager and business partners;
- deliver a professional advice for MRP and S&OP calculations intended for a responsible manager;
- calculate the cost per unit (product or service) based on fixed and variable costs (simple setting):
  * Break-even analysis;
  * Absorption costing;
  * Direct cost;
- link financial flows to information flows and physical flows within the information system (e.g. financial accounting within an ERP-solution).

Content description: In this study component, the following content is covered:

This study component is part of the first semester and is linked to the Blokko project. During this course you will learn to distinguish between the different levels in planning and the information needs of these processes. You will learn that business decisions are supported with process mapping, cost calculations and integrated information systems. This module takes

	place simultaneously with Experiencing SCM in the first semester. The relevant theory of this course is applied in both study components. The module consists of four sub-areas: - Business Process Modelling – what is a business process and how can you, for example, design a warehouse process? In this part of the course, you will learn techniques to visualize processes and make them understandable; - Production Planning – how do you ensure that required materials and capacities such as labor and machines are available in a factory in a timely manner? In these lessons you will learn what, among other things, MRP1 and MRPII systems do, how supply and demand are matched (S&OP); - Cost Accounting – how do you provide insight into the costs associated with the manufacture of goods and the provision of services? In this part of the course you will learn how to value products in the different stages of production in accounting. - ICT & ERP – What exactly is ICT and which digital developments are important for the development of the logistics field. During these lessons you will become acquainted with various programs and systems that logistics organizations work with and you will gain insight into what an Enterprise Resource Planning system is and what you can do with it.
Language:	EN
Type of study component:	Case
Teaching activity:	Lecture, Workshop
Examination:	Individual assignment 50% Written exam 50%
Mark:	Marks, P, F, MO
Required literature:	B. Groenendijk. Getting More Out of Excel 2019: Essential Topics for the Professional. Boom Uitgevers Amsterdam (ISBN 9789024402281), H. Visser, A. van Goor. Logistics: Principles and Practice: a demand and supply chain management approach. Hessel Visser BV (ISBN 9789081649117)
Required other materials:	Reader, e-book, Proces modelling, Via Teams; Reader, e-book, ERP- MRP, Via Teams; Reader, e-book, Foundations of Finance & Control (Year 1 & 2) (Purchase via buas.myedumundo.com).

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Year 1 Semester 2

OSIRIS-code:	BLGE1.MLB-01
Name study component:	Material Logistics – Basics
Study load:	5 EC (=140 hours)
Coordinator:	Paul Schuurmans
Lecturer(s):	Robin Audenaerdt, Imad Boulakhrif, Emmi Bravo Palacios, Rosa Hagenaars, Azadeh Irajifar, Simone Jacobs, Luuk Koopman, Paul Schuurmans, Jaap Smink, Rutger Thielen, Raechel Torner, Semi Torun
Learning objective(s):	Upon completion of this study component you are able to: - compare different modes of transport; - explain the basics of intermodal/multimodal networks; - explain the basics of transport, warehousing & distribution; - explain the basics of hub and spoke network in relation to e.g. warehousing, shipping, airlines; - explain the basics of warehousing & inventory management, including theory, methods and models; - describe the basic aspects of Transport Management Systems (TMS); - describe the basic aspects of Warehouse Management Systems (WMS); - recognize the forms of AUTO ID (Barcosing, SSCP, RFID, scanning e.g.) for an automated process in a company; - recognize the basics of forecasting and the impact on warehousing & distribution; - apply basic calculation and analysis tools in different (transportation and distribution) contexts; - write a well-structured and target group oriented article using relevant visuals; - apply guidelines and correct grammar in the Dutch or English language; - use relevant sources and apply source referencing according APA; - identify the importance of Legislation and Regulations within Transport, Distribution and Warehousing; - describe the concept of Trends & Innovation within transport and warehousing; - apply the basics of descriptive statistics; - recognize connection between mathematics, statistics and the formula's which are used in iventory management.
Content description:	In this study component, the following content is covered: You will explore the basics of physical flows, including transport, warehousing, distribution and inventory management. You will write an article about a trend in logistics.
Language:	EN
Type of study component:	Case
Teaching activity:	Lecture, Workshop, Fieldtrip

Examination:	Written exam 70% Individual assignment 30%
Mark:	Marks, F, MO
Required literature:	H. Visser, A. van Goor. Logistics: Principles and Practice: a demand and supply chain management approach. Hessel Visser BV (ISBN 9789081649117), Rudd, Jerry. A Practical Guide to Logistics. Kogan Page (ISBN 9780749486310)
Required other materials:	Reader, e-book, additional study material, Via Teams; Reader, e-book, Foundations of Finance & Control (Year 1 & 2) (Purchase via buas.myedumundo.com).

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OSIRIS-code:	BLGE1.MLII-01
Name study component:	Material Logistics – Improvement & Innovation
Study load:	10 EC (=280 hours)
Coordinator:	Luuk Koopman
Lecturer(s):	Robin Audenaerdt, Imad Boulakhrif, Claartje Eggermont, Azadeh Irajifar, Simone Jacobs, Luuk Koopman, Rocco Reukema, Paul Schuurmans, Jaap Smink, Rutger Thielen, Semi Torun
Learning objective(s):	Upon completion of this study component you are able to: - explain the concepts of multi-modal transport in a given business case setting; - analyze the characteristics of warehousing- and inventory concepts; - explain the impact of a given warehouse location choice on transportation- and distribution opportunities; - determine the best possible location for a new warehouse based on a given business case with underlying dataset; - explain the different types of warehousing strategies, design and functions; - explain the basic principles of material handling - design a warehouse (storage and handling systems and areas); - determine most optimal flow of goods through the warehouse; - match the form of AUTO ID (Barcoding, SSCP, RFID e.g.) for an automated process in a company; - apply the concept and functioning of a Warehouse Management System (WMS); - apply the basics of functional designing for an innovatieve solution in a warehouseing environment; - apply basic statistical- and data analysis tools (descriptive) in a simple business case; - experience automated warehouse solutions; - calculate the cost per unt/logistical activities (product or service) based on direct and indirect costs (more complex settings) and distinguish process steps and activities- surcharge method; cost centre method; - distinguish between open and closed book information regarding costs of warehousing operations; - determine expected financial results of activities/projects and the financial impact of logistical improvements by means of a forecast calculation (part of a budget); - differentiate costs into operating expenses (OPEX) and capital expenditures (CAPEX) that are related to investments; - process the impact of various taxes on financial statements. E.g. VAT (calculation with percentages) in a simulation game; - analyze the financial performance of a company (on strategic level) by means of Ratio analysis; - be aware of differences in stock valuation (e.g. Fifo, Lifo); - advise how to identify the best supplier for specific services and measure their performance within the agreed conditions; - write an advisory report for a company decision, in a well-structured, convincing and substantiated manner;

- present a company decision orally, target- and target group-oriented, convincing and substantiated;
- locate macro economic data and translate this to logistical decisions;
- create a Service Level Agreement for a new customer and an new supplier;
- give a clear, detailed presentation in a convincing manner, supporting ideas with relevant examples;
- manage basics of law and legislation related to transport, warehousing and distribution (x-border transport law, liability etc.);
- explain the impact of sustainability and it's impact on (re)design of warehouses and operations;
- apply knowledge about different leadership styles, management- and decision tools in a safe business case/project environment;
- apply data gathering by making use of questioning (Interviewing) within Project based working;
- apply data gathering and analysis tools from Excel, math and statistics and apply learnings in decision-taking;
- create a project plan and project charter in which you recall all steps and elements of a project based work approach (risk & control & implementation);
- recall the importance of communication (create support in team), collaboration and leadership skills and styles during project execution.

Content description: In this study component, the following content is covered:

Based on an external analysis you will define the most applicable warehouse location. Subsequently you are assigned to design a new or adjusted layout for the chosen location, based on provided data which will be analysed and applied (warehouse design, material management and inventory management). Relevant logistical unit costs are calculated. Future quantites and volumes will be calculated and forecasted and based on this expected financial results are determined. The eventual content covers physical, information and financial flows. Followed up by an extended project, in which you continue with applying the learned matter to create innovative logistics solutions.

Language: EN

Type of study component: Case

Teaching activity: Project with coaching, Workshop, Lecture

Examination: Group assignment 70%
Individual assignment 30%
Process (obligatory)

Mark: Marks, P, F, MO

Required literature: H. Visser, A. van Goor. Logistics: Principles and Practice: a demand and supply chain management approach. Hessel Visser BV (ISBN 9789081649117),
Rudd, Jerry. A Practical Guide to Logistics. Kogan Page (ISBN 9780749486310)

Required other materials:	Reader, e-book, Readers/articles provided, Via Teams; Reader, e-book, Foundations of Finance & Control (Year 1 & 2) (Purchase via buas.myedumundo.com).

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OSIRIS-code:	BLGE1.SLBI-02
Name study component:	Service Logistics – Basics & Innovation
Study load:	5 EC (=140 hours)
Coordinator:	Justin van de Pas
Lecturer(s):	Piet Berkers, Emelie Bral, Bas Groot, Rosa Hagenaars, Sijbren Hogewerf, Karolien Kampstra, Justin van de Pas, Arna van Strien, Rutger Thielen, Raechel Torner, Semi Torun
Learning objective(s):	Upon completion of this study component you are able to: - recognize the concepts of service logistics in relation to transport & warehousing; - recall logistics principles of the service industry; - analyze and improve logistics processes within the service industry; - analyze and improve people movements before/during/after a transformation process; - explain the importance of mobility in a service environment; - apply logic of material logistics in a service business environment; - deploy a company analysis in the service industry on their organisation and process capabilities; - define the importance of the optimization of supply and demand in the service sector and recognize opportunities to apply capacity; management; - apply the basics of functional designing (blueprint) for a possible (innovative) solution in a service environment; - develop a simulation of human flows in a service logistics environment, using available data and different scenarios; - recognise the relationship between all stakeholders; - present the progress and findings in a creative and convincing way; - describe specific trends within the scope of service logistics; - identify the customer journey within service logistics; - develop an active listening attitude and using an open conversation method; - explore your purpose based on a personal analysis in a logistic context; - develop a critical/reflective attitude towards one's own personality and that of fellow students.
Content description:	In this study component, the following content is covered: This study component gives you an introduction in service logistics, with emphasis on people logistics, healthcare logistics and event logistics. You will work with a group of students on a case within the healthcare or event logistics context. You will present the case outcomes, using a square meter. After that, you will work out a future view on a specific trend in the context of service logistics and use storytelling to present your outcomes.
Language:	EN
Type of study component:	Case Lecture, Workshop

Teaching activity:	
Examination:	Group assignment 60% Individual assignment 40%
Mark:	Marks, F, MO
(Required) literature:	Reference book - Walstra, J. Operations management in the service sector. Pearson education (ISBN 9789043037129)
Required other materials:	--

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Year 2 Semester 1

OSIRIS-code:	BLGE2.INTOM-01
Name study component:	Introduction to Operations Management
Study load:	5 EC (=140 hours)
Coordinator:	André Gijsberts
Lecturer(s):	Piet Berkers, Imad Boulakhrif, Claartje Eggermont, André Gijsberts
Learning objective(s):	Upon completion of this study component you are able to: - recognise the complexity of a (production) planning issue with the use of specific tools (MRP-I & MRP-2); - outline the different roles of inventory in a (production) planning issue; - explain and make use of different Algorithm Logic Techniques and Linear Programming Techniques; - identify quality concepts (control, management, measurements/tools) in operations; - make use of data and formulas to analyse material management processes; - optimise one or more processes with the use of specific tools and techniques (e.g. lean); - summarise the roles of physical flows elements (TDWI) within Material Management in a single- and multi location environment; - recognise the various functions impacted when a production planning is changed (in single/multi-location environment); - identify capability- and capacity requirements within a multi-location (network) production environment; - recognise the strategic value of procurement (incl. S&OP); - define implications of sales-/procurement-/logistics-/production choices on other departments and their respective operations in an organisation.
Content description:	In this study component, the following content is covered: Operations Management is the systematic design, direction, and control of processes that transform inputs into services and products for internal, as well as external, customers. In this Case you will learn how to use operations to create value by looking at process and product design, layout choices, concepts as TOC, MRP and Lean supported by techniques as line balancing, linear programming and network analysis.
Language:	EN
Type of study component:	Case
Teaching activity:	Lecture, Workshop, Training
Examination:	Written exam 70% Individual assignment 15% Individual assignment 15%

Mark:	Marks, F, MO
Required literature:	Krajewski, L.J., Malhotra, M.K.. Operations Management: Processes and Supply Chains. Pearson (ISBN 9781292409863)
Required other materials:	Handouts, articles, magazines, Sheets of lectures, Excel files and assignments, Via Teams.

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OSIRIS-code:	BLGE2.OMPE-01P
Name study component:	Operations Management in a Production Environment
Study load:	10 EC (=280 hours)
Coordinator:	Irene Meeuwesen
Lecturer(s):	Imad Boulakhrif, André Gijsberts, Simone Jacobs, Irene Meeuwesen, Paul Schuurmans, Arna van Strien, Rutger Thielen, Semi Torun, Letty Zhu
Learning objective(s):	Upon completion of this study component you are able to: - develop purchasing strategies that support organisational strategies; - apply basic concepts of Contract- and Labour law; - interpret complex financial statements to perform a ratio analysis and understand the financial impact of logistical operations (e.g. on assets, equity and liabilities). (Linked with financial analysis and information flows (e.g. BI/KPI's)); - calculate the consequences of logistical decisions by using a cost-benefit analysis and advise on decisions (e.g. 'make or buy' and insourcing or outsourcing decisions); - analyse variances based on service or production activities (variance analysis); - create an investment selection by using the most appropriate tools, based on (link with strategic procurement): * Cash flows without time preference (e.g. payback period and average accounting return); * Cash flows with time preference (e.g. net present value and internal rate of return). - select the most appropriate way to calculate the cost per unit (product or service) in a complex setting e.g. by means of Activity-Based Costing and calculate the cost per unit; - solve a complex (production) planning issue with the use of specific tools (MRP-I & MRP-2); - demonstrate the capability to plan total material requirements, from procurement (sourcing) to delivery to the customer (Material Management); - discuss the potential capabilities of an automated Production Systems and the basic functions needed for a specific company/case; - apply different Algorithm Logic Techniques and Linear Programming Techniques; - recognise the different innovative concepts within the field of Production (factory planning systems e.g.); - analyse the (physical-flows) elements of Material Management in a given medium-complex business case; - explain the connection between, and impact of physical flows elements on production management in practice (Definition of PM); - execute a supplier evaluation as part of an organisation's procurement strategy; - resolve (potential) issues with material availability on single/multiple physical locations when a (production) plan changes (inventory, transport, network); - demonstrate capability- and capacity requirements (from a physical flows perspective) in a multi-location production environment;

- analyse the different aspects within Quality management and Continuous improvement.

Content description: In this study component, the following content is covered:

This project focuses on various aspects of Operations Management based on a business situation. You will develop three recommendations in the field of purchasing, process design and automation for a company. You will create a decision model for purchasing contract management of flow meters in which you decide which purchase strategy will be chosen for each item. You will make a material handling plan and a machine configuration and layout for the production of hospital beds. You will make a production configuration and an operating system for the wrapping of personal medical devices.

In the analyses, you will use layouts and datasets. These relate to products and the (current and future) consumption, technical properties of machines and products. In addition, you use financial data, so that you can make choices that lead to a combination of good delivery performance and a healthy financial situation. Your results highlight physical, information and financial flows that enable the company to innovate and grow. You learn to have an eye for quality management.

You learn to work in ERP. The engineering student delves into product development and planning. The management student will focus on out-sourcing.

Language: EN

Type of study component: Project

Teaching activity: Project with coaching, Lecture, Workshop

Examination: Group assignment 40%
Individual assignment 20%
Individual assignment 20%
Written exam 20%
Proces

Mark: Marks, F, MO

Required literature: Krajewski, L.J., Malhotra, M.K.. Operations Management: Processes and Supply Chains. Pearson (ISBN 9781292409863)

Required other materials: Handouts, articles, magazines, Datasets and hand-outs provided, Via Teams;
Reader, e-book, Edubook Finance & Control Year 2 (Purchase licence via buas.myedumundo.com).

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OSIRIS-code:	BLGE2.CBSC-01
Name study component:	Cross Border Supply Chains
Study load:	5 EC (=140 hours)
Coordinator:	Peter Kole
Lecturer(s):	Jan-Willem Boskaljon, Erik van Diffelen, Sijbren Hogewerf, Eric Hopstaken, Peter Kole, Paul Schuurmans, Raechel Torner, Semi Torun, Ron van der Wegen, Letty Zhu
Learning objective(s):	Upon completion of this study component you are able to: - identify and analyse the core concepts and techniques of import and export operations on strategic, tactical and operational level; - identify possibilities for intermodal-/multimodal-/synchromodal transport within a European distribution network; - advise on impact of change in INCO-terms for an importing organisation (both from a logistics-, financial and legal point of view) - incl. bonded warehousing; - apply basic concepts of trade compliance related to port logistics; - recognise intercultural differences and the influence on communication and behaviour; - develop skills to bridge intercultural differences; - develop skills and strategies to keep improving English skills; - advise on the working capital of a company: Stock management, Debtor management (incl. international payments) and cash management (link with INCO terms, law and import/export regulations); - translate the impact of operational choices on the working capital (e.g. currencies); - recognise the impact of taxes in an international environment; - explain the basics of Supply Chain Finance.
Content description:	In this study component, the following content is covered: You will investigate international flow of goods, supply chain networks, advise on strategic and operational level about improvement opportunities (including aspects like physical flows, legal, finance, etc.) and present to the board of investors in your role as a supply chain manager.
Language:	EN
Type of study component:	Case
Teaching activity:	Lecture, Workshop, Project with coaching
Examination:	Group assignment 40% Written exam 60%
Mark:	Marks, F, MO
Required literature:	Hans Veldman. Export Management: A European Perspective. Noordhoff Uitgevers (ISBN 9789001700324)

Required other materials:	Reader, e-book, Readers/articles provided, Via Teams; Licence, Edubook Finance & Control Year 2 (Purchase licence via buas.myedumundo.com).

Year 2 Semester 2

OSIRIS-code:	BLGE2.RSTB-01
Name study component:	Running Sustainable Businesses
Study load:	5 EC (=140 hours)
Coordinator:	Erik van Diffelen
Lecturer(s):	Sannie van Boxtel, Erik van Diffelen, Sijbren Hogewerf, Peter Kole, Luuk Koopman, Justin van de Pas, Paul Schuurmans, Raechel Torner
Learning objective(s):	Upon completion of this study component you are able to: - describe the basics of organisational structures, systems, culture and organisational behaviour; - recognise the importance of leadership skills and differences in leadership styles; - explain the basic concepts of human resources; - recognise the importance of ethics and integrity in doing business; - recognise the legal aspects of a company; - analyse organisations' marketing and sales strategies; - explain the theories and models about change (management); - explain how to create understanding and support for changes among employees, management and customers; - explain the relevance of CSR & sustainability in business; - analyse a business on CSR & sustainability; - explain the coherence between sales-/marketing-/import-/export-/business plan for a sustainable business; - identify the playing field between DMU and PSU; - make a well-founded price calculation to compile a profound quotation/value proposition; - explain the dynamics of sales conversation(s); - recognise the basics of entrepreneurial and sustainable finance.
Content description:	In this study component, the following content is covered: We are in the middle of the transition to a different sustainable and more circular society. For companies and organizations this means that they must organize themselves sustainably. This requires a change in their business and revenue models. So we need to move towards business models that have a positive impact on people, society and the environment. In this study component you will therefore analyze how companies and organizations could make a transition from all business facets such as HR, Legal, Sales & Marketing, Ethics, Leadership styles, Change methods and Procurement to a sustainable or circular business proposition in which in the Entrepreneurship follow-up study component, we will apply the acquired knowledge in practice.
Language:	EN

Type of study component:	Case
Teaching activity:	Lecture, Workshop
Examination:	Group assignment 40% Written exam 60%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Reader, e-book, Organizing for sustainability (Jonker, J. Faber, N. et al) = free e-book: https://link.springer.com/book/10.1007/978-3-030-78157-6.

*Please note – the course descriptions, assessment methods, and required literature included in this document are from the 2022-2023 academic year and are subject to changes.

OSIRIS-code:	BLGE2.SCRD-01P
Name study component:	Supply Chain re-design
Study load:	10 EC (=280 hours)
Coordinator:	Jan van Elderen
Lecturer(s):	Jan-Willem Boskaljon, Claartje Eggermont, Jan van Elderen, Sijbren Hogewerf, Simone Jacobs, Alinda Kokkinou, Justin van de Pas, Paul Schuurmans, Ron van der Wegen
Learning objective(s):	Upon completion of this study component you are able to: - apply the basics of a Supply design process; - describe the desirability, feasibility, and viability of an innovation; - develop written, oral, and visual communication skills related to a (research) report; - translate and present the results in a management report and a professional presentation; - communicate about costs of (logistics) processes with internal and external users of information; - use a (Financial) Business case as support in a supply chain (re)design; - create a strategic forecasting model and inventory control system for an end-to-end supply chain; - analyse impact of change in transportation mode on physical flows in the chain (transport, warehousing, distribution, inventory); - apply sustainability elements in the supply chain (re-)design; - benchmark recycling opportunities (incl. return logistics) in a specific service-, production- or events-related business case; - analyse gathered data and draw conclusions with use of statistical principles by using appropriate tools; - create a research model based on an integrated approach for the situation; create simple scenarios and scenario planning; - explain the theory with regard to validity and reliability and apply this theory when designing a research proposal; - gather relevant data and literature based on self selected research questions - identify risks and advise on possible measures (risk management); - select and apply data collection methods in order to gather data for answering research questions; - select the appropriate data sources and collection techniques to operationalise specific subjects and theory used within the research; - use data collection techniques for questioning (surveys, interviews and conversations) - recognise the impact of Supply Chain Strategy and how this is translated to the design on strategic, tactical and operational level; - describe the various forms of collaboration and integration, upstreams and downstreams, within the Supply Chain. Logistics Management: - analyse an organisation and formulate a strategy; - analyse the customer journey of a logistics organisation; - explain basic principles of contract management;

- map and analyse an organisation's internal and external environment (macro-/meso-/micro-analysis);
- deploy the basic elements of Supply Chain Finance;
- use BI tools to retrieve and visualise financial data on the Supply Chain.

Logistics Engineering:
- apply the basic functions of BI-software (e.g. Power BI);
- apply the basic functions of programming software (Python e.g.) to solve an complex problem
- build and make use of relational databases, and translate these to the reliability of the data;
- construct a design of a KPI dashboard for a specific supply chain choosing from different methods of Data visualisation;
- explain basic princples of a vendor selection process in various contexts (IT, materials, services, people, etc.);
- interpret and use the aspects of Data Quality (DAMA-DMBOK) to improve the quality outcome of (end-to-end) processes;
- recognise the possible advantages and risks when working with 'Big Data' and Select the right Data sources (3 V's) as input for the (re)design;
- select the right type of interfaces and network needed to connect specific different systems together, and select the right infrastructure (On premise vs Cloud e.g.);
- use visualisation languages for making modelling decision made in a (digital) process (Rule Management).

Content description: In this study component, the following content is covered:

This project is devided into two parts. In the first part, you will have the chance to gain experience in practical research, supported by indepth supply chain management theory. You will be guided through all the different steps of research (literature, qualitative and quantitative), including reporting skills. This is the perfect preparation for your first internship.

In the second part, the focus will be on Business Intelligence, including the tool 'PowerBi', where you will work, as a group, on a '(re)design' of a specific supply chain topic.

The Logistics Engineers will focus on Big Data/ Quality/Architecture, and the Management students will have the focus on different Legal and Supply Chain Finance aspect of the Supply Chain.

At the end of this project an individual defence will take place, where you can prove that you have gained the knowlegde to be ready for the next step: Into to 'real' world for a research internship!

Language: EN

Type of study component: Project

Teaching activity: Project with coaching, Lecture, Workshop

Examination: Individual assignment 20%

Group assignment 30%
Group assignment 50%
Proces

Mark: Marks, F, MO

Required literature: Krajewski, L.J., Malhotra, M.K.. Operations Management: Processes and Supply Chains. Pearson (ISBN 9781292409863)

Required other materials: Handouts, articles, magazines, Different articles and sources handed out, Via Teams.
Licence, Edubook Finance & Control (Purchase licence via buas.myedumundo.com);
Other, Grasple E-learning, Via Teams.

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OSIRIS-code:	BLGE2.ENT-01
Name study component	Entrepreneurship
Study load:	5 EC (=140 hours)
Coordinator:	Erik van Diffelen
Lecturer(s):	Erik van Diffelen, Jan van Elderen, Peter Kole, Semi Torun

Learning objective(s): Upon completion of this study component you are able to:

- discover co-creation innovation processes;
- explain the need for business model innovation;
- recognise key drivers of innovation;
- set up a business model, from the perspective of new concepts related to the Logistics industry and/or your own field of interest;
- discover and identify key elements when starting a business;
- apply theory in the areas of management & organisation, marketing, logistics and accounting in relation to entrepreneurship;
- model and implement strategies for significant procurement;
- align system prcesses and functions within your organisation;
- develop written and visual communication skills related to a business plan;
- develop business model options based on generated insights;
- validate the business model options and elaborate one of them into a business case;
- execute a business presentation to get a message across in a convincing way;
- make a business plan (incl. sales/marketing/procurement/production/finances/operations/logistics) for delivering a product or service to the market;
- recognise the importance of business communication in gaining understanding of a manager and business partners;
- analyse financial flows and cash needs of (logistics) start-ups;
- discover and develop personal intra/entrepreneurial skills.

Content description: In this study component, the following content is covered:

The logistics industry is confronted by immense changes; new technologies, new market entrants, new customer expectations and new business models. Like all changes, this brings both risks and opportunities. There are many ways the sector could develop to meet these challenges, some evolutionary, others more revolutionary. One thing is for sure: development is necessary. The frontrunners are the companies that are able to anticipate on the trends, developments and opportunities, also called 'entrepreneurship'. Entrepreneurship is also the engine to boost employment in the sector. So, it is crucial that companies have to adopt a more entrepreneurial approach and professionals have an entrepreneurial or intrapreneurial attitude. In addition to knowledge and skills, your success depends also on the extent to which you are able to demonstrate flexibility and an entrepreneurial mind-set. In this study component you will learn why an entrepreneurial mind-set is important, what are the characteristics of an entrepreneur and an intrapreneurial professional and you are developing and setting up a business model for a new (innovative) logistic concept.

Language:	EN
Type of study component:	Case
Teaching activity:	Lecture, Workshop, Training
Examination:	Group assignment 50% Individual/group assignment 20% Individual assignment 30%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

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Year 4 Semester 1 – Minors (30 ECTS)

OSIRIS-code:	BDSC.22MINOR
Course name:	Designing a future proof supply chain
Study load:	30 EC (=840 hours)
Coordinator:	Eric Hopstaken
Lecturer(s):	Jan-Willem Boskaljon, Sannie van Boxtel, Erik van Diffelen, Jan van Elderen, Eric Hopstaken, Luuk Koopman, Hans Quak
Learning objective(s):	Upon completion of this study unit you are able to: - apply knowledge and theories about integrated supply chain management from dedicated workshops - review a supply chain related problem or challenge from a company/organisation within the strategical, tactical and operational context of that company or organisation - develop and pilot improvements in the end-to-end supply chain and present these, together with outlining needs and wants for/from the organisation to make these improvements sustainable - define and apply a full-fletch design science research methodology, based on different theories; apply in this methodology a systematic literature review, including data-collection and analysis on validity and reliability.
Content description:	In this study unit, the following content is covered: Experience what it is and how it feels to make a solid improvement in the supply chain of an existing company or organization. This improvement is based on tools from Design Thinking and its 'magnitude' of improvement/change was proven with a real-life concept/pilot. Lots of (hard) teamwork, fun, collaboration and personal/professional development.
Language:	EN
Teaching activity:	Project with coaching, LAB with coaching, Workshop
Examination:	Group assignment 50% Individual assignment 50%
Mark:	Marks, P, F, MO
Required literature:	Lewrick, Link, Leifer. The Design Thinking Toolbox. Wiley (ISBN 9781119629191), Grant, D.B., Trautims, A., Wong, C.Y. Sustainable Logistics and Supply Chain Management. Kogan Page (ISBN 9780749478278 - November 2022 ISBN 9781398604438)

Required other materials:	Reader, e-book, "Sustainable Logistics & SCM" - Princples and practices for sustainable operations and management, 2nd edition, Via Teams.

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OSIRIS-code:	BLC.22MINOR
Course name:	Last mile & the city
Study load:	30 EC (=840 hours)
Coordinator:	Peter Kole
Lecturer(s):	Peter Kole, Jeroen Weppner
Learning objective(s):	Upon completion of this study unit you are able to: - create an idea about how to organize the last mile in an urban environment in 2030, where knowledge and ideas around logistics, built environment and (smart)mobility get applied, analyzed and evaluated jointly; - understand and apply the basics of (city)logistics, built environment and (smart)mobility; - understand the entire integral chain of the first and last mile of goods and people; - to understand the difference between the cities public ambitions and the private organizations goals and their effect on future solutions; plan transition within complex environments with many stakeholders involved; - recognize and translate relevant future last mile trends and developments (of both goods and people) and their associated impact on urban space and lay-out; - to discuss the (inter)national ambition on sustainability in urban environments; - to determine the complexity of applying innovative mobility as a last mile solution in a public environment.
Content description:	In this study unit, the following content is covered: How to organize the last mile in an urban environment in 2030? Amongst others urbanization, climate change, scarcity of space, and changing shopping behavior affects the livability of cities. Air quality and accessibility are under constant pressure. Therefore, the last- and first mile of goods and people needs to be rethought. The minor “Last mile & the city” challenges you to generate innovative solutions for the last mile, considering the use of public space. By doing so you get the opportunity to develop and combine logistics-, urban development- and mobility knowledge and experience. In this minor you will discuss the public – private debate trying to find a solution for a more sustainable and livable urban environment, where most people live, recreate and work. We will focus on the motives of the

three main stakeholders: the government, the industry and the citizens of the city. What are their drivers for change? What kind of last mile solutions are currently tested in an urban environment and which can be (combined) used in the future? What other new innovations can you think of? How to facilitate these from an infrastructure- and regulating perspective? What is the impact on urban space and lay-out? Is it complex to test or use innovative 'last mile' solutions, like delivery robots or automated- and connected vehicles in the public space? And finally, how can you ensure that our environment is more sustainable in 2030 as part a of transition?

During this minor you work in multi-disciplinary teams to realize innovative solutions enabling a sustainable and livable city. You will apply your knowledge, competences and ideas on real-life cases sponsored by one or more municipalities or companies.

The final product of the minor includes an overall background report, a 15-pager highlighting the unique elements of your vision and concepts, a change plan and a pitch supported with posters, 3D models, gaming or any other (innovative) tools to emphasize your innovative ideas.

Language:	EN
Teaching activity:	Lectures, guest lectures, workshops, excursions
Examination:	Test/individual assignment 33% Test/individual assignment 33% Test/individual assignment 33%
Mark:	Marks, MO
Required literature:	--
Required other materials:	--

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OSIRIS-code:	BAC.22MINOR
Course name:	The art of change in an era of transformation
Study load:	30 EC (=840 hours)
Coordinator:	Sannie van Boxtel
Lecturer(s):	Sannie van Boxtel, Erik van Diffelen, Karolien Kampstra, Jaap Smink, Rutger Thielen
Learning objective(s):	Upon completion of this study unit you are able to: - successfully plan, execute, and evaluate change initiatives; - make an analysis of external developments which can be of influence on the organization; - set up a business model; - formulate strategic options based on the analyses; - analyze your own organization in terms of strengths and weaknesses; - formulate strategic objectives in such a way that operational objectives can be derived from them; - diagnose a complex situation with appropriate diagnosis models; - provide insight into how the current situation is maintained by various factors; - identify the core of the change issue; - properly substantiate the choice for a specific change strategy, considering the nature of the issue, the change history of the organization, the change agents and the energy and resistance of all those involved; - translate the chosen change strategy in an intervention plan with a mix of interventions, aimed at the effective and efficient implementation of the change (including a training plan); - develop a communication plan which fits the change strategy; - determine the feasibility of the intended change (financial, legal and organizational); - being able to write a resistance handling plan.
Content description:	In this study unit, the following content is covered: - Change Management - Project Management - Learning & Development - Strategy & Innovation - Organisational Behavior
Language:	EN
Teaching activity:	Project with coaching, LAB with coaching, Workshop
Examination:	Group assignment 70% Individual assignment 30% Process (obligatory)

Mark: Marks, P, F, MO

Required literature: J. Kotter. Leading Change. Harvard Business School Publishing (ISBN 9781422186435),
Kotter, John P. Accelerate: building strategic agility for a faster moving world. Harvard Business Review Press (ISBN 9781625271747)

Required other materials: --

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OSIRIS-code:	BCS.22MINOR
Course name:	Crowd Safety in Hubs & Events
Study load:	30 EC (=840 hours)
Coordinator:	Justin van de Pas
Lecturer(s):	Justin van de Pas
Learning objective(s):	Upon completion of this study unit you are able to: - clear understanding of important concepts of Crowd Management and application of crowd modelling; - ability to discuss application of crowd safety management (with concepts such as planning, licensing and operations) and its relevance to the wider legal, organisational, regulatory and risk management framework; - ability to discuss appropriate risk assessment methodologies for crowd safety, how this impacts on legislation and guidance, and/or which areas of crowd safety need improvement; - demonstrating understanding of core principles and applications of the tools. Providing some detail of use of models, information they provide and how this assists in the risk analysis of crowd dynamic; - clear understanding of important concepts within mobility and urban design by applying and analysing integtal alignment, design and planning processes and urban and spatial design; - ability to discuss the application of crowd simulations by analysing crowd simulations, applying measuring and monitoring tools, queing theories and crowd simulations; - ability to discuss application of stakeholder analysis, procedures and permits and law and regulations; - ability to discuss appropriate risk assessment methodologies for crowd safety, how this impacts on legislation and guidance, and/or which areas of crowd safety need improvement; - communicate the information about the tools to users and/or team, with the goal to communicate with the audience; - analysing an event or venue, including four core modelling elements; - recognise group behavior and understanding causality; - (deep) researching and correct referencing; - the use of clear graphics.
Content description:	In this study unit, the following content is covered: - crowd safety backgrounds and dynamics; - crowd safety, modelling and monitoring; - crowd safety, design & organization; - crowd simulations and the use of simulation; - crowd safety, decisions & response; - crowd simulations; - (event) Logistics; - mobility and Accessibility; - overtourism.

*Please note – the course descriptions, assessment methods, and required literature included in this document are from the 2022-2023 academic year and are subject to changes.

Language:	EN
Teaching activity:	Lecture, Workshop, Project with coaching
Examination:	Group assignment 50% Individual assignment 50% Process (obligatory)
Mark:	Marks, F, MO
Required literature:	Still, G.Keith. Introduction to Crowd Science. (ISBN 9780367866709)
Required other materials:	--

*Please note – the course descriptions, assessment methods, and required literature included in this document are from the 2022-2023 academic year and are subject to changes.

OSIRIS-code:	BUR.22MINOR
Course name:	International urban redevelopment
Study load:	30 EC (=840 hours)
Coordinator:	Paul van de Coevering
Lecturer(s):	Paul van de Coevering, Zhan Goosen, Ed Ravensbergen, Ineke Spapé
Learning objective(s):	Upon completion of this study unit you are able to: - assess the current situation in your international case study area with the STEEP and SWOT analysis tools; - create integrated concepts with hardware, software and orgware interventions for the redevelopment and revitalization of your case study area which are grounded in theory and are alligned with the results of your SWOT analysis; - create a detailled integrated plan to tackle societal issues related to urban sprawl and car dependency in your case study area; - provide a coherent storyline from the SWOT analysis to concepting and the specific measures; - conduct targeted Urban Guerilla tactics in practice.
Content description:	In this study unit, the following content is covered : - in depth analysis of a case study area in North America; - differences in land use and transportation networks between European and Northern American cities; - societal challenges related to urban sprawl and a car dependent culture; - hardware, software and orgware measures and their synergies; - designing and planning from masterplan to detailed street designs; - urban Guerilla tactics and connection with hardware, software orgware measures; - effective presentation skills; poster presentations, videos, brochures and other means of conveying your message.
Language:	EN
Teaching activity:	Project with coaching
Examination:	Individual assignment 50% Group assignment 50%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

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