



APPLIES TO ACADEMIC YEAR 2013/2014

## GRA 6753 Operations 1

### Programme

Master of Science in Business, Master of Science in Business (Logistic - Supply Chains and Networks), Specialization Course

### Responsible for the course

Stein Erik Grønland

### Department

Department of Strategy and Logistics

### Term

According to study plan

### ECTS Credits

6

### Language of instruction

English

### Introduction

Logistics management operations requires a good knowledge of methods and concept for optimising cost and service levels. Through the methods, also an understanding in operational decisions and their impact will be given.

Students participating in this course will gain an understanding of the management of logistics operations. Emphasis will be on various methods for optimising supply chains, and how they can be implemented in the real world.

### Learning outcome

A good understanding of logistics operations and outcomes.

#### Acquired knowledge:

- (i) To understand process capacities and evaluation of those
- (ii) To understand how to best utilise bottlenecks in processes
- (iii) To gain knowledge of forecasting
- (iv) To gain knowledge of cycle stock management
- (v) To understand safety stock management and optimisation of service levels
- (vi) To get some understanding of basic issues in scheduling
- (v) To understand aggregate planning of operations

#### Acquired skills:

- (i) Optimisation techniques
- (ii) To be able to understand and use logistics models
- (iii) To be able to discuss logistics management with other specialists

#### Reflection:

- (i) To understand the role of systems support in Supply Chain Management
- (ii) To appreciate and understand possibilities and limitations of optimisation models
- (iii) To better understand the day to day challenges of logistics management

### Prerequisites

Bachelor degree qualifying for admission to the MSc Programme + A basic logistics course at the bachelor level

### Compulsory reading

#### Books:

Cachon, Gérard, Christian Terwiesch. 2012. Matching supply with demand : an introduction to operations management. 3rd ed. McGraw-Hill

Chopra, Sunil, Peter Meindl. 2013. Supply chain management : strategy, planning, and operatio. 5th ed. Pearson

#### Other:

During the course there may be hand-outs and other material on additional topics relevant for the course and the examination.

### Recommended reading

### Course outline

**1.Introduction:**

Models and concepts in logistics operations

**2. Understanding the supply process:**

Evaluation process capacity

**3. Estimating and reducing labour cost:**

A process perspective

**Batching and flow interruptions:**

Optimising the flow through a supply chain:

**4. Forecasting**

Requirements to forecasting, static forecasting

**5.Forecasting**

Adaptive forecasting

**6.Cycle stock**

Inventory management with multiple products.

**7.Cycle stock**

Discount schemes, joint optimisation for supplier and customer

**8.Safety stock****9. Optimal service levels****10. Scheduling****11. Aggregate planning****12. Pricing, coordination, IT and E-business****Computer-based tools**

Microsoft Excel., It's learning

**Learning process and workload**

A course of 6 ECTS credits corresponds to a workload of 160-180 hours.

Students are expected to actively participate through discussions and exercises. There will be optional evaluations of test assignments.

Please note that while attendance is not compulsory in all courses, it is the student's own responsibility to obtain any information provided in class that is not included on the course homepage/It's learning or text book.

**Examination**

A 5 hour written exam (individual) accounting for 100% of the final grade.

Specific information regarding student evaluation beyond the information given in the course description will be provided in class

**Examination code(s)**

GRA 67531 written exam accounts for 100% of the final grade in GRA 6753.

**Examination support materials**

All aids allowed.

Exam aids at written examinations are explained under exam information in the student portal @bi. Please note use of calculator and dictionary in the section on examaids

**Re-sit examination**

It is only possible to retake an examination when the course is next taught.

The assessment in some courses is based on more than one exam code.

Where this is the case, you may retake only the assessed components of one of these exam codes.

Where this is not the case, all of the assessed components of the course must be retaken.

All retaken examinations will incur an additional fee.

**Additional information****Honor Code**

Academic honesty and trust are important to all of us as individuals, and represent values that are encouraged and promoted by the honor code system. This is a most significant university tradition. Students are responsible for familiarizing themselves with the ideals of the honor code system, to which the faculty are also deeply committed.

Any violation of the honor code will be dealt with in accordance with BI's procedures for cheating. These issues are a serious matter to everyone associated with the programs at BI and are at the heart of the honor code and academic integrity. If you have any questions about your responsibilities under the honor code, please ask.