



APPLIES TO ACADEMIC YEAR 2016/2017

ELE 3744 Business Dynamics

Programme

Elective, Exchange Program

Responsible for the course

Kim van Oorschot

Department

Department of Leadership and Organizational Behaviour

Term

According to study plan

ECTS Credits

7,5

Language of instruction

English

Introduction

Many of the problems organizations face arise as unanticipated side effects of their own past actions. All too often the solutions they implement to solve important problems fail, make the problem worse, or create new problems. Effective decision making and learning in a world of growing complexity requires us to think differently. We need to think outside the box and develop tools to understand this growing complexity and learn how solutions sometimes create problems instead of solving them.

This course introduces students to *business dynamics* as a method for analyzing and modeling business problems and strategies. This method enables us to increase our understanding of business behavior. The method also enables us to simulate organizational behavior (or the behavior of parts of an organization, like a team). These simulations allow us to create "management flight simulators" that can be used to understand the past and predict the future. As pilots learn how to fly in a flight simulator, managers learn how to make better decisions by testing out different scenarios in their management flight simulator. When we understand the past and can predict the future, we can improve business performance.

This course is especially applicable for students that want to learn a *new way of thinking about business processes*. Furthermore, the course gives students, interested in a future career as consultant or business analyst, a competitive edge in the job market. This new way of thinking applies to all kinds of businesses and problems; therefore, the course is suitable for students from all bachelor programmes.

Learning outcome

Acquired knowledge

After completing the course, students will be able to explain what the underlying causes are of typical business' behavior and performance. Furthermore students will be able to understand how well-meant decisions or rules often (unintended) *create* business performance issues, rather than *solve* them.

Acquired skills

After completing the course, students will be able to develop simulation models of businesses, and perform *what-if* scenarios with these models. Based on the outcomes of the what-if scenarios, students will be able to develop better decisions leading to higher business performance.

Reflection

After completing the course, students will be able to reflect on their "old way of thinking" and how it differs from the new way of thinking. Students will be able to recognize when a problem is dynamic, and when they should apply the "new way of thinking". Students will learn to look at business or social problems from a broader perspective.

Prerequisites

None.

Compulsory reading

Collection of articles:

Kim van Oorschot. 2013. Collection of articles: ELE 3744 Business Dynamics. Handelshøyskolen BI. The collection of articles comprise:

One or two chapters from the books of:

Senge, P.M., 1990. *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Currency Doubleday.

Sterman, J.D. 2000. *Business dynamics – systems thinking and modeling for a complex world*. Boston: Irwin McGraw-Hill.

Warren, K. 2008. *Strategic Management dynamics*. West Sussex: John Wiley & Sons, Ltd.

Scientific articles:

Burg, E. van, Oorschot, K.E. van. 2012. Cooperating to commercialize technology: A dynamic model of fairness perceptions, experience, and cooperation, *Production and Operations Management*.

Davis, J.P., Eisenhardt, K.M., Bingham, C.B. 2007. Developing theory through simulation methods. *Academy of Management Review* 32(2): 480-499.

Lyneis, J.M. and Ford, D.N. 2007. System Dynamics Applied to Project Management: A Survey, Assessment, and Directions for Future Research. *System Dynamics Review*, 23:157-189.

Oorschot, K.E. van, Akkermans, H., Sengupta, K., Wassenhove, L. van. 2013. Anatomy of a decision trap in complex new product development projects. *Academy of Management Journal*, 56(1).

Perlow, L.A., Okhuysen, G.A., & Repenning, N.P. 2002. The speed trap: Exploring the relationship between decision making and temporal context. *Academy of Management Journal*, 45(5): 931-955.

Repenning, N.P., & Sterman, J.D. 2002. Capability traps and self-confirming attribution errors in the dynamics of process improvement. *Administrative Science Quarterly*, 47(June): 265-295.

Rudolph, J.W., & Repenning, N.P. 2002. Disaster dynamics: Understanding the role of quantity in organizational collapse. *Administrative Science Quarterly*, 47(1):1-30.

Smets, L.P.M., Oorschot, K.E., Langerak, F. 2013. Don't trust trust – A dynamic approach to controlling supplier involvement in new product development, *Journal of Product Innovation Management*, (forthcoming).

Sterman, J.D. 2001. System dynamics modeling: Tools for learning in a complex world. *California Management Review*, 43(4).

Recommended reading

Books:

Sterman, John D. 2000. *Business dynamics : systems thinking and modeling for a complex world*. Irwin McGraw-Hill

Course outline

- Introduction, course overview, objectives, rules of the game
- Overview of business dynamics and interrelations of business structure and behavior, causal loop diagramming
- Stocks and flows diagramming
- Typical business behavior: S-shaped growth, delays & oscillations
- Decision-making & modeling human behavior
- Supply chains
- Term paper introduction

Computer-based tools

Vensim PLE (software, free download available at www.vensim.com)

Learning process and workload

There will be different means of learning in this course, for instance lectures, individual exercises, group work, and presentation about real-life examples of applications of business dynamics. Firstly, studying the course material (lecture slides and compulsory literature) is required to get a grasp of basic concepts. Secondly, different kinds of exercises will be given to practice the new way of thinking. These exercises must be completed in order for the student to be well prepared for the examination. Finally students have to deliver a group assignment based on a case study in a given topic. The assignment can be executed in groups of up to 4 persons.

A reading plan will be provided at the start of the semester.

Student Workload

Activity	Hours
Participation in lectures	36
Preparation for lectures/Reading literature	59
Assignments & Working with software tool	25
Exam (preparation & participation)	10
Term paper based on a case study/practical project	70
SUM	200

Use of hours

36 hours - Lectures
 5 hours - Working with software tool (instructions, supervision)
 4 hours - Term paper (Case study - group work) supervision, providing feedback
 46 hours total

Examination

Final grade in the course will be based on following activities and weights:

Part 1 – A three-hour individual multiple-choice exam, counts 40 % of final grade

Part 2 – Term paper (case study, max 4 students per group), counts 60 % of final grade

Both parts must be passed in order to obtain final grade.

Examination code(s)

ELE 37441 - Multiple Choice exam, accounts for 40 % of the grade in the course ELE 3744 Business Dynamics

ELE 37442 - Term paper, accounts for 60 % of the grade in the course ELE 3744 Business Dynamics.

Examination support materials

Examination - All support materials are allowed (except computer (laptop, iPad, iPhone, etc.).

Group assignment - All support materials are allowed.

Re-sit examination

For electives re-sit is normally offered at the next scheduled course. If an elective is discontinued or is not initiated in the semester it is offered, re-sit will be offered in the electives ordinary semester.

Even though all parts must be passed to obtain final grade, re-sit is possible to do separately.

Additional information