ME1000 Industrial management

The course is a 6 ECTS basic level course given by Indek, a part of the ITM-school, in period 1.

Course objectives

Engineering is more than technology. To participate in technology-based businesses as an engineer, carry out projects, develop businesses and lead teams and employees in today's companies, knowledge in industrial management is needed. In practice, the key to success lies in an understanding of technical and economical aspects of decisions. This course provides you with basic knowledge within the area of industrial management. This means that you, after the course, should:

- 1. Be able to explain how a business as well as leadership, organizing, strategic planning, and management control functions in an industrial organisation.
- 2. Be able to interpret an annual report from an industrial organisation, as well as be able to calculate and design the different parts of it at a basic level.
- 3. Be able to explain the structure of the industrial company's streams of payments.
- 4. Be able to choose, construct, interpret and use cost calculations as part of the decision support for the industrial company's different situations.
- 5. Be able to connect industrial management to your future area of work.
- 6. With the departure in your view on industrial management, be able to explain how the different parts of the area fit together related to the objectives of the industrial organization.

Main content

Industrial dynamics and the interplay with competitors and stakeholders (customers, suppliers, employees, the society at large and so on), the distinctive character of industrial operations, organization & human resource management, innovation & entrepreneurship, leadership, strategic planning, marketing, cost-volume-profit analysis, accounting & bookkeeping, finance (supply & use of capital), cash-flow analysis, investment appraisal, management control, and costing. Sustainability, gender, communication and teamwork are covered in relation to the subject.

Further courses

Behavioural management control builds on Industrial management. There are also a lot of courses at Indek that has Industrial management as a prerequisite.

Education

The course consists of 9 modules with 37 hours of lectures. The lecturing departs from the content in the course literature, news in business, and material provided for the lectures. You are expected to participate in all the parts of the course. No education is given outside the syllabus. If you miss a part, you can follow it in the next period instead (with, mainly, Swedish support – but also some support in English). You should (for a higher grade than E) participate in one of the "Continuous questions are checked" (with control of attendance): You will book this during the course.

Home page of the course

The home page of the course is at KTH Social. You reach it on the lower part of your display when you are at one of the pages of KTH, e.g. <u>www.kth.se</u>, if you are enrolled to the course – if not, follow the instructions on the top of the home page to get access to the material. On the home page,

slides and other material is provided. You will also hand in the continuous questions as well as your homework assignment there.

Teachers

The responsible teacher of the course is Håkan Kullvén, who also holds the lectures. The course also has eight guest lecturers from different parts of Indek.

Language

All education is in English. You can choose if you want to use literature in English or in Swedish, and the homework assignment is provided in both languages. For students that want to have a Swedish-speaking education, the course ME1003 in periods 1, 2, 3 and 4 is recommended.

Course literature

The course book is *Accounting and finance for non-specialists* by Peter Atrill & Eddie McLaney, Prentice Hall. As an alternative, *Företagsekonomi 100* by Per-Hugo Skärvad & Jan Olsson, Liber (in Swedish) can be used. Please observe, however, that all references are made to the English-speaking book. For all literature, it is the latest edition that is used.

The latest published annual report from an industrial company is part of the literature. It will be handed out at the first class, and is also available on the course home page. Also, the annual report and other material about the company you choose to analyse during the course should be used.

Course registration

You have to choose the course at your international office. You will then be *enrolled* to the course, and will be part of the list of students. Enrolled students should put their *signature* on the list of participants. You will then be *registered* on the course, which is a prerequisite for getting a grade from it. The list of participants is circulated during the first three lectures. If you haven't signed the list on one of these three occasions, please mail <u>afzal.lotfi@indek.kth.se</u> to register.

Examination

The course is examined by a homework assignment with one continuous and one summarizing part.

Continuous part

After each module, a problem of some kind (e.g. one of the examples that were dealt with and/or a theoretical model) for the continuous part of the homework assignment is presented. You then have to reflect on this problem and how it could be applied to *your future area of work*. (If you e.g. participate in a program in transportation, you can reflect on how a certain model can be used by General Motors. As a minimum, you need to study the latest annual report from that company (can often be downloaded from the company's home page, or be ordered from it, or be downloaded from a database such as e.g. "Annualreports" at <u>http://www.annualreports.com/</u>.) Your answer, which should be no more than one page long, can (for a higher grade, see below) be handed in on the course home page when the next part of the course is started, according to the schedule, at the latest.

When all the lectures have been held, you should put together and work more with the continuously handed in answers, so that you have a report that covers all the areas that have been dealt with. This report should be of no more than 5 pages, and should deal with each question separately. All students should prepare such a report, also those students that haven't handed in the answers continuously as described above. You have earlier chosen a seminar ("Check of continuous questions") to participate in, and you bring one copy of your report to this seminar and give it to the

teacher. You and all other students will then (randomly) receive a report each to give your comments on, with the help of a suggested solutions manual. The teacher inform you about expected answers, and you will check the report and do notifications about problems, interesting discussions, reflections and so on on the report that you have received – as a support for the student that has written it. When the seminar is over, you will get your own report back together with the comments from another student.

Summarizing part

When all the seminars have been fulfilled, four problems, one question each for the four first objectives of the course described on page 1, for a summarizing part of the homework assignment is handed out. The four questions are based on the continuous part that you have already handed in. It can e.g. be to join together two of the continuous questions, or to evaluate something that has recently occurred in business with what you have written in the continuous part as background. You will thereafter get *additional time to construct the summarizing part*, and to strengthen your answers in the continuous part even more. This will be done by (for the continuous part) taking comments and thoughts from the seminar into account, and (for the summarizing part) by *reflecting* on your text (see the criteria below) – you do what is needed to get the grade you would like to receive. Please note that to get a pass you have to reflect on the company that you have more than 5 pages of text; of which one page is a "map" over the course (see objective 6 on page 1). The continuous part is an appendix to the summarizing part, and put together this is your homework assignment. The final version of it should be handed in at the course home page on the specified date at the very latest.

When the homework assignment is graded, the summarizing part is the part that is evaluated with diligence, but also the continuous part is evaluated in a broad sense. *The grades* are set as follows:

- If you grasp the content of the course in a good way, you will receive the grade D. To prove this, you need to write a well-constructed homework assignment that answers the questions (connected to the course literature as well as to your area of work) in a good way. Also, you have to answer the questions with the help of methods and models from the course. If you have also handed in the continuous part with reasonable quality (continuously and as a final version) you will receive the grade C instead.
- If you really *master the course content, and also are able to critically reflect on this knowledge, you will receive the grade B.* To prove this you will also need to have outstanding references to the course literature where appropriate, and also use (at least) one other source (a book, an article and so on) to which you connect your answers. Also, you should elaborate your answers so that they go beyond what is said in the course literature about a specific question e.g. by giving examples of uses in companies, and/or by relating to your own experiences and news from business. In other words: you should prove an excellent knowledge in the field. By excellent knowledge is meant that you are not only able to show it up and use it, but also to "twist" it, e.g. by relating it to new knowledge in the area or in completely different areas (as ethics, sustainability, ethnicity, or gender). Also, active attendance is an important criterion for receiving this grade. *If you have also handed in the continuous part with good quality (continuously and as a final version) you will receive the grade A instead*.

If you have received the grade Fx, and after that have passed a complement, you will get the grade E. This is also the grade for you that didn't participate in the part "heck of continuous questions), but have a homework assignment that has passed.

Avoide plagiarism

The course builds on individual work with continuous questions and a homework assignment, and plagiarism isn't allowed. Information about plagiarism can be found at www.kth.se/plagiarism. Information about what plagiarism is and how control of plagiarism will be executed in this course will be presented during the course. Amongst the measures taken, the following can be mentioned; automatic control of all hand-ins, a demand for continuous hand-ins and for changing hand-ins during the duration of the course, and demands on individualized answers to the questions (e.g. by building the answers on your own examples and experiences).

Registration of grades

The grades are presented on "My pages" within three weeks after the deadline of the schedule.

Reassessment

Reassessment of the homework assignment can be considered upon request in mail to the examiner. This should be handed in no later than *three weeks* after the result has been made available at "My pages". After this, no changes in the grades are done.

Complement

If you receive the grade Fx, you can hand in a complement at the course home page (see the deadline of the schedule for this). This includes you correcting your own mistakes in a new version which, in a distinguished way, covers the answers and the content of the course. If the complement is well performed, you will get the grade E, if it isn't, you get an F.

New assignments

New assignments are given each period. So; no extra assignments to individual students are given – you always have the possibility to, within a reasonable time, hand in a new homework assignment. If you missed the seminar "Check of continuous questions", but would like a higher grade than E, you can keep your answers and participate in the seminar in the next period (a special english-speaking group with the earlier homework assignment will be created) and have the same prerequisite as all other students. After this period, this possibility is closed.

Examiner

Examiner is Håkan Kullvén, assistant professor at Indek, SingSing room 255, phone 46 8-790 6052. Questions about the course should be asked at KTH social.

Evaluation

The course is evaluated continuously by students answering a short question. After the course, a focus group consisting of some of the students and the examiner will meet and discuss the course and how it has been perceived. Also, a conceptual evaluation will be executed (at the start and the end of the course).

Indek office

Indek office is situated in SingSing, Lindstedtsvägen 30. The doors to SingSing are usually open workdays from 8 AM to 4 PM. Indek office is usually open workdays from 9.30 AM to 3.30 PM. At periods of manpower shortage, the office is closed for lunch between 12.30 AM and 1 PM.

Schedule

Element 1a: Industrial Organisation	
30/8 Tue 15-16 room E1 Industrial Management	Henrik Blomgren
30/8 Tue 16-17 room E1 Employees in Work, in Organisations	Fredrik Barchéus
2/9 Fri 15-16 room FR4 Entrepreneurship	Terrence Brown
2/9 Fri 16-17 room FR4 Industrial Dynamics	Staffan Laestadius
Element 2: Cost-Volume-Profit Analysis	
6/9 Tue 13-15 room M1 CVP-Analysis Ch 7	Håkan Kullvén
6/9 Tue 15-17 room M1 Exercises in CVP-Analysis	Håkan Kullvén
Element 3: Costing	
7/9 Wed 13-15 room F1 Costing Ch 8 (7)	Håkan Kullvén
7/9 Wed 15-17 room F1 Exercises in Costing	Håkan Kullvén
Element 1b: Industrial Organisation	
8/9 Thu 13-14 room E1 Industrial Operations and Leadership	Mats Engwall
8/9 Thu 14-15 room E1 Industrial Production & Projects	Johann Packendorff
9/9 Fri 13-14 room E1 Organisation and Leadership	Anna Wahl
9/9 Fri 14-15 room E1 Industrial Marketing	Henrik Uggla
Element 4. Accounting	
13/9 Tue 13-14 room F1 Bookkeeping Ch 2	Håkan Kullvén
13/9 Tue 14-16 room F1 Accounting Ch 1, 3, 4 (2, 5, 6)	Håkan Kullvén
15/9 Thu 8-10 room E1 Exercises in Accounting	Håkan Kullvén
Element 7: Investment Appraisal	
15/9 Thu 15-17 room E1 Investment Appraisal Ch 10	Håkan Kullvén
16/9 Fri 13-15 room E1 Exercises in Investment Appraisal	Håkan Kullvén
Element 5: Finance	
19/9 Mon 15-17 room Q1 Finance Ch 11, 12	Håkan Kullvén
20/9 Tue 13-15 room F2 Exercises in Finance	Håkan Kullvén
Element 6: Cash-Flow Analysis	
22/9 Thu 10-12 room F2 Cash-flow and Financial Analysis Ch 5, 6	Håkan Kullvén
22/9 Thu 15-17 room F2 Exercises in Cash-Flow Analysis	Håkan Kullvén
Element 8: Management Control	
28/9 wed 10-12 room Q1 Management control Ch 9	Håkan Kullvén
Element 9. Homework Assignment	
4/10 Tue 8-17 room 255 Possibility to Ask Questions	Håkan Kullvén
6/10 Thu 13-15 room V34 Check of Continuous Questions, alternative 1	Håkan Kullvén
6/10 Thu 15-17 room V34 Check of Continuous Questions, alternative 2	Håkan Kullvén
7/10 Fri 10-12 room V34 Check of Continuous Questions, alternative 3	Håkan Kullvén
17/10 Mon 24.00 Hand-in of Homework at the latest	Håkan Kullvén
14/11 Mon 24.00 Hand-in of Reworked Fx-Homework at the latest	Håkan Kullvén