**International Market-Driven Engineering, Fall 2014**

**Administration**

Responsible for the course in Sweden is associate professor Charlotta Johnsson (+46 46 222 87 89) at the Department of Automatic Control, LTH, Lund University.

**Prerequisites**

The Swedish students should be accepted to Technology Management at Lund University.

The Chinese students have to apply to the course.

**Course Description**

The course is a joint course with Zheijang university in China. It will intertwine the two disciplines Technology and Management, in Sweden and in China, in four ways; Students, Teachers, Subjects and Cultures.

* Subject: the focus will be on Innovation and Product Development, a subject that is of great relevance from both the technical aspect as well as the economical and management aspect. The course will contain both lectures and a project. For the Swedish students the course will also contain a few lectures on Chinese culture. At the end of the course the students should present their project through a written project report and an oral presentation.
* Students: The course should be given to the 40 Swedish students from the Technology Management (20 from LUSEM and 20 from LTH) together with, a minimum of 20 Chinese students (10 from SoM and 10 from the technical departments (ID and CSE)).
* Teachers: Teachers from both Sweden and China and from both Engineering (LTH, ID and CSE) and Management (LUSEM and SoM) will be involved in the lectures. A minimum of two teachers with different aspects of the subject matter will be present at each lecture.
* Cultures: The cultural aspects of project management and business behavior will be treated in the course and practiced in real life through the course project.

Course homepage: http://www.control.lth.se/Education/EngineeringProgram/TMAF05.html

**Course Material**

The course material will consist of lecture notes, articles and chapters from various books.

**Lectures and Projects**

The course will start in China on Monday September 9th 2012 and end no later than Friday October 18th 2013. For the Swedish students there will be lectures in Sweden in the period of Monday 26/8-Wednesday 4/9 (Note: no lecture on Tuesday 27/8 since there are other assignments for the students this day).

Preliminary special dates in China (to be confirmed):

* 19/9-21/9: mid-autumn festival, (Moon festival) no lectures
* 22/9: normal working day, lectures possible
* 29/9: normal working day, lectures possible
* 1/10: National day (P.R.China founded 1/10 1949)
* 1/10-7/10: October festival (national day festival), no lectures
* 12/10: working day in China, lectures possible

The course will contain lectures and a project. The project will be performed in groups of 7-10 students, i.e., 4-5 Swedish students and 3-5 Chinese students. For the Swedish students there will also be a set of lectures concerning Chinese culture (Lcc).

The course schedule is shown in the chapter Weekly Schedule.

* The first day, Monday Sept 9th in the morning, at 9-11 am, an introduction to ZJU will be given by International College. All Swedish students will meet at 09.00 in the entrance hall of International College, Yuquan campus.
* All course-lectures will be given at Xixi campus, classroom D:201, Art Building, Xixi Campus, Zhejiang University. The lecture time will be 9.00-12.00 except Monday Sept 9th when the lecture time will be 13.00-16.00 (start 13:15).
* Each teacher will arrange the coaching sessions individually. Coaching slots, that the groups can book, will be made available from 9.00 to 12.00 the respective days. The location for the coaching sessions will most probably be in the lecture hall.
* The Chinese-Culture lectures (Lcc), for the Swedish students only, will be given by International College at Yuquan campus. The lecture time will be 14.40-16.40 (tentative).

The project will be centered on a theme. The student should try to make a small prototype of the ”product” and to document (by filming) their work along the way. The students should write a market-and-business-plan for their product. At the end of the course the students should make an oral presentation of their market-and-business plan. They should also hand in a report containing the market and business plan in a written format. Their work during the project should result in a short film that they can include in their presentation. The film should highlight their working procedure as well as their product. The groups are encouraged to contact companies for support of the project and possible commercialization. Each group will have a budget of max 1000 Yuan. The students need to apply for money from the teachers. Possible themes are: toys, services/devices for elder people, convenience for students, communication, booking/service systems, traffic planning.

**Examination**

The examination is the written project-report and the oral presentation.

* A written report should be handed in. This report should also contain the Business plan.
* An oral presentation should be made, presenting the prototype and its business plan. The oral presentation should also show the film.

The grade will be pass or fail. For the Swedish students the course will result in 7 hp.

**Additional information**

For more information please contact:

* Charlotta Johnsson (email: charlotta.johnsson@control.lth.se)
* Carl-Henric Nilsson (email: carl-henric.nilsson@gmail.com)

**Weekly schedule 2014**

L=Lecture

* Lecture hall: Classroom D:201, Art Building, Xixi Campus, Zhejiang University (to be verified).
* Lecture time: 09.00-12.00, except Monday Sept 9th when it will be 13.00-16.00 (start 13:15) (to be verified).

Lcc= Lecture on Chinese Culture (Swedish students only)

* Lecture hall: International College at Yuquan campus
* Lecture time: 14.40-16.40 (tentative) (to be verified).

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| *Week* | *Date* | *Lecture* | *Time* | *Content* | *Responsible teachers* |
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| 35 | In con-junction with the TMAN50 (GTE) course. | L-intro | See TMAN50 for more info regarding time and lecturehall.  | Introduction to iMDE for the Swedish studentsPlease note that this course starts 1 week prior to other courses at LU. | TM-responsible |
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| 36 | 1-5/9 |  |  |  |  |
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| 37 |  |  |  |  | *Må-Fr: Anders Warell* *Må-Fr: Charlotta?* |
| 37 | 8/9 | Lcc | 9-11 | Holliday in China 2014  |  |
|  | 9/9 | Lcc | 9-11 | Introduction to ZJU | International College |
|  | 9/9 | L1 | 13-16 | Introduction  | Anders Warell, LTHCompany-representative? |
|  | 10/9 | L2 | 9-12 | Innovation-1 (Inspiration) | Anders Warell, LTHCompany-representative? |
|  | 10/9 | Lcc | 2h afternoon | Chinese Culture: Survival Chinese | International College |
|  | 11/9 | L3 | 9-12 | Innovation-2 (Ideation) | Anders Warell |
|  | 11/9 | Lccc | 2h afternoon | Chinese Culture: Survival Chinese | International College |
|  | 12/9 | Coaching | 9-12 | 1 hour coaching per group | Anders Warell, LTH |
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| 38 |  |  |  |  | *Må-Fr: Anders Warell*  |
| 38 | 15/9 | L4 | 9-12 | Innovation-3 (Implementation) | Anders Warell, LTHJun Jin, SoM,  |
|  | 16/9 | Lcc | 2h afternoon | Chinese Culture: Interesting Chinese characters | International College |
|  | 17/9 | L5 | 9-12 | Innovation-4 (Innovation Cultures and Examples) | Anders Warell, LTHJun Jin, SoM,Qinmin Yang, CSE  |
|  | 17/9 | coaching | 13-16 | 1h coaching per group | Anders Warell, LTHJun Jin, SoM,Qinmin Yang, CSE |
|  | 18/9 | Visit to company | All day | Volvo (tentative) alt Nedermann (tentative) altAlipay | Anders Warell, LTH, altDamien Motte, LTH, altLuo Shijian, ZJU |
|  | 19/9 |  |  |  |  |
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| 39 |  |  |  |  | *Må-On: Damien Motte**Fr: Tommy Shih*  |
| 39 | 22/9 | L6 | 9-12 | Product Development, Sourcing and Production | Damien Motte, LTH Jun Jin, SoM |
|  | 23/9 | Lcc | Leave at 13:00 | Chinese Culture: Visit to Museums by Grand Canal | International College |
|  | 24/9 | Coaching | 9-12 |  | Damien Motte |
|  | 24/9 | Lccc | 2h afternoon | Chinese Culture: New Media and Chinese Society | International College |
|  | 25/9 | Visit to company | All-day | SupCon | Qinmin Yang, CSE |
|  | 26/9 | L7 | 9-12 | Business plans | Tommy ShihJun Jin, SoM\*\*Tommy wants to move this lecture to 24/9. |
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| 40 | 29/9 |  |  | -- |  |
|  | 30/9 |  |  | -- |  |
|  | 1/10 |  |  | Holliday in China 2014(National Day) |  |
|  | 2/10 |  |  | Holliday in China 2014(National Day holiday) |  |
|  | 3/10 |  |  | Holliday in China 2014(National Day holiday) |  |
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| 41 |  |  |  |  | *Må: Erik&Robin?**On-Fr: Carl-Henric**To-Fr: Charlotta* |
| 41 | 6/10  | Lextra | 9-12 | Lean Launch Pad? | Erik & Robin? |
|  | 7/10 | Lcc | 2h | Chinese culture: Traditional Chinese Painting  | International College |
|  | 8/10 | L8 | 9-12 | Marketing and Sales | Weiqing XU, SoMCarl-Henric Nilsson, LUSEM |
|  | 9/10 | Lextra | 9-12 | Entrepreneurship | Charlotta Johnsson |
|  | 9/10 | Lcc | 13:30-15:00 | Chinese culture: Chinese Consumer Behavior  | International College |
|  | 10/10 | Coaching | 9-12 | 1 hour coaching per group | Carl-Henric NilssonCharlotta Johnsson |
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| 42 |  |  |  |  | *Må-Fr: Carl-Henric* *Må-Fr: Charlotta*  |
| 42 | 13/10 | coaching | 9-12 | 1 hour coaching per group | Carl-Henric NilssonCharlotta Johnsson |
|  | 14/10 | Lcc | 13:30-15:00 | Chinese culture: Chinese Paper Cutting  | International College |
|  | 15/10 | L9 | 9-17 (All day) | Final presentations | All teachers |
|  | 17/10 | L10 | 9-13 | End of course | All teachers |
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| 43 | 20/10 – 24/10 |  |  | --- | Note: The Swedish studyperiod-1 officially ends Wednesday 22/10 |
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| 44 | 27/10 – 31/10 |  |  | Week of examinations in Lund |  |
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| 45 | 3/11 – 7/11 | Tentatively 6/11 kl 12-17  |  | Final presentation in Sweden for the Swedish students. This event is held in con-junction with the final presentation in course TMAN50 (GTE) | All Swedish teachers(Anders ok, Damien ok) |
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Possible themes 2014:

* If the projects are done in cooperation with Volvo:
	+ TFuture means of transportation
	+ Smaller Electrical vehicles
	+ Decrease conjestion
	+ Clean air
* If the projects are done in cooperation with Nedermann:
	+ Clean air
	+ Clean air in production-industry
	+ trevlig verkstadsmiljö
* General ideas:
	+ Clean air