Read this Handout carefully and read it again throughout the year!

# Master in Industrial Management Handout

Centrum voor Industrieel Beleid (CIB) Departement Werktuigkunde

Academic Year 2008-2009

This Handout and the Blackboard "Toledo" system contain the most recent information regarding the MIM programme. Data available on the general K.U.Leuven website may be out of date.

# **Table of Contents**

1.	INTRODUCTION	1
2.	OFFICIAL REGISTRATION	2
3.	MEMBERS OF THE "CENTRUM VOOR INDUSTRIEEL BELEID"	3
3.1	FACULTY MEMBERS	3
3.2	MIM Associated Faculty Members	3
3.3	Associated Staff Members and Contact Persons ICAM	4
3.4	Associated Staff Members and Contact Persons KaHo	4
3.5	Associated Staff Members and Contact Persons PIH	4
3.6	MIM RESEARCH ASSOCIATES	5
3.7	Secretaries	5
4.	MISSION OF THE PROGRAMME "MASTER IN INDUSTRIAL	
	MANAGEMENT"	6
5.	THE INDUSTRIAL MANAGEMENT PROGRAMME: OPTION LEUVEN	7
5.1	General Industrial Management Courses	7
5.2	SPECIALISED MANAGEMENT–TECHNOLOGY COURSES	8
5.3	THESIS RESEARCH	10
5.4	ELECTIVE COURSES	10
5.5	PART TIME PROGRAMME	13
6.	THE INDUSTRIAL MANAGEMENT PROGRAMME: OPTIONS GENT	
	AND KORTRIJK-LILLE	14
6.1	General Industrial Management Courses	14
6.2	SPECIALISED MANAGEMENT–TECHNOLOGY COURSES	14
6.3	THESIS RESEARCH	14
6.4	Elective Courses	14
6.5	Part Time Programme	14
7.	THESIS RESEARCH	15
7.1	INTRODUCTION	15
7.2	COACHING AND SUPERVISION	17
7.3	THE START OF YOUR THESIS	17
7.4	GUIDELINES FOR THE SURVEY OF THE LITERATURE ON THE SUBJECT	18
7.5	Formats for Citations and References	19
7.6	Reporting During the Year	19
7.	6.1 Discussions with the thesis coach	19
7.	6.2 Written reports	19
7.	6.3 Thesis work presentations during the year	21
7.7	THE FINAL THESIS TEXT	22

7.7.1 Furt	her guidelines	22
7.7.2 Con	fidentiality	22
7.7.3 Subi	nitting the thesis	23
7.8 The Fin	AL THESIS PRESENTATION	24
7.9 EVALUA	TION	24
7.10 PRACTIC	CAL DETAILS	25
7.10.1 Trav	el expenses	25
7.10.2 Insu	rance	25
8. EXAMIN	VATIONS	26
		•0
9. FACILI	TIES	28
9.1 CLASSRO	DOMS	28
9.2 Сомрит	ER FACILITIES	28
9.3 "TOLED	D"	30
9.4 LIBRARY	ζ	30
10. STUDEN	TS' REPRESENTATIVES IN THE POC AND STUDENTS'	
UNION.		32
10.1 STUDEN	TS' REPRESENTATIVES IN THE POC	32
10.2 STUDEN	rs' Union	32
11. DAILY A	ARRANGEMENTS	34
11.1 WHOM S	HOULD YOU CONTACT?	34
11.2 NOTICE	Boards	
11.3 ADDITIC	NAL COSTS AND REIMBURSEMENTS	
12. ADDITI	ONAL INFORMATION	36

APPENDIX A: TIMETABLE ACADEMIC YEAR 2008-2009

APPENDIX B: CALENDAR ACADEMIC YEAR 2008-2009

APPENDIX C: LIST OF UNIVERSAL DECIMAL CODES (UDC)

APPENDIX D: REQUIRED TEXTBOOKS 2008-2009

APPENDIX E: ARENBERG CAMPUS PLAN

Note: Throughout the academic year, the CIB may modify the dates and plans mentioned in this Handout. Please, regularly consult on the computer the electronic notice board "**Toledo**".

# 1. Introduction

Welcome to the "Centrum voor Industrieel Beleid" (CIB) and welcome to our master's programme "Master in Industrial Management" (MIM). Our international programme is eight years of age and you are our nineth batch of students.

Since 1962 the faculty of engineering of K.U.Leuven has had a specialised, one-year programme in Industrial Management. This programme was taught in Dutch. It was enthusiastically attended by hundreds of engineers and through its many alumni the Centre is known and appreciated in the Belgian industry and service sector.

During the years 1998 and 1999 the Board of the Centre, chaired by Prof J. Roos, decided to reform the existing programme and to emphasise modern management-technology interactions in such fields as environment and energy, information and communication, production and logistics. The programme should be oriented to an international public and use English as the language of instruction.

The University endorsed this new approach and authorised the Centre to start its new programme in September 2000.

In 2002, an agreement was made between the CIB, the PIH Engineering School Kortrijk, the K.U.Leuven branch KULAK and the "Institut Catholique d'Arts et Métiers" (ICAM) Lille to work closely together and to offer two varieties of the same Industrial Management programme, one entirely organised at K.U.Leuven (Option Leuven) and the other (Option Kortrijk-Lille) partially in Kortrijk-Lille and in Leuven. In 2005 a modest beginning was made with a third variety of the programme: the Option Gent, organised by the KaHo Engineering School Sint-Lieven and by the CIB.

Over the last eight years, MIM has been a great success. The number of enrolled students has been fluctuating between 60 and 110. Each year, many nationalities are represented and, on the average, only one out of two MIM candidates has been admitted. You are amongst the lucky few. Because of this privilege, we expect you to study seriously and with enthusiasm.

Good luck!

# 2. Official Registration

All foreign students, who are new in Leuven, should carefully follow the instructions outlined in the brochure "Travelling to Leuven". This is a brochure for "International Students and Scholars at Katholieke Universiteit Leuven, Belgium". The foreign students received this brochure by mail together with an official letter stating that they have been admitted to the programme Master in Industrial Management, academic year 2008-2009.

If you are a foreign student and you do not have the brochure "Travelling to Leuven", you can ask your copy at the "International Admissions and Mobility Unit", Atrecht College, Naamsestraat 63, 3000 Leuven or download a PDF version at http://www.kuleuven.be/admissions/pdf/travelling.pdf. The office is located in the centre of the city.

After your official registration<sup>1</sup> at the Student Administration Office (Registrar's Office) at the University Hall, Naamsestraat 22, 3000 Leuven, you should, as soon as possible, visit the secretary's office of CIB (i.e. the secretary's office of the MIM programme) to show to the secretary your "studentenkaart" (= student card), an I.D. card that proofs your official registration. The secretary will then write down the I.D. number of your card. You should also inform the secretary of your address in Leuven.

You are a true MIM student only AFTER your visit to the secretary's office. Without this registration at the secretary's office you will not be informed properly about many programme arrangements.

For finding the secretary's office of CIB, see Section 9.1 of this Handout.

<sup>&</sup>lt;sup>1</sup> After official registration you should also enter your MIM course selections in the so-called "ISP" form (ISP = Individual Study Programme) via a web application. At registration and at a MIM meeting in the first week of the academic year (Info Session Fields of Study, Wednesday September 24), you will be informed how to do this.

# 3. Members of the "Centrum voor Industrieel Beleid"

More detailed information regarding the full members and associated members of the Centre can be retrieved from the K.U.Leuven, ICAM, KaHo and PIH websites (see Section 12).

The Centre consists of two research groups: Production and Logistics (PL) and Traffic and Infrastructure (TI). The MIM programme is actually organised by the Production and Logistics group.

### **3.1 Faculty Members**

Prof D. Van Oudheusden (CIB Chairperson, PL)	Dirk.VanOudheusden@cib.kuleuven.be
Prof D. Cattrysse (PL)	Dirk.Cattrysse@cib.kuleuven.be
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Prof L. Gelders (PL)	Ludo.Gelders@cib.kuleuven.be
Prof B. Immers (TI)	Ben.Immers@cib.kuleuven.be
Prof L. Pintelon (PL)	Liliane.Pintelon@cib.kuleuven.be

### 3.2 MIM Associated Faculty Members

Prof A. Carbonez (UCStatistics., Fac. of Sciences) An.Carbonez@ucs.kuleuven.be Prof. M. Cools (Dep. AFI, Fac. of Business. & Econ.) Martine.Cools@econ.kuleuven.be Prof H. Crauwels (De Nayer) Herman.Crauwels@denayer.wenk.be Prof J. De Schutter (Dep. Mech., Fac. of Eng.) Joris.DeSchutter@mech.kuleuven.be Prof K. De Witte (Dep. Psych., Fac. of Psych. & Pedag. Sc.) Karel.DeWitte@psy.kuleuven.be Prof W. Dewulf (Groep T) Wim.Dewulf@groept.be Prof W. D'haeseleer (Dep. Mech., Fac. of Eng.) William.Dhaeseleer@mech.kuleuven.be Prof W. Joosen (Dep. Comp., Fac. of Eng.) Wouter.Joosen@cs.kuleuven.be Prof L. Helsen (Dep. Mech., Fac. of Eng.) Lieve.Helsen@mech.kuleuven.be Prof J.-P. Kruth (Dep. Mech., Fac. of Eng.) Jean-Pierre.Kruth@mech.kuleuven.be Prof B. Lauwers (Dep. Mech., Fac. of Eng.) Bert.Lauwers@mech.kuleuven.be Prof G. Marquenie gb.marquenie@skynet.net Gilbert.Marquenie@cib.kuleuven.be Prof H. Martin (Open Universiteit, Nederland) Harry.Martin@cib.kuleuven.be Prof N. Peirs (PIH) norbertpeirs@hotmail.com norbertpeirs@pandora.be Prof G. Poels (UGent, Fac. of Econ.) Geert.Poels@ugent.be Prof P. Sas (Dep. Mech., Fac. of Eng.) Paul.Sas@mech.kuleuven.be

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# 3.3 Associated Staff Members and Contact Persons ICAM

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Jean-Luc.Larbot@groupe-icam.fr Didier.Verschelde@groupe-icam.fr Jean-Michel.Viot@groupe-icam.fr

### 3.4 Associated Staff Members and Contact Persons KaHo

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# 3.5 Associated Staff Members and Contact Persons PIH

Prof A. Dumoulin (Director of PIH)
Prof F. De Pauw
Prof J. Detand
Mr P. Grymonprez
Prof B. Leenknegt
Prof N. Peirs
Mrs H. Robberecht (PR & Communication)

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### **3.6 MIM Research Associates**

Mr O. Ali Mr R. Corthout Mr J. D'hondt Mr R. Frederix Mr K. Kellens Mr X. Lin Dr M. Moonen Mr P. Muchiri Mr. B. Saint Germain Dr K. Sörensen Mr W. Souffriau Mr J. Stada Dr C. Tampère Dr P. Valckenaers Mr J. Van Belle Mr P. Vanegas Dr P. Vansteenwegen Mr P.-A. Verhaegen Mr P. Verstraete Mr J. Vertommen Dr F. Viti

### 3.7 Secretaries

Mrs E. De Volder Mrs E. Neyens

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# 4. Mission of the Programme "Master in Industrial Management"

"To train young engineers and scientists in the sound principles of Industrial Management, to let them understand the intrinsic complexities of management and modern technology, in different fields. To train young engineers and scientists to be analytical, resourceful and inventive while combining organisational skills and technology. To make them good communicators."

# 5. The Industrial Management Programme: Option Leuven

The Industrial Management master's programme is a one-year programme. It consists of

- 1. General Industrial Management Courses: counting for 24 study points
- 2. Specialised Management-Technology Courses: counting for 15 study points
- 3. Thesis Research: counting for 15 study points
- 4. Elective Courses: for AT LEAST 6 study points.

### 5.1 General Industrial Management Courses

With the exception of H00K7a, all these required courses, seminars and workshops are taught during the first semester (from September to December). The table below gives an overview.

Code	Course	Professor	# h	Study Points
<b>H00J6A</b> H00J6a H00J7a	Introduction to Management Introduction to Management Introduction to Management: Seminars	L. Gelders L. Gelders L. Gelders	40.5 19.5 21	4
<b>H00J9C</b> H00J9a H03J0a	Operations Management and Logistics Operations Management and Logistics Workshop Management and Logistics	D. Cattrysse D. Cattrysse D. Cattrysse	30 19.5 10.5	3
НООКОА	Introduction to Management Accounting	M. Cools	10	3
<b>HOOK1A</b> HOOK1a HO3K2a	Engineering Economy Engineering Economy Workshop Engineering and Business Economy	L. Gelders L. Gelders L. Gelders	30 19.5 10.5	3
<b>HOOK2A</b> H00K2a H03K3a	Management and Information Technology Management and Information Technology Workshop Management and Information Technology	L. Pintelon L. Pintelon L. Pintelon	30 19.5 10.5	3
<b>HOOK3A</b> H00K3a H00K4a H00K5a	Deterministic and Stochastic Decision Models Deterministic and Stochastic Decision Models Workshop Decision Models Workshop Probability Models and Statistical Analysis	D. Van Oudheusden D. Van Oudheusden D. Cattrysse, D. Van Oudheusden A. Carbonez	55.5 29.5 15.5 10.5	5 4 0.5 0.5
<b>HOOK6B</b> H00K7a H00K8a	Integrated Management Seminars Business Game and Reporting Skills: Seminars Socio-Psychological Issues in Organisations: Seminars	D. Cattrysse et al. D. Cattrysse et al. K. De Witte	40 21 19	3 1.5 1.5

Some professors will give at the due time a homework assignment related to the course lectures. At the beginning of the academic year, a list of all first-semester assignments will be put on the notice board "Toledo".

Attendance at seminars and workshops is compulsory. If you cannot attend please inform the CIB secretary in advance.

### 5.2 Specialised Management–Technology Courses

Students select one field of study out of the following four possibilities:

- 1. Environment, Safety and Energy (ESE field of study)
- 2. Information and Communication Technology (ICT field of study)
- 3. Product and Production Management (PPM field of study)
- 4. Transportation and Logistics (T&L field of study).

After admittance to a field of study, a student is required to register for all the courses of the chosen field. The table below gives an overview.

Code	Course	Professor	# h	Study Points	
	Environment, Safety and	Energy			
HOOK9A HOOLOA HOOL1A HOOL2A HOOL3A	Industrial Safety Industry and Environment Energy Management Safety and Environmental Aspects in Energy Eng. ESE: Seminars	F. Verplaetsen T. Van Gerven W. D'haeseleer L. Helsen, E. Van den Bulck D. Cattrysse et al.	19.5 19.5 19.5 19.5 31	3 3 3 3 3	
	Information and Communicatio	n Technology			
HOOL4A HOOL6ACommunication Systems Management Software Project ManagementD. Schreurs G. Poels19.5 19.5HOOL8A HOOL9A HOOM0ADevelopment of Software Products Computer Infrastructure Management ICT: SeminarsD. Schreurs G. Poels19.5 19.5HOOL9A HOOM0AComputer Infrastructure Management ICT: SeminarsI. Van Horebeek L. Pintelon et al.19.5 31		19.5 19.5 19.5 19.5 31	3 3 3 3 3		
	Product and Production Management				
HOOM1A HOOM2AManufacturing Processes and Systems Production and Logistics Planning Maintenance ManagementJ. Duflou, B. Lauwers D. Van Oudheusden19.5 19.5HOOM4A HOOM5A HOOM7AProduct Development and Innovation PPM: SeminarsJ. Duflou19.5 J. Duflou19.5 19.5		19.5 19.5 19.5 19.5 31	3 3 3 3 3		
Transportation and Logistics					
H00M8A H00M2A H00N2A H00N3A H00N5A	Transportation Technology Production and Logistics Planning Facilities Planning Distribution Logistics T&L: Seminars	P. Sas D. Van Oudheusden L. Pintelon D. Cattrysse D. Van Oudheusden et al.	19.5 19.5 19.5 19.5 31	3 3 3 3 3	

From each field of study, the first listed course is taught in the first semester, the other courses and most seminar sessions are taught in the second semester. All ESE second semester courses are taught on Monday; ICT courses are taught on Friday; PPM courses are taught on Wednesday; T&L courses are taught on Thursday, except for H00M2A (Production and Logistics Planning).

Can you select any field of study?

When choosing a field of study you should have a good motivation for your selection and have some minimal background of the field. For the ESE field of study you need, for instance, sufficient knowledge of chemistry and thermodynamics. For the PPM field of study you need some background on discrete manufacturing processes. To start the ICT field of study, an electro-technical degree with an important ICT component, or a degree in computer sciences or informatics is required; alternatively, any degree is admissible under the condition that you followed in your curriculum several ICT courses or have substantial ICT work experience. Candidates for the ICT field of study can be asked to pass an interview with several faculty members. Having in your curriculum a single course in Pascal or C, is certainly NOT enough to embark on ICT!

In the beginning of the academic year, you MUST discuss the choice of your field of study and the choice of your elective courses with faculty members or research associates from CIB:

For Environment, Safety & Energy:

**D. Cattrysse, P. Muchiri** and **D. Van Oudheusden** (CIB 04.44) on Thursday, September 25 and on Monday, September 29 (both days from 1 p.m. to 5 p.m.).

For Information and Communication Technology:

**L. Pintelon** and **J. Vertommen** (CIB 04.46) on Thursday, September 25 and on Monday, September 29 (both days from 1 p.m. to 5 p.m.).

For Product and Production Management:

**J. D'hondt** and **P.-A. Verhaegen** (CIB 04.54) on Thursday, September 25 and (CIB 04.49) on Monday, September 29 (both days from 1 p.m. to 5 p.m.).

For Transportation and Logistics:

**K. Sörensen** and **C. Tampère** (CIB 04.48) on Thursday, September 25 and on Monday, September 29 (both days from 1 p.m. to 5 p.m.).

During this discussion, your interviewers may also examine your capabilities to do thesis research in a specific area; they may once more evaluate your English skills.

Although the interviewers will try to accommodate your wishes for a field of study as much as possible, the faculty of the particular field of study makes the final decision on your admittance.

Please book BEFOREHAND at the CIB secretary's office your time slot for this brief discussion on your field of study choice and bring this Handout with you to the discussion.

Notes:

- Students who obtained their engineering or science degree from K.U.Leuven and who had in their programme the courses H00K1A ("Engineering Economy", L. Gelders), H0080A ("Besliskunde voor Operationeel Management", D. Cattrysse), H0F27D ("Operationeel Onderzoek", D. Van Oudheusden), H0Z04A ("Productiemanagement en Logistiek Management", L. Gelders and D. Van Oudheusden), H00M4A ("Maintenance Management", L. Pintelon) or H00K2A ("Management and Information Technology", L. Pintelon) must contact D. Cattrysse to discuss some modifications to their MIM required courses programme.
- 2. Students who can claim to have thoroughly studied, in the recent past, the subjects of a specific MIM required course, may substitute an extra elective course for the required one, after having obtained permission of the POC committee (see Section 10). At the start of the academic year, they should discuss this modification to their programme with the professor of the MIM course concerned and with the chairman of the POC committee (D. Cattrysse). No changes can be granted after the first POC meeting (October 14).

### 5.3 Thesis Research

The CIB considers the thesis a very important part of the study programme. That is why a complete section is dedicated to it (see Section 7).

### **5.4 Elective Courses**

You are required to take at least two elective courses (NO seminars!) for a total of at least six study points. They may be chosen from the table below or from any field of study outside your own field, on the condition that you meet the prerequisites. Also other relevant management courses taught at the K.U.Leuven or the "Université Catholique de Louvain" (UCL) can be selected. However, such a choice may require the approval of the POC committee (see Section 10). Please note that courses are taught either in the first or in the second semester, and THEY MAY BE SCHEDULED AT AWKWARD HOURS. Occasionally, an elective course and a required course may be scheduled at the same time!(Check carefully; search at http://www.kuleuven.be/onderwijs/ aanbod/opleidingen

/E/) Keep in mind your study load and the commuting implications! There are many required courses scheduled in the first semester, so you better avoid taking two elective courses in the first semester.

#### **Especially recommended courses:**

Code	Course	Professor	# h	Study Points
DOM37A	Advanced Corporate Finance <sup>1</sup>	G. Wuyts	39	6
DOM48A	Corporate Strategy <sup>2</sup>	H. Daems	39	6
H04M8A	Interdisciplinair College: Duurzame Ontwikkeling (in Dutch) <sup>2</sup>	W. Dewulf et al.	19.5	3
H0003A	Ecodesign, Levenscyclusengineering (in Dutch) <sup>2</sup>	J. Duflou	28	3
DOM36A	Environmental and Transportation Economics <sup>1</sup>	S. Proost	26	3
H05K3A	Freight Transport Management <sup>2</sup>	A. Van Breedam	19.5	3
D0M57A	Managerial Aspects of European Integration <sup>1</sup>	D. Janssens	39	6
DOM70B	Managing Technology and Innovation <sup>2</sup>	B. Van Looy	39	6
D0M82A	Optimization: Special Topics <sup>2</sup>	F. Spieksma	39	6
H00O4A H04X2A	Projectmanagement (in Dutch) <sup>2</sup>	D. Cattrysse, J. Duflou	19.5	3
H05K0A	Selected Topics in Management Accounting <sup>2</sup>	A. Van den Abbeele	19.5	3
H00N6A	Total Quality Management <sup>2</sup>	N. Peirs	19.5	3

<sup>1</sup> first semester course

<sup>2</sup> second semester course

# In the SECOND semester, students can also select three study points from an ATHENS intensive course programme.

"Created in 1996, the ATHENS Network is composed of ten European technological universities... The principal goal of the Network is to facilitate the exchange of students... among the major European technological universities... One of the Network's first and most unique actions concerns the organisation of an intensive course programme given at each member institution during one of two defined periods ("Sessions") of the academic year... Each Session, includes both 30 hours of scientific courses work as well as 10-15 hours of "European Dimension" activities."

(Text quoted from the ATHENS website: http://www.ntnu.no/international/athens/ Athensbrochureweb#Presentation; September 2006).

For more information, consult www.paristech.org/ or contact by e-mail the K.U.Leuven ATHENS service: Anouck.Brouwers@eng.kuleuven.be.

When in the course of the first semester, you are planning to take an ATHENS course, please inform the CIB secretary by means of the form "Change of Elective Courses" (available at the secretary's office) before February 6. At this stage, do not change your electronic ISP form yourself. D. Cattrysse will implement all changes in due time. AND DO NOT FORGET TO INFORM YOUR THESIS PARTNER WHEN YOU GO ABROAD !

You may take elective courses for more than six study points. But keep in mind that, after selection and approval, you cannot change your mind. You cannot come back to the decisions made and you have to pass all the examinations of all the chosen courses.

You should inform the CIB secretary of your courses and field of study selection by means of a copy of your ISP form, before October 3. If you do not submit your choice before October 3, CIB may select for you the elective courses and assign you to a field of study !

In the course of the first semester, it remains possible, to exchange a second semester elective course for another second semester elective course IF you inform the CIB secretary, by means of the form "Change of Elective Course", before February 6 and IF your choice is approved by the POC committee. At this stage, do not alter your electronic ISP form yourself !

Please consult the K.U.Leuven website (see Section 12) for more information about the contents of the courses.

Remark: Students with obviously weak programming skills are recommended to take one of the following LUDIT courses according to their needs (thesis research!):

- Latex (four sessions of two hours)
- Matlab Part 1 [Introduction] and Matlab Part 2 [Programming] (each part: two sessions of three hours)
- Matlab Part 3 [Graphics GUI] (two sessions of three hours)
- C programming (four sessions of three hours)

For the most recent information go to https://icts.kuleuven.be/cursus/; scroll down to "cursusrooster" (i.e. course schedule).

You will find more information regarding LUDIT on the K.U.Leuven website (see Section 12).

# 5.5 Part Time Programme

The programme can be followed part time, e.g. over two years instead of one. If you have the intention to follow the programme part time, you should first make an appointment with D. Cattrysse or with another CIB faculty member to discuss your intentions and planning.

A possible part time arrangement would be:

during the first semester of the first year, all courses (and seminars) taught on Thursdays; during the second semester of the first year, all remaining field of study courses; during the first semester of the second year, all courses taught on Wednesdays; during the second semester of the second year, only thesis work.

Remaining Friday courses and elective courses are taken whenever possible, spread over the two years... Each year, you should aim at a study load of about 30 study points. Seminar sessions can sometimes be replaced by individual homework.

# 6. The Industrial Management Programme: Options Gent and Kortrijk-Lille

Obviously, the Options Gent and Kortrijk-Lille follow a very similar programme.

Important: MOST CLASSES ARE IN LEUVEN, not in Ghent<sup>2</sup> or Kortrijk-Lille.

# 6.1 General Industrial Management Courses

This coursework requirement is the same as in the Option Leuven. Some courses, workshops or seminars may be taught twice: once in Leuven and once in Kortrijk. If this is the case, Gent and Kortrijk-Lille students will be properly informed about time and place of the lectures in Kortrijk. Sometimes, part of courses or workshops will be taught simultaneously in Leuven, in Ghent and in Kortrijk by means of video conferencing. Video conferencing will start in the first semester on Friday morning, September 26. Please consult the Timetable (Appendix A).

If it is convenient, an Option Leuven student may join video conferencing sessions in Ghent or Kortrijk.

# 6.2 Specialised Management–Technology Courses

Same as for the Option Leuven.

# 6.3 Thesis Research

Teams of two or three students, together with advisors and coaches, will tackle complex factory research projects in the provinces of East and West Flanders, or Northern France. For more thesis information, see Section 7.

# 6.4 Elective Courses

Same as for the Option Leuven. The course H00N6A Total Quality Management is especially recommended. It is taught in Leuven AND in Kortrijk (or in Lille). Gent and Kortrijk-Lille students can also select courses from the "Ghent University". Please contact prof. D. Cattrysse for more information.

# 6.5 Part Time Programme

Same as for the Option Leuven.

<sup>&</sup>lt;sup>2</sup> Ghent is the English spelling of the city's name.

# 7. Thesis Research

# 7.1 Introduction

The thesis research is a very important component of the Industrial Management programme. Ideally, it is a genuine research project, focusing on important, relevant problems. The thesis research should fit in the general Industrial Management curriculum and closely relate to the chosen field of study. Normally, two students work together AS A TEAM on a single thesis project. Often, one of these students will be a Flemish or Belgian student, the other student will be non-Belgian. Thus, good multicultural teamwork is required in order to be successful.

The CIB staff will do their utmost to select for every student of every field of study an appropriate real-life research project. However, due to practical obstacles, such an arrangement may not always be possible. Sometimes students will have to do more theoretical, non-factory oriented research. Obviously, this type of research too should have significant scientific and practical value.

There are no first class and second class theses in MIM. Factory and non-factory theses are of the same academic level.

Students carrying out their research in a company, should be prepared to visit their company frequently (if required: very frequently) and travel long distances. Furthermore, these students should have excellent oral communication skills (English), right from the beginning of the academic year. Students with an insufficient knowledge of the English language (although we are not expecting them in the MIM programme) will certainly not be given a thesis subject in industry.

Students also have the possibility to propose a thesis subject themselves. The CIB staff members will analyse this proposal and decide on its feasibility.

A thesis typically has the following phases:

- 1. Problem delineation: preliminary analysis, OBJECTIVE(S) (also called "thesis mission"), scope, limitations, deliverables
- 2. Literature survey
- 3. Problem analysis
- 4. Problem solving alternatives
- 5. Selected approach in detail
- 6. Implementation and results
- 7. Conclusions and recommendations.

In the course of the year students will present their thesis research in two intermediate thesis presentations at the CIB (one in December just before the Christmas holidays and one in March-April). The final thesis results will be presented in June or September at CIB or, if it is a factory thesis, at the company itself.

The thesis has to meet the following requirements:

- 1. It has to be a useful learning experience for the students.
- 2. The thesis should be a genuine research project focusing on important, relevant problems.
- 3. The students should learn to work independently, to use their creativity and to follow the scientific research methodology.
- 4. The thesis should be a real team effort.
- 5. A thesis is more than a standard application of theory:
   Look for new application areas for proven techniques;
   Look for new techniques for known problem types.
- 6. The thesis should have the two main qualities of scientific research: objectivity and reproducibility. Assumptions must be formulated, all claims must be documented, literature references must be clearly stated, conclusions must be the outcome of research, etc.
- 7. Students should prove thorough insight in techniques used.
- 8. The thesis text should be written in English (motivation required if otherwise).

This handout provides some information, but the CIB considers the book "Enjoy writing your science thesis or dissertation!" by Daniel Holtom and Elizabeth Fisher (1999; Imperial College Press, London) as being THE standard work on how to write a thesis. All MIM students should consult this book before writing the thesis (and before writing assignments too!).

If you do not follow the main guidelines of the book, YOU WILL NOT BE ALLOWED TO SUBMIT YOUR THESIS.

Another useful source for thesis writing is http://owl.english.purdue.edu/handouts/

# 7.2 Coaching and Supervision

Every thesis team has one or two advisors, a thesis coach at CIB (or at ICAM, KaHo or PIH) and, in the case of a factory thesis, a thesis mentor at the company. The advisor(s), thesis coach and mentor will supervise and coach the thesis research.

• The advisor

is usually an MIM (associated) faculty member;

the thesis coach informs the advisor(s) about the thesis progress;

the students should only contact the advisor in case of serious problems, otherwise they should contact the thesis coach.

A thesis in the Gent or Kortrijk-Lille option has always two advisors: a CIB advisor and a Gent or Kortrijk-Lille advisor.

• The thesis coach

is a research associate (occasionally a faculty member);

coordinates the thesis work;

can help to collect interesting literature, gives theoretical and practical guidance; reads the preliminary thesis text and makes suggestions for corrections.

- The thesis mentor at the company coordinates the thesis work in the company.
- The thesis examination committee The official "thesis examination committee" is composed of the advisor(s), the coach and one or two assessors. The committee is appointed in November, when thesis topics are allocated.

# 7.3 The Start of Your Thesis

In the master's programme, thesis research starts with the selection of a suitable thesis topic. At the beginning of October, lists of possible thesis topics are announced to the students. Each topic is clarified by a short description of the research problem(s), the appropriate field of study, the company concerned and a set of restrictions and additional requirements (if any). Each student will select from the lists five topics that suit him and forward this information to the CIB faculty members before October 16. On the basis of the student's preferences, he will be assigned a specific thesis topic by the end of October. A student cannot expect to receive his most preferred thesis topic. Usually, many students want the same topics and there are many other considerations.

Early November, a student will know who are his advisor (= faculty member) and his thesis coach (= research associate). The student should immediately contact his coach and, in the case of a factory thesis, prepare with him the first meeting at the thesis company. (Due to insurance issues students cannot start their thesis before they have officially registered as students of the K.U.Leuven.)

It is very important that the student consults with his thesis coach very regularly (at least once every two weeks).

More detailed information about starting up the thesis research, writing intermediate thesis reports, giving intermediate thesis presentations, etc., will be given at the beginning of November. It is clear that the bulk of the thesis research will be carried out in the second semester.

### 7.4 Guidelines for the Survey of the Literature on the Subject

The literature survey is a very important part of your thesis and has a double aim. The first one is to introduce you to a brand-new domain and to provide a deeper insight in this domain. The second one is to prevent you from re-inventing the wheel.

A good survey of the literature on the subject starts with several basic works e.g. books, journals, articles, working papers, computer searches, internet, ...which have to be complemented with very recent articles.

References can be found in the bibliographies of basic works, textbooks, theses from past years, and also in the databanks of the library; see http://bib.kuleuven.be. On www.sciencedirect.com you have access to all journals for which the K.U.Leuven has an e-subscription. Your thesis coach will help you with your survey, but most efforts will be expected from your side.

A good survey is more than a summary of the things you have read. You have to analyse what you have read critically: compare the advantages and the disadvantages of different methods; why can you use certain methods for your thesis and not the other ones.

In your literature study (and in the remaining part of your thesis) you refer to the list of references, which should be clear and complete so that the reader can easily find all the references. Only journals, books,... that are referred to in the text are included in the

reference list! The ways to cite references and to create a reference list are explained in the book of Holtom and Fisher.

Plagiarism is something that the CIB takes very seriously. If you just copy information from a book or the internet without mentioning its source or even suggest that it is your own work, you are taking a very big risk. A thesis (or assignments!) with obvious signs of plagiarism will be refused.

See also http://www.kuleuven.be/plagiarism

### 7.5 Formats for Citations and References

See Holtom, D. and Fisher, E. (1999) Enjoy writing your science thesis or dissertation (Imperial College Press, London), pp. 26-34.

<u>Important:</u> whenever you use information from web sites, you need to reference these sites by giving their full URL (http://www...) AND the date you made use of them.

# 7.6 Reporting During the Year

Time is an invaluable resource. When time is not utilized effectively, you will not be successful in your thesis work.

#### 7.6.1 Discussions with the thesis coach

To draw out a maximum advantage of this supervision, it is necessary to contact your coach very regularly. Only this way a sufficient and accurate accompaniment of the thesis work is possible. Always make an appointment before you come to see your coach or visit him at a fixed hour every week.

#### 7.6.2 Written reports

Besides oral follow-up, you are expected to make written reports regularly. The aim of it is certainly not to burden you with extra work, but to give you the opportunity to arrange your thoughts nicely on paper. We know from experience that without these it is much more difficult to write a well-structured thesis. Make sure you and your thesis partner(s) contribute to each and every written report, right from the beginning of the academic year. If you cannot write reports together, you will not be in a position to write a thesis together!

The following paragraph tells you which reports you should make during your thesis work.

#### - Intermediate reports

After each phase (six times) you have to submit an elaborate intermediate report. These reports should be of good quality, in layout as well as in content. With some rearrangements and extensions they may serve as a chapter of the final thesis. They are also provided to the company you are working with.

These reports are the "milestones" of the thesis: they represent the progress of the thesis. They can be used during meetings at the company to discuss results, to handle possible difficulties, to schedule a further plan, etc.

The report at the end of the first phase (problem definition) has to contain a further planning for the thesis, with clear mention of the deadlines for submitting the following reports.

A possible planning could be:

1. Problem delineation	mid-November
2. "80 %" of survey of existing literature	mid-December
3. Problem analysis	end of February
4. Problem solving alternatives	mid-March
5. Selected approach in detail	mid-April
6. Implementation, results, recommendations	mid-May.

The report has the following parts:

- title page: title & company thesis, names of students, date, thesis phase;
- activity report: the activities done since the previous report are summarised in this part;
- phase report: this is the part that may be used in the final thesis text;
- problems to be discussed during the following meeting(s);
- detailed work schedule for the following thesis phase;
- actualised planning of the thesis.

#### - Report of a thesis meeting

Every important thesis meeting (with coach, mentor at the company...) will result in a short report (max. 2 pages) in which further actions (with deadlines and responsibilities) should be emphasised. A copy of this report will be given to each person attending.

#### - Outline of the thesis

Before beginning to write the final text of the thesis, a detailed outline should be made and submitted to the coach.

#### 7.6.3 Thesis work presentations during the year

During the year you will have to give a few formal thesis work presentations. Twice at the Centre (December and March-April) and, in the case of a factory thesis, once or twice at the company.

#### - Thesis work presentation at the Centre

In December, you will have to give a thesis work presentation for CIB members; in March-April, you will have to give a thesis work presentation for CIB members and a small group of your colleague students who are interested in your thesis topic.

Every thesis team has a limited time to present its work. Stick to the time limit and focus on what is really important. For example: in the December presentation you should convince the audience of the fact that you have a clear idea of the thesis problem and a general idea on how to tackle this problem. It might be useful to give the audience handouts of your presentation. After this presentation, the audience has five to ten minutes to ask questions.

#### - Thesis work presentation at the company (for factory theses only)

During the year every team should give at least one thesis work presentation at the company. The purpose of this presentation is to inform the employees of the company about the thesis and to give them the opportunity to make suggestions and to give advice.

# 7.7 The Final Thesis Text

The last phase is writing the thesis text. This is a very important part of your thesis work since a bad thesis text will make a very bad impression on the thesis assessors.

Please note: students have to pay all thesis reproduction costs themselves.

The thesis title, as mentioned on your diploma, should be finalised (after discussion with the coach, mentor and the advisor(s)!) before February 20. Please submit the correct title to the CIB secretary by e-mail.

#### 7.7.1 Further guidelines

Once more, consult the book "Enjoy writing your science thesis or dissertation"! If you have questions about the thesis layout or other matters, you can find the answers in this book. Some copies of the book are available at the Campus Library (see Paragraph 9.3).

The thesis should be made on format DIN A4 with line spacing 1.5. It should contain 50 to 70 pages (appendices and pictures not included).

The final thesis text contains:

- a standard title page and a standard summary page (further information will be given at the due time)
- a table of contents
- a list of references
- perhaps some appendices
- a list of the symbols used in the text.

#### 7.7.2 Confidentiality

A number of copies of your thesis will end up in the library and are accessible to everybody. Obviously these copies should not contain confidential company information. That is why you should discuss confidentiality with the company and your coach. Sometimes you will have to make a confidential (the frontpage of this thesis version should clearly mention "CONFIDENTIAL") and a non-confidential version. In the non-confidential version you are not allowed to mention the name of the company or give any information that reveals the company's name. Because it is the non-confidential version that will end up in the library, this version too should be self-contained and count at least 50 pages.

#### 7.7.3 Submitting the thesis

- The deadline for submitting the thesis is June 2 or August 21 for the exam period of August-September.
- The students are not allowed to submit their thesis before the thesis coach has read and approved the preliminary thesis version. This preliminary version should not be a rough electronic draught but a complete paper version with pictures, references, etc. The students should submit the preliminary version AT LEAST ten days before "due date thesis" (see Appendix B: Calendar). If your final thesis presentation takes place before "due date thesis", you should show your preliminary version ten days before this presentation.
- Also, the company thesis mentor should read and approve the preliminary thesis version well in advance of the final presentation. He decides whether a confidential thesis version must be made or not; he also decides on its contents.
- IF THERE IS NO CONFIDENTIAL THESIS: the students give EVERY member of their thesis examination committee a copy, at least five working days before the final thesis presentation. After the final thesis presentation and after receiving an OK of the thesis coach, the students should provide the CIB secretary with ONE copy.
- IF THERE IS A CONFIDENTIAL THESIS: the students give every member of their thesis examination committee a copy. They give a confidential AND a non-confidential copy to the advisor(s) and thesis coach, and a confidential copy to any other committee member. It is important to have a well-structured and appropriate non-confidential version. If the non-confidential version is substandard the thesis grade will be affected. The CIB secretary receives after the OK of the thesis coach ONE NON-CONFIDENTIAL and ONE CONFIDENTIAL COPY.
- When submitting a thesis copy to the CIB secretary, also give one separate summary page (using the standard paper format).
- The students should make an agreement with the company about the number of thesis copies they deliver to the company.
- A word of warning: The graduation of students who do not submit the right number of thesis copies and forms can be postponed !

### 7.8 The Final Thesis Presentation

After the completion of the final thesis text, the students should give a final thesis presentation (in May/June or August/September) which can last one hour or longer! In the case of a factory thesis this presentation is held at the company (of course the thesis coach and the advisor(s) will also attend). Prepare this presentation carefully and make it a worthwhile event.

### 7.9 Evaluation

The respective scores are defined as follows:

- $\leq$  7 Absolutely unsatisfactory ; thesis work is not as required (volume and/or contents) despite suggestions of coach/advisor
- 8 or 9 Weak in volume and/or contents sometimes this score is also given to a single thesis team member that obviously contributed very poorly
- 10 or 11 Rather poor thesis
  - 12 Thesis is OK, "cum fructu"
  - 13 Good thesis
  - 14 Good thesis, "cum laude"
  - 15 Better-than-average thesis, a well-deserved "cum laude"
- 16 or 17 Very good thesis (creative, hard working,...), worth the label "magna cum laude"
  - $\geq 18$  An excellent thesis, which can serve as an example for years to come.

The score of a thesis team depends on the following criteria:

- Originality
- Problem solving creativity
- Thoroughness (are all problems tackled?)
- Effort (also: is it a real team effort ?)
- Independent work
- Punctuality
- Final text quality (English must be OK!)
- Reporting and team work THROUGHOUT THE YEAR (good work at the very end of the academic year is not enough!)
- QUALITY OF THE THESIS PRESENTATION(S), especially: quality of the final thesis presentation.

Generally, students working together, as a team, on the same thesis subject, will receive the same thesis grade. If, however, the thesis examination committee judges that the amount of work of the contributors is SUBSTANTIALLY different, different thesis grades may be given. Normally, students will be given a word of warning first when it is believed that their respective contributions are not of equal value.

Important remark: If your thesis score is lower than 10, you are not allowed to graduate!

### 7.10 Practical Details

#### 7.10.1 Travel expenses

In the case of a factory thesis, travel expenses for the thesis work are reimbursed by the company where the research project is carried out. Every company has its own policy for reimbursing travel expenses. The students should discuss this at the beginning of their thesis work together with their daily thesis coach.

You should always keep your train and bus tickets when you use public transportation to go to the company!

In the case of an in-house thesis, necessary travel expenses may be reimbursed by CIB.

#### 7.10.2 Insurance

All K.U.Leuven students are insured for accidents during their thesis work at a company. That is why the CIB doesn't allow students to start their thesis work before they are registered as K.U.Leuven students.

# 8. Examinations

The Master of Industrial Management programme uses a two-semester system, as is the case for other K.U.Leuven programmes. This implies that at the end of both semesters an exam period is organised for all courses taught during the respective semester. For the first semester this exam period is organised in January. Examinations for the second semester are held in June. One month before the beginning of every exam period the exam schedule will be announced on the notice board and on "Toledo" (see Paragraph 11.2). A general timetable and an MIM calendar are given in Appendix A and B.

Students enrolled at the university are automatically enrolled for the examinations in January and June. Students wanting to postpone their examinations to the August-September exam period, should contact the CIB ombudsperson (see next page).

Students failing to successfully pass their examinations at the end of a semester have a chance for re-examination during an extra exam period organised for all courses in August-September. It should be emphasised that, once the semester examinations have been concluded, there is no opportunity to take examinations again for the same course before the August-September exam period.

Students who are going to participate in the August-September exam period MUST INFORM the CIB ombudsperson before July 10. Students not informing the ombudsperson will not be scheduled for the examinations!

All official regulations to pass the examinations or to transfer credits between exam periods (or between academic years) can be consulted on the following webpage:

#### http://www.kuleuven.be/onderwijs/aanbod/info/algemeen/e/060403.htm

It is possible to successfully pass the examinations for all courses in June without having submitted the final thesis report. Students doing so can use the summer break to complete their thesis text before the August-September exam period. Mr R. Frederix is appointed CIB ombudsperson<sup>3</sup>. He can be contacted by e-mail: Ombuds.MIM@cib.kuleuven.be. In December he will discuss with all students the K.U.Leuven examination system. He can always provide extra information or advice; he can also mediate in cases of conflict.

A last remark: most examinations at the CIB are "open book", oral examinations. What you tell the examiner during your oral is important, NOT what you have written down. Make sure to be well prepared for this particular type of examination.

<sup>&</sup>lt;sup>3</sup> The concept and word "ombudsman" originated in Sweden. In Swedish an ombudsman is "an agent of justice", making certain that interactions between government and citizens are fitting and fair. In K.U.Leuven an ombudsperson assures that all examinations are fair for everybody. He assists in solving problems between professors and students.

# 9. Facilities

### 9.1 Classrooms

Most classes of the Master in Industrial Management programme take place in room CIB 04.43. Room CIB 04.43 is a large classroom at the fourth floor of the building "Werktuigkunde" or "WERK", Celestijnenlaan 300 A, 3001 Leuven (Heverlee). The secretary's office of CIB is on the same floor of this building, as well as the offices of Prof D. Cattrysse, Prof J. Duflou, Prof L. Gelders, Prof L. Pintelon and Prof D. Van Oudheusden. Most of the research associates who will monitor the seminars and workshops, also have their offices on the fourth floor.

For finding the building Werktuigkunde and other locations, please consult the Arenberg Campus Plan in Appendix E.

During the first semester, video conferencing is organised on Friday morning in the AVD studio, Kapeldreef 62, 3001 Leuven (Heverlee). See Appendix E, building number 116.

Classes in Ghent are organised at Campus Rabot, Gebr. Desmetlaan 1, 9000 Gent. Classes in Kortrijk at Ondernemingscentrum, Leiestraat 22, 8500 Kortrijk; classes in Lille in 6, rue Auber, 59046 Lille Cedex.

# 9.2 Computer Facilities

The students receive a K.U.Leuven ICTS e-mail address, a login I.D. (s-number or mnumber) and an "activation code" (on a scratch card) while registering in the University Hall, in the centre of the city, Naamsestraat 22, 3000 Leuven.

You can find your Internet ID on the backside of your student card (see the field "Gebruikersnummer").

It is important to change this "activation code" as soon as possible into a **less obvious**, **secret password**, to prevent any misuse of your account. A valid password for your userid is at least eight characters long, containing at least one upper case letter, one lower case letter and one figure. Visit https://activate.kuleuven.be to activate your account.

You need this login I.D. and password for :

- account management : to manage your K.U.Leuven e-mail account (e.g. for changing your password).
- registration at the Department "Werktuigkunde": the PCs in the computer rooms of the building "Werktuigkunde" (groundfloor and third floor) are only available for students registered at the Department by means of a web application on the intranet (http://www.mech.kuleuven.be; click on "Registration Students" under Useful Links). You can do this one day <u>after</u> your official registration at the university and preferably before October 13.
  - Gent, Kortrijk-Lille and second year students, please do likewise!

Registration at the Department "Werktuigkunde" can be done from inside or outside the university .From inside the building "Werktuigkunde" you can log in with a limited user I.D.: user I.D. = "register" (without the quotes); password "register" (without the quotes). With the limited user I.D. you can only have access to a web browser, and it allows you to register.

Your account will be normally activated within two hours and certainly the day after registration.

Regarding print accounting, every registered student gets a credit of 100 pages at the start of the academic year. If you want to print more, you have to pay in advance (15 € per set of 500 pages). This can be done at the secretary's office of the Division PMA on the second floor of the building "Werktuigkunde".

- the Blackboard "Toledo" system (see Paragraphs 9.3 and 11.2).
- reading your e-mail and to log in to KotNet, the central PC classes (owned by Ludit) and KULoket (ISP application).

IMPORTANT: The mailing lists used by the Centre will only contain standard K.U.Leuven e-mail addresses (...@student.kuleuven.be).

Students can rent a PC at very reasonable prices. Please contact the PC Shop, W. de Croylaan 52A, 3001 Leuven (Heverlee);

http://icts.kuleuven.be/computer/pcverhuur/index\_en.html.

For more information: http://icts.kuleuven.be/students.

# 9.3 "Toledo"

Toledo is short for "TOetsen en LEren Doeltreffend Ondersteunen", meaning "efficient support for tests and studying". It offers the students a web-based virtual learning environment. For many MIM courses it is an important didactical tool and a source for different kinds of information.

"Toledo" also encompasses an electronic version of the notice boards which is widely used by the Centre to distribute daily information (see Paragraph 11.2)

If you do not see any notices on the "Toledo" MIM notice board, please mail your login to Secr@cib.kuleuven.be, but make sure you pressed the "view all" tab.

You can also find the WEEKLY TIMETABLES of the MIM programme under "documents".

You can log in at Toledo (http://toledo.kuleuven.be) by means of the K.U.Leuven login I.D. and password you received in the University Hall.

Detailed information regarding Toledo is available at the Toledo website under "info students", which also offers you a Student Manual.

# 9.4 Library

The Campus Library (CBA Library) is situated in building number 59 (see Appendix E). Opening hours are Monday to Friday, from 8.30 a.m. to 10 p.m., and Saturday, from 9 a.m. to 1 p.m.

The library contains more than 6000 books specifically dealing with subjects in Industrial Management. These books are classified according to the Universal Decimal Code (UDC; see list of codes in Appendix C). There are also several relevant journals and all the master's theses of the previous years. You can search for books and journals using http://bib.kuleuven.be/english/index.htm.

The books and master's theses (but not the journals) can be borrowed for a maximum of 14 days. It is possible to extend this period by informing the librarian or by means of the

In order to make use of the library services, your student card is required. You receive this I.D. card after your official registration in the master's programme at the University Hall, Naamsestraat 22, 3000 Leuven. The card gives access to all libraries of the K.U.Leuven.

The Campus Library will organise a library information session for you. Please consult the WEEKLY TIMETABLES of the MIM programme on "Toledo" (see Paragraph 11.2).

# 10. Students' Representatives in the POC and Students' Union

# 10.1 Students' Representatives in the POC

The POC (*Permanente OnderwijsCommissie*) is a standing committee of the CIB that deals with all educational and programme related issues of the Master of Industrial Management programme. The committee suggests to the APOC, the POC of the entire faculty of engineering, possible improvements and changes to the existing programme.

Any faculty member teaching in the Master of Industrial Management programme is entitled to attend the POC meetings. Furthermore, in any meeting there will be research associates' representatives and students' representatives. Voting rights are restricted to eight faculty members, two research associates' representatives and five students' representatives.

Thus, those five students' representatives have considerable voting power. They can really have an impact on decisions made in the Centre. So please select very carefully, five representatives for the entire MIM student body at the beginning of the year. Try to have amongst these representatives: foreign students and Flemish students, engineers, agricultural engineers and scientists, and students from different options. Obviously, the students' representatives should be go-betweens and act on behalf of all master's students. They should clearly voice the opinions of the students.

Normally, there are three or four POC meetings a year.

# 10.2 Students' Union

The students also have their union, M-I-M. The mission of M-I-M is twofold: stimulating the team spirit amongst the MIM students and promoting the programme.

Being a student in the MIM programme should not only mean studying and acquiring knowledge. The student should enjoy and take advantage of being part of the group. Functioning in a group and showing creativity are capabilities that may be expected from future managers. That is why M-I-M aims at strengthening the ties between students through cooperation and common activities. The Master in Industrial Management programme should also become better known in industry and in universities and colleges

where potential students are to be found. There, M-I-M will try to promote the programme and will help the MIM graduates in finding a job in the industry.

The students' union M-I-M will make highly educated people work together voluntarily. This is the core competence of M-I-M. M-I-M committee members are elected at the beginning of the academic year. They are not paid for their work; they find the motivation for their efforts in the mission statement of M-I-M. They are ordinary students of the programme themselves and thus are well placed to organise activities for their fellow students.<sup>4</sup>

The M-I-M union has its own website (http://www.M-I-M.be), where all the M-I-M activities are announced. In the past academic years, they organised job fairs, several day trips, soccer games against the professors and research associates of the CIB, a visit to the Flemish Parliament, a movie night, a barbecue, food festivals etc. For more information please consult the M-I-M website.

Early October, a small meeting to introduce M-I-M to all students will be organised by the M-I-M representatives of the previous (2007-2008) academic year. Please consult the WEEKLY TIMETABLES on "Toledo".

Since September 2003 there is also an alumni organisation... More about it after graduation!

<sup>&</sup>lt;sup>4</sup> Text taken from the M-I-M website: http://www.M-I-M.be; September 2005.

# **11. Daily Arrangements**

# **11.1 Whom Should you Contact?**

Information about	Contact Person	E-mail
Handouts	Secretaries	Secr@cib.kuleuven.be
Field of study		
1. ESE	Prof D. Cattrysse	Dirk.Cattrysse@cib.kuleuven.be
2. ICT	Prof L. Pintelon	Liliane.Pintelon@cib.kuleuven.be
3. PPM	Prof J. Duflou	Joost.Duflou@mech.kuleuven.be
4. T&L	Prof D. Van Oudheusden	Dirk.VanOudheusden@cib.kuleuven.be
Study problems, scheduling and examination issues,	R. Frederix (ombudsperson)	Ombuds.MIM@cib.kuleuven.be
POC	Prof D. Cattrysse	Dirk.Cattrysse@cib.kuleuven.be
PR activities of the	J. D'hondt	Joris.Dhondt@cib.kuleuven.be
CIB	K. Sörensen	Kenneth.Sorensen@cib.kuleuven.be
General issues		info@cib.kuleuven.be

The secretary's office	
Secretaries:	Mrs E. De Volder
	Mrs E. Neyens
Office houres:	9 a.m. to noon
	1 p.m. to 4 p.m
They can be reached at:	
- tel.number:	016/32.25.67
- telefax number:	016/32.29.86
- e-mail address:	Secr@cib.kuleuven.be

The research associates and faculty members can be contacted, preferably in the afternoon; an appointment by e-mail is appreciated.

# **11.2 Notice Boards**

The notice boards are located in the *students' meeting room*, adjacent to room CIB 04.43 in the building "Werktuigkunde". The students' meeting room can be used for all kind of purposes. Please keep it clean! Students can make use of one of the notice boards (the one without glass covering) to put up their own notices.

But not all messages will be fixed there! The Blackboard "Toledo" system: http://toledo.kuleuven.be, is more important for daily information.

You can login at "Toledo" by means of the K.U.Leuven login I.D. and the password you received in the University Hall. Please read the messages on "Toledo" very regularly! If you do not see any notices on "Toledo", press the "view all" tab. If the problem persists, please mail (Secr@cib.kuleuven.be) and explain your problem. Also mention your login I.D. (sxxxxxx or mxxxxxx) in the e-mail.

# **11.3 Additional Costs and Reimbursements**

You should finance yourself teaching materials (to order from the CIB secretary's office) and required textbooks (to buy from a book store).

CIB will organise and carry the cost of all field trips; if you are going on your own (by car e.g.), you may be reimbursed, but only if you obtained an OK of the CIB chairperson BEFORE the event.

In the case of factory research, your thesis research firm will pay for all your thesis research travel expenses (see Paragraph 7.10.1).

# 12. Additional Information

Administration issues for foreign students

International Admissions and Mobility Unit Head of Office : Marie-Thérèse Deloddere Atrecht College, Naamsestraat 63, bus 5410, 3000 Leuven Tel : : +32 16/32.40.20, fax: +32 16/32.37.73 E-mail: csb@int.kuleuven.be http://www.kuleuven.be/english/about/oiss.htm

CIB homepage http://cib.kuleuven.be

General information for foreign students http://www.kuleuven.be/english

ICAM homepage http://www.groupe-icam.fr

KaHo Sint-Lieven Gent homepage http://www.Kahosl.be

K.U.Leuven homepage http://www.kuleuven.be/kuleuven (Dutch) http://www.kuleuven.be/english (English)

M-I-M (students' union) homepage http://www.M-I-M.be

PIH homepage http://www.pih.be

#### Finding lodging in Leuven

The Housing Service, located in the Van Dalecollege, Naamsestraat 80, 3000 Leuven (tel. 016/32.44.00, fax 016/32.88.20) collects all information about available single rooms, studios, flats and apartments and stores this in the computer. Students can select the type of housing they want, taking into account considerations such as location, number of students in the house, size, comfort, monthly rent, etc.

http://www.kuleuven.be/english/living/index.htm

#### Finding a job in Leuven

Foreign students often have to live on a slender allowance. Sometimes a student job can help them out financially. However, finding a job can be rather difficult because of several reasons.

There is the language problem: a great many job opportunities require the knowledge of Dutch. Belgian law requires certain additional formalities for the employment of foreign students. Not all employers are eager to fill out the documents necessary for a foreign student to obtain a job in a legal way.

But do not get too worried, there is the Job Service to help you out... Van Dale College, Naamsestraat 80, Leuven.

#### http://www.kuleuven.be/studentemployment/

#### Study advice

Naamsestraat 80, 3000 Leuven. Tel.: 016/32.43.11, fax: 016/32.43.30

#### General questions about life in Leuven

Orientation Days K.U.Leuven: from September 17 to September 25. Everything you want to know about life in Leuven and at the university! http://www.kuleuven.be/vesta/orientationdayssept/index.htm

# THE CIB STAFF WISHES YOU A FRUITFUL, ENJOYABLE AND SATISFYING STAY AT THE CENTRE!

YEAR 2008-2009
: TIMETABLE ACADEMIC
APPENDIX A

More detailed WEEKLY TIMETABLES will be put up on "TOLEDO" during the academic year.

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Wednesday				
10 a.m 11.30 a.m	Introduction to Management	НООЈ6а	L. Gelders	CIB 04.43
11.30 a.m. – 1 p.m	Deterministic and Stochastic Decision Models $^1$ Workshop or Seminar $^2$	НооКза	D. Van Oudheusden	CIB 04.43
2 p.m. – 3.30 p.m.	Specialised Management-Technology Course (in parallel for the four fields of study)	ESE ICT PPM T&L		WERK 00.77 CIB 04.44 WERK 03.042 CIB 04.43
3.30 p.m. – 5.30 p.m.	Workshop or Seminar			CIB 04.43
Thursday				
8.30 a.m. – 10 a.m.	Deterministic and Stochastic Decision Models	НООКЗА	D. Van Oudheusden	CIB 04.43
10 a.m 11.30 a.m.	Engineering Economy	НООК1а	L. Gelders	CIB 04.43
11.30 a.m. – 1 p.m.	Introduction to Management Accounting <sup>1</sup> Workshop or Seminar <sup>2</sup>	НООКОА	M. Cools	CIB 04.43
2 p.m. – 6 p.m.	Workshop or Seminar			CIB 04.43
Friday				
9 a.m. – 10.30 a.m	Management and Information Technology <sup>3</sup>	НООК2а	L. Pintelon	AVD/KaHo/Ondern. Centr.
10.30.a.m. – 12 a.m.	Operations Management and Logistics <sup>3</sup>	H00J9a	D. Cattrysse	AVD/KaHo/Ondern. Centr.
1 p.m 4 p.m. (three weeks only)	Socio-Psychological Issues in Organisations <sup>4</sup>	НООКва	K. De Witte	CIB 04.43

1: first half of semester 2: second half of semester

3: by video conferencing 4: other arrangements will be made for Options Gent and Kortrijk-Lille

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Monday	ESE		
9 a.m 10.30 a.m.	Industry and Environment	HOOLOA	T. Van Gerven
10.30 a.m. – 12 a.m.	Energy Management	H00L1A	W. D'haeseleer
2 p.m. – 3.30 p.m.	Safety and Environmental Aspects in Energy Eng.	H00L2A	L. Helsen, E. Van den Bulck
3.30 p.m. – 5.30 p.m.	Environment, Safety and Energy Seminars	H00L3A	D. Cattrysse, L. Helsen, T. Van Gerven, F. Van den Schoor
Tuesday	Some Elective Courses		
Not every week	Selected Topics in Management Accounting	НО5КОА	A. Van den Abbeele
10.30 a.m. – 0.30 p.m. and	Total Quality Management <sup>1:4</sup>	HOON6A	N. Peirs
1.30 p.m. – 4.30 p.m.			
1.30 p.m. – 4.30 p.m.	Freight Transport Management <sup>2</sup>	H05K3A	A. Van Breedam
Wednesday	РРМ		
11.30 a.m. – 1 p.m.	Maintenance Management	H00M4A	L. Pintelon
2 p.m. – 3.30 p.m.	Product Development and Innovation	HOOM5A	J. Duflou
3.30 p.m. – 5.30 p.m.	Product and Production Management Seminars	НООМ7А	J. Duflou, L. Pintelon, B. Lauwers, D. Van Oudheusden
6 p.m. – 8 p.m	Managing Technology and Innovation <sup>5</sup>	DOM70B	B. Van Looy
	(an elective course)		

Courses take place in room CIB 04.43. 1. first half of semaster

1: first half of semester 4: will be scheduled in Kortrijk at another time

3: by video conferencing 2: second half of semester 3: by video 5: NOT taught in CIB 04.43, but in Huis De Munter, Naamsestraat 69

2

APPENDIX A - ERRATA: TIMETABLE ACADEMIC YEAR 2008-2009

Thursday	T&L		
11 a.m. – 0.30 p.m.	Facilities Planning	HOON2A	L. Pintelon
1.30 p.m. – 3 p.m.	Distribution Logistics	HOON3A	D. Cattrysse
3 p.m. – 5 p.m.	Transportation and Logistics Seminars	HOON5A	D. Cattrysse, L. Pintelon, P. Sas, D. Van Oudheusden
Friday	ICT tentative schedule		
10 a.m 11.30 a.m.	Development of Software Products	H00L8A	W. Joosen
11.30 a.m. – 1 p.m.	Software Project Management	H00L6A	G. Poels
2 p.m. – 3.30 p.m.	Computer Infrastructure Management	H00L9A	I. Van Horebeek
3.30 p.m. – 5.30 p.m.	Information and Communication Seminars	Ноомоа	W. Joosen, L. Pintelon, G. Poels, D. Schreurs, I. Van Horebeek

1: first half of semester 4: will be scheduled in Kortrijk at another time Courses take place in room CIB 04.43.

3: by video conferencing 2: second half of semester 5: NOT taught in CIB 04.43, but in Huis De Munter, Naamsestraat 69

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APPENDIX B : C	ALENDAR A	CADEMIC YEAR 2	2008-2009	
			Caler	idar Academic Year 2008-2009
		-		
	Week (acad.year)	Date	Week (civil year)	MIM Calendar
Semester 1 Part 1	-	22/09-26/09	39	<i>Start of academic year, start of 1<sup>st</sup> semester</i> September 23 (2 p.m. – 3 p.m.): General MIM info session September 24 (10 a.m. – 12 a.m.): Short presentation of the four fields of study September 24 (2 p.m. – 5.30 p.m.): Campus Rally
	2	29/09-03/10	40	October 3: - Due date field of study and elective course selection - POC students' representation selection
	3	06/10-10/10	41	October 8: Start of thesis selection process
	4	13/10-17/10	42	October 14 (2.30 p.m.): POC 1 October 17: Due date thesis selection
	2	20/10-24/10	43	October 24: Thesis subject assignment
	9	27/10-31/10	44	
	7	03/11-07/11	45	
Semester 1 Part 2	8	10/11-14/11	46	November 10: Holiday November 11: Holiday
	6	17/11-21/11	47	
	10	24/11-28/11	48	
	11	01/12-05/12	49	
	12	08/12-12/12	50	Intermediate thesis presentations 1 (first week)
	13	15/12-19/12	51	Intermediate thesis presentations 1 (second week)

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		22/12-02/01	52 - 1	Christmas Holidays
		05/01-09/01	2	Study leave
•		12/01-30/01	3 - 4 -5	Exam week 1, week 2 and week 3
		02/02-06/02	9	No lectures or seminars February 2: Holiday February 6: Last day for change of elective courses
Semester 2 Part 1	14	09/02-13/02	L	Start of 2 <sup>nd</sup> semester February 10 (2.30 p.m.): POC 2
	15	16/02-20/02	ω	February 20: Due date final thesis title
	16	23/02-27/02	6	
	17	02/03-06/03	10	
	18	09/03-13/03	11	
	19	16/03-20/03	12	
	20	23/03-27/03	13	Intermediate thesis presentations 2 (first week)
	21	30/03-03/04	14	Intermediate thesis presentations 2 (second week)
		06/04-10/04	15	Easter Holidays; Business Game 1 (06/04 - 08/04), Business Game 2 (08/04 - 10/04)
		13/04-17/04	16	Easter Holidays
Semester 2	22	20/04-24/04	17	
Part 2	23	27/04-01/05	18	May 1: No lectures or seminars (holiday)
	24	04/05-08/05	19	
	25	11/05-15/05	20	
	26	18/05-22/05	21	May 19 (2.30 p.m.): POC 3 May 21: No lectures or seminars (holiday)

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	25/05-29/05	22	Study leave
			May 25: Submit preliminary thesis version to coach (also preliminary non-confidential copy if there is one)
	01/06-05/06	23	Study leave
		_	June 1: Holiday
			June 2: Due date thesis Final thesis presentations (preferably in this period)
	08/06-26/06	24 - 25 - 26	Exam week 4, week 5 and week 6 June 26 (2 p.m.): Council of thesis examiners
	29/06-03/07	27	July 2: Council of faculty examiners – ( 4.30 p.m.) MIM graduation
	06/07-14/08	28-33	Summer Holidays July 10: Last day for informing ombudsperson about August-September exams August 11: Submit preliminary thesis version to coach (also preliminary non-confidential copy if there is one)
	17/08-04/09	34-35-	Exam weeks
		36	August 21: Due date thesis September 04 (2 p.m.): Council of thesis examiners
	07/09-11/09	37	September 7: Holiday September 10: Council of faculty examiners - (4.30 p.m.) MIM graduation

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# List of Universal Decimal Codes (UDC)

# UDC codes for the most relevant topics

1. Probability. Mathematical Statistics	(519.2)
2. Operational research	(519.8)
- Theory of Games	(519.83)
- Mathematical Programming	(519.85)
- Queuing Theory	(519.87)
- Inventory Theory. Stock Control	(519.87)
- Theory of Reliability and Reservation	(519.87)
- Simulation	(519.87)
- Network Planning	(519.87)
- Quality Control	(519.87)
3. Management and Organisation_	(65)
- Methods and Methodology	(65.01)
- Work Study and Analysis	(65.015)
- Material Handling	(658.2)
- Human Relations in the Enterprise. Personnel	(658.3)
- Production Engineering and Planning. Design.	(658.5)
- Production Management and Control	(658.5)
- Servicing and Maintenance Work	(658.58)
- Marketing. Sales. Selling. Distribution	(658.8)
4. Accountancy	(657)
- Profit Planning	(657.)
- Bookkeeping Methods, Systems, Techniques	(657.1)
- Budgets. Estimates. Business Records	(657.3)
- Balances	(657.3)
- Cost Accounting	(657.4)
5. Information and Communication Technology	(681.3*)
- Hardware	
- Software	(681.3*D)
- Information Systems	(681.3*H)

# **Required Textbooks**

For required	d courses:
1. H00J6A	Needle, D. (2004) <b>Business in Context</b> (Business Press, London);
2. H00J9A	Nahmias, S. (2005) <b>Production and Operations Analysis</b> (Irwin McGraw-Hill, New York);
3. H00K2A	O'Brien, J.A. and Marakas G. (2008) <b>Management and Information</b> (Irwin McGraw-Hill, Boston);
4. H00K3A	Winston, W.L. (2004) <b>Operations Research</b> (Thomson, Australia).
5. H00K0A	Atkinson, Kaplan and Young (4 <sup>th</sup> Edition, 2003 or 5 <sup>th</sup> Edition, 2007) <b>Management Accounting</b> (Prentice Hall, England)

For PPM and	T&L fields of study:
6. H00M2A	Nahmias, S. (2005) <b>Production and Operations Analysis</b> (Irwin McGraw-Hill, New York). <i>This book is exactly the same as the book for H00J9A</i> <i>(number 2).</i>





1	Arenberg Castle, Kardinaal Mercierlaan 94
10	MTM, Kasteelpark Arenberg 44
39	Building "Werktuigkunde", Celestijnenlaan 300A
46	ICTS (Ludit/AIV), W. de Croylaan 52A

40	Auditorium 200 N004, Celestijnenlaan 200
57	Auditorium De Molen
59	CBA Library, W. de Croylaan 6
116	AVD Studio, Kapeldreef 62