

ensait

SYLLABUS

FORMATION CLASSIQUE

2^{ème} ANNEE

SEMESTRE INTERNATIONAL

E2-SI

| | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|---|--------------------|--------|----------|----------|----|----|------------------------------|----------|
| SI-MANA02 International Management | ZENG Xianyi | | 8 | 4 | | | | 1 |
| E2-S8/E2-SI | MARIAUD Eric | SI | 8 | | | | Ctrl cont. reg. & Exam final | |
| 3*1h20 en TD | TERNYNCK Elise | | | 4 | | | | |

COURSE OBJECTIVES

Identifying : what differences can be outlined in the various countries

Understanding : how cultural differences impacts business relationships

Adapting : how to adapt management in an international environment ; what mistakes to avoid

PREREQUISITES

Sensitivity to other people, personal experiences

COURSE DESCRIPTION

Management is probably the key capacity you should have if you want to be successful in your job. In an international environment, management is all the more complex that besides the human component there is a cultural component you will need to take into account.

Because identity, values, and institutions are different from one country to another, behaviour and work habits vary from one region to the other one and your business relationships are impacted. As a good manager, you will have to take into account this variable. You will not be required to approve or disapprove them but your success will rely on your capacity to identify, understand and assimilate these differences.

TEACHING METHOD

Lectures and workshops

ASSESSMENT

Case study

REFERENCES

| | | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|--------------|-----------------------------|-----------------------------|--------|----|----|----|----|------------------------------|-----------|
| SI-PP | Projet professionnel | <i>LEWANDOWSKI Maryline</i> | | | | | | | 14 |
| E2-DD | Etudiants DD | CHAMALET Cyril | SI-DD | | | | | Ctrl cont. reg. & Exam final | 1 |

> OBJECTIFS EN TERMES D'ACQUIS D'APPRENTISSAGE

Au terme de ce cours, l'étudiant devra avoir compris :

- les principes de base du CV et de la lettre de motivation

Au terme de ce cours, l'étudiant sera en mesure de :

- identifier les éléments clés de son projet professionnel
- mettre en œuvre sa recherche de stage par rapport à ce projet professionnel, et postuler à une offre de stage

> PREREQUIS

CV à jour + Fiche de retour d'expérience (à télécharger sur Moodle, module Projet Professionnel) : à présenter à la première séance.

> CONTENU/DESCRIPTION

- 2 journées de 7h
- Exploration de l'environnement personnel : motivations, valeurs, personnalité
- Exploration du marché des offres de stage
- Eléments de connaissance de soi acquises dans l'interaction avec les autres élèves et l'enseignant.

> PEDAGOGIE

- Apports théoriques sur le projet professionnel
- Travail de recherche individuel ou en groupe
- Auto-évaluation de son parcours.
- Simulation d'entretien de présentation de son projet professionnel

> METHODE D'EVALUATION

Présence aux sessions.

Simulation d'un entretien pour présenter son projet professionnel : choix argumenté d'une offre de stage, candidature (LM et CV) à cette offre.

> RESSOURCES

Offres de stage de l'Ensaït (portail de l'Ensaït)

Plateforme moodle : module Projet Professionnel (E3)

| | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|-----------------------------|---------------------------------------|------------------------------|----------------|-----------|----|----------|------------|------------------------------|
| SI-ANGL05 | English for oral communication | <i>LOBB DE RAHMAN Cheryl</i> | | 34 | | 2 | | 3 |
| E2-S8/E2-SI | | LOBB DE RAHMAN Cheryl | 1/2 Gr TD (x2) | | 24 | | 2 | Ctrl cont. reg. & Exam final |
| | | AUDUREAU Anita | | | | | | |
| | | <i>Plateforme elearning</i> | SI | | 10 | | | |

OBJECTIFS / COMPETENCES

Approfondir les compétences dans la communication orale dans le contexte professionnel

PRE-REQUIS

Avoir de préférence le niveau B2, mais au moins B1+, du Cadre de Référence Européen

DESCRIPTION

TD : en utilisant le Business Benchmark, le 600 words for the TOEIC et Business Reflex English, et autres ressources selon intervenant(e)

METHODES D'ENSEIGNEMENT

Travaux dirigés, Plateforme e-learning, Campus numérique

METHODES D'EVALUATION

DS, contrôle continu

REFERENCES

Seront données par l'intervenant(e)

| | | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|-----------------------------|-------------------------|------------------------------|----------------|----|-----------|----|----------|------------------------------|----------|
| SI-ANGL06 | Business English | LOBB DE RAHMAN Cheryl | | | 34 | | 2 | | 3 |
| E2-S8/E2-SI | | LOBB DE RAHMAN Cheryl | 1/2 Gr TD (x2) | | 24 | | 2 | Ctrl cont. reg. & Exam final | |
| | | AUDUREAU Anita | | | | | | | |
| | | Plateforme elearning | SI | | 10 | | | | |

OBJECTIFS / COMPETENCES

Approfondir les compétences dans la langue professionnelle anglaise surtout à l'écrit, dans la compréhension écrite et orale comme dans la production écrite, dans l'objectif général d'atteindre, voire dépasser, le niveau minimum requis en anglais pour l'obtention du diplôme d'ingénieur.

PRE-REQUIS

Niveau minimum B2

DESCRIPTION

Activités, exercices de grammaire et de production écrite

METHODES D'ENSEIGNEMENT

Travaux dirigés, Bulats blanc : paper-based test

METHODES D'EVALUATION

Contrôle continu, DS final

Les étudiants venant à l'Ecole dans le cadre d'un programme d'échange tel qu'ERASMUS peuvent participer aux cours ; cependant, ils ne passeront pas le test officiel de Bulats organisé au cours du semestre, ceci étant une condition pour le diplôme de l'ENSAIT.

REFERENCES

"Essential Bulats" : De David Clark , University of Cambridge ESOL examinations

"Success with Bulats" (Summertown Publishing)

"Achieve Bulats" (Cavendish Publishing)

| | | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|-----------------------|-------------------------|------------------------------|--------|----|-----------|----|----|-----------------|----------|
| SI-LV2-04 | Foreign Language | LOBB DE RAHMAN Cheryl | | | 20 | | | | 2 |
| E2-S8 | | <i>Plateforme elearning</i> | SI | | 20 | | | Ctrl cont. reg. | 6 ECTS |

OBJECTIFS / COMPETENCES

Les étudiants suivant un programme d'échange tel que ERASMUS suivent le français comme LV2. Objectifs: une progression régulière des étudiants ayant déjà des connaissances de la langue française, en accentuant l'usage pratique et professionnel.

Exchange students at ENSAIT take French as their second foreign language. The course objective is to improve understanding and fluency, with the emphasis on practical and professional usage.

PRE-REQUIS

Connaissances de la langue française. Les étudiants seront répartis en groupes de niveaux, des faux-débutants aux avancés.

These courses are for students who already have a knowledge of French. The students will be put into groups according to their level, from pre-intermediate to advanced.

METHODE D'EVALUATION

En contrôle continu et test final : 5/20 pour l'assiduité et la participation ; 5/20 pour la progression ; 10/20 pour le devoir surveillé. La présence aux tests est obligatoire: toute absence non justifiée est sanctionnée par un zéro.

Continuous assessment and final test: 5/20 for participation, 5/20 for progress during the semester, 10/20 for the final test. Presence is compulsory at all tests; any unjustified absence will be marked "zero".

REFERENCES

Seront données par l'intervenant(e).

Will be given by the teacher.

| | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|---------------|---------------------------------------|------------------------------|---------|-----------|----|----|------------------------------|----------|
| SI-FR1 | Intensive French for beginners | <i>LOBB DE RAHMAN Cheryl</i> | | 40 | | | | 2 |
| E2-SI | Français | Vacataires LV2 | SI EXCH | | 20 | | Ctrl cont. reg. & Exam final | |
| | | Plateforme elearning | | | 20 | | | |

OBJECTIFS / COMPETENCES

- Apprendre quelques bases de français surtout pour la vie quotidienne (se présenter, se déplacer, participer à une conversation simple, compréhension orale et écrite, écrire des emails simples...)

- An intensive introductory course to the basics of French, aimed at practical day-to-day life in French-speaking countries: in addition to learning basic grammar and vocabulary, students will practise listening and reading comprehension and learn how to hold a simple conversation in French (meeting people, travelling...) and how to write simple emails.

PRE-REQUIS

- N'avoir aucune, ou presque aucune connaissance de la langue française

- This course is aimed at complete beginners in French.

DESCRIPTION

Travaux dirigés en utilisant des ressources diverses (textes, CD, DVD...)

METHODE D'EVALUATION

Contrôle continu, test final

- The course will be evaluated through continuous assessment and a final test. The overall mark comprises 5/20 for participation, 5/20 for progress made throughout the semester, and 10/20 for the test. Presence at all tests is compulsory and any unjustified absence will be marked "zero".

REFERENCES

Seront données par l'intervenant(e).

| | | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|--------|----------------|--------------------------|---------|----|----|----|----|-----------------|------|
| SI-FR2 | French Culture | DELESPIERRE Marie Pierre | | 16 | | | | | 2 |
| E2-SI | | DELESPIERRE Marie Pierre | SI EXCH | 16 | | | | Ctrl cont. reg. | |

COURSE OBJECTIVES

The course aims to give some cultural keys concerning the culture (politics, society, religion...), main historical events, major artistic tendencies and schools of thought, fundamental symbols (concrete or abstract) representing French memory. The aim will be to present and explain some ideas, texts, symbols, celebrations, monuments, places, particular days or works of art which are necessary to understand the current French society because they partly establish the conscience of the country.

COURSE DESCRIPTION

Focusing on heritage and culture, we will see French history before and after the 50 60's period which is the date of birth of the hexagonal representation of France.

We will use documents, objects, sounds, images or texts, current ones if possible, and we will comment upon them to understand their meaning, scope, and historical importance, discover their origin, see how they continue influencing and understand their importance in the contemporary reality.

We might visit a monument or gather testimonies of external people.

In other words, we will wait for your sense of observation, as well as your curiosity and questioning. As a result, the aim of this course is not only gathering facts and giving general knowledge.

If there are non-European students, each time it is needed, first we will establish occidental references useful to the comprehension of a fact, an event or an object, before observing specifically French characteristics.

TEACHING METHOD

ASSESSMENT

Each student will have to realize an exposition about a course topic. You will have to do a written summary of the exposition.

For marking, we will take into account relevancy and quality of the exposition, coherence and legibility of the layout, clarity and precision of the oral presentation (in particular its understanding by French and non-French speaking people). We will also take into account the personalized nature of the written summary (in other words, the target is not only to gather information on the web, and even less to copy an entire article).

REFERENCES

Arnold Toynbee, *La grande aventure de l'humanité*, Coll. «Grande bibliothèque Payot», Éditions Payot & Rivages, Paris, 1992.

Sous la direction de Jean Carpentier et François Lebrun, *Histoire de France*, Coll. «Points Histoire», Seuil, Paris, 1987.

Malet et Isaac, *L'histoire I, II, III, IV*, Coll. Marabout, Hachette, Paris, 1958.

Philippe Ariès, *Histoire des populations françaises et leurs attitudes devant la vie depuis le XVIIIe siècle*, Coll. «Points Histoire», Seuil, Paris, 1971.

Odile Rudelle, *De Gaulle, pour mémoire*, Coll. «Découvertes Gallimard, histoire», Gallimard, Paris, 1990.

Sous la direction de Pierre Nora, *Les lieux de mémoire I, II, III*, Coll. «Quarto», Gallimard, Paris, 1997.

Pascale Goetschel, Emmanuelle Loyer, *Histoire culturelle de la France de la Belle Époque à nos jours*, Coll. «Cursus», Armand Colin, Paris, 2005.

Hannah Arendt, *La crise de la culture*, Coll. «Folio essais», Gallimard, Paris, 1972.

Ernst Gombrich, *Histoire de l'art*, Flammarion, Paris, 1986.

André Chastel, *Introduction à l'histoire de l'art français*, Coll. «Champs», Flammarion, Paris, 1993.

Jean-Michel Leniaud, *Utopie française, essai sur le patrimoine*, Mengès, Paris, 1992.

J.-A. Brutails, *Pour comprendre les monuments de la France*, Gérard Montfort, Brionne, 1988.

Ernest Renan, *Qu'est-ce qu'une nation? et autres essais politiques*, Coll. «Agora, les classiques», Presses pocket, 1992.

Bernard de Gunten et al., *Les institutions de la France*, Coll. «Repères pratiques», Nathan, Paris, 1994.

Textes officiels de la République française, La Documentation française, Paris.

Textes officiels de l'Union européenne et du Conseil de l'Europe, Bruxelles, Strasbourg.

Encyclopedia Universalis, Universalis, Paris, 1968 et suivantes. In the ENSAIT Library.

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|-----------|------------------------------|---------------|--------|----|----|----|------------|------------------------------|
| SI-CONC02 | Virtual reality for textiles | KONCAR Vladan | 18 | | 6 | 2 | | 2 |
| S8 SI CMD | | KONCAR Vladan | SI-CMD | 18 | | | 2 | Ctrl cont. reg. & Exam final |

COURSE OBJECTIVES

To acquire knowledge in the field of conception and realization of interactive websites (2D and 3D) concerning textile commercial exchanges.

To use design and creation tools based on computer-generated images and virtual merchandising.

To localize and browse on commercial websites.

To know virtual-reality languages (xml, vrmf...).

To conceive and realize a virtual-shop website.

PREREQUISITES

General knowledge in computing, navigation softwares on the internet and basic programming languages (C, HTML...).

COURSE DESCRIPTION

To think about the evolution of commercial terms of exchange - To analyze the needs in terms of interactive sales - Study and analysis of the existent websites «Textile» and «Généraliste» - Navigation tools and installation of «Plug-in» allowing 3D navigation - Study of software tools allowing the quick realization of a 2D animated website and a 3D website - Programming languages for sales websites (VRLM, PHP, FLASH...) - Use of «modelers» in order to create digital 3D images - Insertion of videosequences, acquisition, DV format, compression tools MPEG2, MPEG4 - Definition of the website objectives - technical specifications set up - Conception of a prototype for «virtual-merchandising» (virtual-shop) website - Practical realization.

TEACHING METHOD

ASSESSMENT

Mini-project: realization of a virtual space with computer-generated images.

REFERENCES

Scientific publications in the field of virtual merchandising, modelling and simulation of adaptable structures.

<http://www.confection.fr.st>

<http://www.wtcm.be/~waa/data/vrml/97/spec.dis/index.html> (Norme VRML 97)

<http://www.spazz3d.com/> (Spazz3D Animated 3D VRML Editor)

<http://cosmosoftware.com/products/worlds/> (CosmoWorld)

<http://www.univ-mlv.fr> (Université Marne la Vallée)

<http://www.planete-numerique.com> (MPE2, MPEG4)

<http://www.allhtml.com/> (HTML, DHTML, JAVA, PHP)

<http://blender.org/cms/Home.2.0.html> (Blender)

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|-----------|---------------------------------|-------------------|----|----|----|----|-----------------|------|
| SI-CSR | Corporate Social Responsibility | PERWUELZ Anne | 10 | 2 | | | | 1 |
| S8 SI CMD | | BERARD Christophe | 6 | | | | Ctrl cont. reg. | |
| | | PERWUELZ Anne | 4 | 2 | | | | |

OBJECTIFS / COMPETENCES**PRE-REQUIS****DESCRIPTION****METHODES D'ENSEIGNEMENT****MÉTHODES D'ÉVALUATION****RÉFÉRENCES**

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS | |
|------------------|------------------------------------|----------------------------|----|----|----|----|-----------------|-----------|----------|
| SI-MCUS02 | Advanced Mass Customisation | <i>THOMASSEY Sébastien</i> | | | | | | 12 | 1 |
| S8 SI CMD | TAO Xuyuan | Gr TP CMD (x2) | | | | 12 | Ctrl cont. reg. | | |

COURSE OBJECTIVES

This course is aimed to bring students necessary knowledge to the comprehension of «Mass Customization». It also aims to create a “customized” garment from measures taken by means of a bodyscanner. Prerequisites
Basic knowledge in logistics. Basic knowledge of Modaris and Diamino de Lectra softwares (preferable but not compulsory).

COURSE DESCRIPTION

Practical workshop: use of the Fitnet de Lectra software : solution for Mass Customization. Implementation of a Mass Customization process for Clothing: implementation of a configurator, measurements via a body scanner, «tinged pattern makings» in right measurements,...

TEACHING METHOD

ASSESSMENT

Practical workshops

REFERENCES

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|------------------------------------|------------------------|----------------|-----------|----|----|----|-----------------|------------|
| SI-MARK01 Fashion marketing | ZENG Xianyi | | 16 | | | | | 1,5 |
| S8 SI CMD | Behaviour of Consumers | JEHANNE Annick | SI-CMD | 8 | | | Ctrl cont. reg. | |
| | Fashion and innovation | | SI-CMD | 8 | | | | |

COURSE OBJECTIVES

Understand the specificities of the luxury sector

Know the main actors strategies

Understand the structural elements of today's fashion brand based on its DNA and how today's major Artistic Directors (fashion designers) find the balance between respecting the heritage of a brand/house and expressing something that is attractive to a new generation. Knowing who is who in the major fashion brands of today and what the style and its' meaning are in today's fashion world also constitutes an important understanding of today's international fashion system.

Understand the mechanisms & systems involved in collection management process environments.

Help fully understand today's world of fashion design and how fashion designers and fashion houses operate to create a collection, the collection process will be explained and analyzed in detail.

PREREQUISITES

Marketing knowledge, and the ability of doing a macro and micro analysis.

Read and study fashion related articles in BRITISH ELLE- AMERICAN VOGUE – NYLON and other fashion related magazines as well as Suzy Menkes' articles in the International Herald Tribune. Visit www.style.com web site. Watch the major international fashion shows on www.vogue.com for example.

COURSE DESCRIPTION

Introduction to the luxury industry:

This course will explain the development of western luxury brands, and the strategies implemented by the main international groups and brands in the fashion and leathersgoods sector. Other sectors will also be presented: jewelry and watches, cosmetics, wines & spirits.

Fashion culture and design:

Fashion Brand DNA : what are the codes, values, image that result from the brands' DNA ?

How do today's fashion artistic directors use them whilst still making today's trends ?

We will explore why and how it is generally accepted that the DNA content of a fashion brand in today's market is part of a brand management strategy that is fundamental in building long term success.

What is "brand DNA"?

How is it materialized in a brand's image & product?

How do today's Artistic Directors modernize the brand's standards and heritage?

Who is who in today's top fashion houses? Who are the Artistic Directors for the major international designer & couture fashion brands ?

Fashion collection management:

Fashion trends & systems

From the fiber to the catwalk

TEACHING METHOD

Lectures and workshops

ASSESSMENT

Mini projects

REFERENCES

It is advised that the students read at least one of the following books :

In English

Michel Chevalier & Gérald Mazzalovo, Luxury brand management, 2008

Uche Okonkwo, Luxury fashion branding : Trends, tactics, techniques, 2007

Fifty years of fashion: new look to now, Valerie Steele Yale University Press, 1997, ISBN 0300071329.

Fashion from concept to consumer – Gini- Stephens- Frings, Pearson Prentice Hall, ISBN 0-13-117338-3

In French

Gilles Lipovetsky et Elyette Roux, Le luxe éternel : de l'âge du sacré au temps des marques, 2003

Histoires de Mode –Didier Grumbach

Christian Blanckaert, Luxe, 2007

Olivier Assouly et Pierre Bergé, Essais sur la fabrique de l'ostentation, 2005

Jean Castarède, Le luxe, 2007

Stéphane Marchand, Les guerres du luxe, Fayard, 2001

Revue Entreprises et histoire, Le Luxe, Numéro 46, Avril 2007

Dana Thomas et Olivier Colette, Comment les marques ont tué le luxe, 2008

Danièle Allèrès et Olivier Mellerio, Luxe, Stratégies marketing, 2005

Jean Castarède, Histoire du Luxe en France des origines à nos jours, 2006

Comité colbert website : www.comitecolbert.com

www.abc-luxe.com

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|------------------|--------------------------------------|-----------------|-----------|----|----|----|-----------------|------------|
| SI-PROD01 | Textile, fashion and luxury products | ZENG Xianyi | 30 | | | | | 2,5 |
| S8 SI CMD | Fashion design | JOLY Frédérique | SI-CMD | 12 | | | Ctrl cont. reg. | |
| | Luxury products | | SI-CMD | 6 | | | | |
| | Textile design | DEWET Audrey | SI-CMD | 12 | | | | 4 ECTS |

COURSE OBJECTIVES

Learning basic knowledge on mail order, e-business and behaviour of consumers

PREREQUISITES

The usual knowledge & know how of an Applied Science graduate level.

COURSE DESCRIPTION

Mail order and e-business:

Part 1:

- An overview on the dramatic change inside the European retail business with very strong influences also on the mail order business (MOB).
- Learn how the mainly catalogue-based MOB is changing into a mainly online-based multichannel-oriented business, including Tele-, Mobile- and ITV-Shopping.

Part 2:

- New ways to survive or gain market share inside this dramatic change of the distance selling market
- Main marketing-strategic success concepts to compete with more and more successful retail concepts: • brand and communication strategy • multichannel offer strategy • CRM (customer relation management) based sales and service strategy • more and more customer based online-strategy • self learning rapid action chain programs • international runner multiplication

Behaviours of consumers:

Part 1: Satisfaction and/or/vs quality of service. Evaluation techniques: Mystery shoppers, Envirosell, Hofstede or even IBM. Promotion techniques, levies and risks.

Part 2: Sales concepts: From Hard Discount to Ethnical including No-Branding or Gay Marketing; Not the same product to everybody ! Adjusting a profile; Emerging trends: Seniors. Markets and Geography: Gross Domestic Product and/vs; Product Purchasing Power; Examples.

ASSESSMENT

Mail order and e-business: All presentations are done by CD-ROM or USB-sticks and are handmade • based on the 25 years experience on building up the world wide market leader • based on concrete best practice examples out of the OTTO Group

Behaviours of consumers: All presentations are Keynote, obviously homemade and handed over as a QuickTime session (.mov). Based on methods we implemented in McArthurGlen Designer's Outlets and other Brand networks.

EVALUATION METHOD

Mini projects. MCQ.

REFERENCES

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|------------------|--|--------------------|----------|----------|----------|----|-----------------|------------|
| SI-INFO05 | International Collection Management | <i>ZENG Xianyi</i> | 8 | 4 | 6 | | | 1,5 |
| S8 SI CMD | Product tracking | Vacataires LV2 | | | 6 | | Ctrl cont. reg. | |
| | International Collection Managt | MARIAUD Eric | 8 | 4 | | | | |

COURSE OBJECTIVES

Identifying : what differences can be outlined in the various countries

Understanding : how cultural differences impacts business relationships

Adapting : how to adapt management in an international environment ; what mistakes to avoid

PREREQUISITES

Sensitivity to other people, personal experiences

COURSE DESCRIPTION

Management is probably the key capacity you should have if you want to be successful in your job. In an international environment, management is all the more complex that besides the human component there is a cultural component you will need to take into account.

Because identity, values, and institutions are different from one country to another, behaviour and work habits vary from one region to the other one and your business relationships are impacted. As a good manager, you will have to take into account this variable. You will not be required to approve or disapprove them but your success will rely on your capacity to identify, understand and assimilate these differences.

TEACHING METHOD

Lectures and workshops

ASSESSMENT

Case study

REFERENCES

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|------------------------------|--------------------|---------------|----------------|----------|----------|------------|------------------------------|------------|
| SI-MAPP04 Data Mining | ZENG Xianyi | | 14 | 2 | 3 | 1,5 | | 1,5 |
| S8 SI CMD | Data analysis | KOEHL Ludovic | SI-CMD | 6 | | | Ctrl cont. reg. & Exam final | |
| | | | Gr TP CMD (x2) | | | 3 | | |
| | | ZENG Xianyi | SI-CMD | 6 | 2 | | 1,5 | |

COURSE OBJECTIVES

Learning design of experiments

Learning data mining methods and their applications related to the textile industry (marketing strategy, processes analysis)

PREREQUISITES

MAAP01, basics in mathematics, statistical methods, Matrix Computing, basic knowledge on database systems

COURSE DESCRIPTION

Basic concepts on data mining, how to extract knowledge from data of information systems, data preprocessing

Principal Components Analysis (PCA) and other methods of factorial analysis

Association rules : principle, rules generation methods, applications in marketing

Design of experiments

TEACHING METHOD

Lectures, exercises

ASSESSMENT

Written examination

REFERENCES

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|---|-------------------------|----------------|-----------|----|-----------|----|-----------------|------------|
| SI-SCMS01 Supply chain modeling and simulation | RABENASOLO Besoa | | 16 | | 12 | | | 2,5 |
| S8 SI CMD | RABENASOLO Besoa | SI-CMD | 16 | | | | Ctrl cont. reg. | |
| | TARTARE Guillaume | Gr TP CMD (x2) | | | 12 | | | |

COURSE OBJECTIVES

Production systems and supply chain modelling

The objective is to learn the different models and techniques for the evaluation and optimization of production systems, supply chains organization, and different management policies. The student will learn how to:

- evaluate the performance of production systems and supply chains.
- use analytical model for the evaluation.
- use a software for modelling and simulation of production systems.
- improve the performance of the existent system from analyzed results.

PREREQUISITES

Knowledge of statistics and probability. Knowledge of textile production processes.

COURSE DESCRIPTION

Production systems and supply chain modelling

I. Introduction

- Introduction to production systems modelling
- Necessity and Objectives of performance evaluation
- Overview of simulation tools

II. Models of production systems

- Simple analytical models
- Queuing networks theory

III. Simulation software

- Introduction to the simulation software: analysis of simulation results
- Optimizing resource assignment
- Simulating multiproduct systems
- Transport and routing, conveyor
- Modelling a textile workshop

TEACHING METHOD

Lectures and workshops

ASSESSMENT

Practical exam with the simulation software. Project with written report.

REFERENCES

David W. Kelton, Randall Sadowski, Deborah Sadowski, Simulation with Arena, McGraw-Hill Education, 2Rev Ed edition, 2001.

ARENA User's Guide, Rockwell Software

Gross, Donald; Carl M. Harris, Fundamentals of Queueing Theory, Wiley, 1998. Myron Hlynka's Queueing Theory Page <http://www2.uwindsor.ca/~hlynka/queue.html>

David, R., H. Alla, Du Grafçet aux Réseaux de Petri, Hermes, Paris, 1992

| CMD | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|------------------|------------------------------|-------------------------|----------------|----|----------|----|-----------------|------------|
| SI-SCPC01 | Supply chain modeling | RABENASOLO Besoa | 18 | | 9 | | | 2,5 |
| S8 SI CMD | Cost estimation | CAMARGO Mauricio | SI-CMD | 8 | | | Ctrl cont. reg. | |
| | Supply chain modeling | RABENASOLO Besoa | SI-CMD | 10 | | | | |
| | | | Gr TP CMD (x2) | | | 9 | | |

COURSE OBJECTIVES

1. Textile and Fashion Supply Chain Management
Acquire different notions on Textile supply chain management.
Identify and solve supply chain optimization problems.
2. Cost estimation
Why integrate cost as design variable (product or manufacturing system).
How to select the best cost estimation method depending on a specific need.
How to implement and use estimation using analytic, analogical or parametric methods.
How to integrate cost estimation and current manufacturing strategies.

PREREQUISITES

Knowledge of textile production processes. Basis on accounting and manufacturing systems.

COURSE DESCRIPTION

1. Textile and Fashion Supply Chain Management
Textile supply chain: description of processes, typology.
Supply chain problematics.
Planning and replenishment methods.
Case studies: supply chain optimization problems.
2. Cost estimation
Product/systems design cycle, why estimation is important? (product and/or services)

Costs estimation methods:
 Analytics: Activity based Costing.
 Analogical: Case based reasoning principles.
 Parametric: Cost estimation Relationships
 Manufacturing approaches:
 Economic criteria for process selection
 Process Based Cost Modelling (PBCM)
 Design for X (Design for manufacturing, Design for Logistics)
 Main topics will be illustrated by examples and case studies.

TEACHING METHOD

Lectures and workshops.

ASSESSMENT

Case studies, written reports and practical exams (in computer lab). Written exam.

REFERENCES

Ulrich, Karl, and Steven Eppinger. Product Design and Development. 3rd ed. New York, NY: McGraw-Hill,. ISBN: 9780072471465. 2003

Camargo M., B. Rabenasolo , A-M. Jolly-Desodt, J-M. Castelain. Application of the Parametric Cost Estimation in the Textile Supply Chain. Journal of Textile and Apparel, Technology and Management. Volume 3, Issue 1, Summer 2003. (<http://www.tx.ncsu.edu/jtatm/>). ISSN 1533-0915

Duverlie P. and J. M. Castelain. Cost Estimation During Design Step: Parametric Method versus Case Based Reasoning Method. Int J Adv Manuf Technol (1999) 15:895–906

Yannou, Robin, Camargo, Micaelli, Roucules. La conception Industrielle de produits, volume 2 : spécifications, déploiement et maîtrise de performances. Chapitre 4. Hermes-Lavoisier. ISBN 978-2-7462-1922-9. 2008

Farineau T., B. Rabenasolo, J. M. Castelain, Y. Meyer and P. Duverlie. Use of Parametric Models in an Economic Evaluation Step During the Design Phase. Int J Adv Manuf Technol (2001) 17:79–86

Stratégie Logistique, Alexandre K.Samii, Dunod, Paris, 2004.

La Logistique - Modèles et méthodes du pilotage des flux, Philippe Vallin, Economica, Paris, 1999.

La gestion des opérations et de la production, Nollet, Kellada & Diorio, Ed. Gaëtan Morin, 1994.

La gestion des approvisionnements et des stocks, Fournier & Ménard, Ed. Gaëtan Morin, 1999.

| TTMA | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|------------|---------------------------------------|----------------------|-----------------|----|----|----|-----------------|------|
| SI-LME04 | Characterization of textile materials | LEWANDOWSKI Maryline | | | 18 | | | 2 |
| S8 SI TTMA | | LEWANDOWSKI Maryline | Gr TP TTMA (x1) | | 18 | | Ctrl cont. reg. | |

COURSE OBJECTIVES

To learn the main tests for textile characterization: methods, apparatus, standards and norms.

Acquiring practical experience in textile metrology. Measurement and results analysis.

PREREQUISITES

Basic knowledge in textile technology

COURSE DESCRIPTION

TP1: Fibre fineness evaluation: of wool (Air Flow), cotton (Micronaire Sheffield), and man-made fibre (Vibroscope)

TP2: Tensile Properties of Textile Materials: study of tensile behaviour of fibres, yarns, and fabrics

TP3: Microscopic Analysis of textiles:

different fibres in longitudinal and cross-sectional analysis

TP4: Basic Properties of Fabrics: study of the basic characteristics of a fabric (basis weight, thickness...), and some common properties such as air/water permeabilities, or abrasion resistance

TP5: Basic Properties of Yarns: study of the basic characteristics of yarns (yarn count (linear density), evenness, twist, and hairiness)

TP6: Nonwoven properties: To determine some characteristic properties of nonwoven fabrics using EDANA or World Strategic Partners (WSP) standards.

TEACHING METHOD

Practical work in textile testing lab.

ASSESSMENT

Written report after each practical work session

REFERENCES

Textile norms and standards (ISO, NF, EN, WSP)

| TTMA | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|----------------------------|----------------------------|------------------------|----------|----------|-----------|----------|-----------------|------------|
| SI-NTISS02 | Design of nonwovens | VROMAN Philippe | 6 | 8 | 12 | 2 | | 2,5 |
| S8 SI TTMA | VROMAN Philippe | SI-TTMA | 6 | 8 | | 2 | Ctrl cont. reg. | |
| | | Gr TP TTMA (x1) | | | 6 | | | |
| | LEWANDOWSKI Maryline | Gr TP TTMA (x1) | | | 6 | | | |

COURSE OBJECTIVES

To bring abilities to be able to design and experiment a nonwoven product

To give the students a work experience in order to better comprehend the relations between the nonwoven properties, structure, raw materials and manufacturing processes

PREREQUISITES

Basic or advanced knowledge on the nonwoven technologies: existing raw materials and fibers, forming and bonding technologies and related nonwoven properties.

COURSE DESCRIPTION

Overview of recent research and development in the nonwoven area, particularly at ENSAIT-GEMTEX

Participation to the design and the implementation of specific (basic) nonwoven products through mini-projects conducted by 3 or 4 students:

Definition of end-use context and requirements

Definition of the functional specifications

Selection of the performance test methods (according to ENSAIT facilities)

Identification and analysis of existing products and theory

Selection of raw materials (fibres); definition of the nonwoven structure, as well as the forming, bonding, finishing and converting technologies (according to ENSAIT-CENT facilities)

Preparation and achievement of nonwoven prototypes at the CENT (nonwoven facilities)

Evaluation of the performance of the prototypes

Oral presentation and outcome of all investigations

TEACHING METHOD

Tutorials, personal and practical works (experimentations)

ASSESSMENT

Oral presentation of the work by group. Written report including investigated samples.

REFERENCES

<http://perso.ensait.fr/vromanp>

| TTMA | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|------------|----------------------------------|----------------------|-----------------|------|----|----|------------|------------------------------|
| SI-TT06 | Innovation in Technical Textiles | MASSIKA Nemeshwaree | 35,3 | | 6 | 2 | | 4 |
| S8 SI TTMA | | PERWJELZ Anne | SI-TTMA | 6,67 | | | 2 | Ctrl cont. reg. & Exam final |
| | | ZENG Xianyi | SI-TTMA | 6 | | | | |
| | | VROMAN Philippe | SI-TTMA | 4 | | | | |
| | | BORDES François | SI-TTMA | 2 | | | | |
| | | CAMPAGNE Christine | SI-TTMA | 4 | | | | |
| | | MASSIKA Nemeshwaree | SI-TTMA | 6,66 | | | | |
| | | | Gr TP TTMA (x1) | | | 6 | | |
| | | LEWANDOWSKI Maryline | Gr TP TTMA (x1) | | | 6 | | |
| | | SALAUN Fabien | SI-TTMA | 4 | | | | |
| | | PETINIOT Jean-Louis | SI-TTMA | 2 | | | | |

COURSE OBJECTIVES

To define processes for the innovative functionalization of textiles, on the bases of research topics of the GEMTEX research laboratory: Nano-composites, chemical and physical grafting, microencapsulation...

To define the notions of textile comfort, the principles of thermal and tactile comfort (textile texture), evaluation methods: physical and sensorial evaluation.

Skills: Knowledge of main textile processes allowing to bring a new property to the textiles.

PREREQUISITES

Basic textile knowledge - Notions on polymers – Statistics

COURSE DESCRIPTION

Textile comfort: basic notions - Thermal comfort: physical and experimental models - Tactile comfort : physical models - Objective evaluation: physical measurements of contact - Sensorial evaluation in the textile industry.

Functionalization processes: introduction: principles of functionalization - Traditional dry filling processes: products, tests, processes - Innovations in dyeing and printing - Environmentally-friendly textile processes - Grafting - Plasma treatments - Microencapsulation - Manufacturing of conductive fibres.

Practical work : fabric fonctionnalization with different process

TEACHING METHOD

Lessons and practical work

ASSESSMENT

Written exam, written report and/or oral presentation

REFERENCES

T.L.Vigo, "Textile processing and properties", Elsevier, 1994

| TTMA | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|------------|---|------------------------|-----------------|----|----|----|-----------------|------|
| SI-TT07 | Production & performance of technical textiles | <i>GIRAUD Stéphane</i> | 7 | | 15 | | | 2,5 |
| S8 SI TTMA | Knitting technology | GIRAUD Stéphane | SI-TTMA | 4 | | | Ctrl cont. reg. | |
| | | GIRAUD Stéphane | Gr TP TTMA (x1) | | | 9 | | |
| | Weaving technology | BOUSSU François | SI-TTMA | 3 | | | | |
| | | | Gr TP TTMA (x1) | | | 6 | | |

COURSE OBJECTIVES

KNITTING PART (CM:4H ; TP:9H)

to work out, carry out, create knitted technical textiles from a precise schedule of conditions.

To know the technical English vocabulary,

To write a schedule of functional and technical conditions

To hold a technical discussion with a schedule of conditions (supplier/specialist/technical personnel)

To adapt a machine for a particular need

To control the properties and technical applications in knitting

To control the properties of technical knittings (weight with the m^2 , dimensional stability, thermal behaviour, resistance to the cut, the perforation...)

WEAVING PART (CM:3H ; TP:6H)

to know the basic knowledge of Jacquard Fabric design and production

to design and produce a double face weft fabric

PREREQUISITES

KNITTING PART

Good knowledge of acquired notions about weft stitch (TEXT01, MAIL01, MAIL02) and yarn (FILA01)

COURSE DESCRIPTION

KNITTING PART

Choice of existing technical knitted fabrics or of new knitted fabrics with high performance fibres to get interesting properties in thermal behaviour, cut resistance or stab resistance

WEAVING PART

good knowledge of the fabric's fundamentals (weave diagrams, peg plan, technical datasheet)

TEACHING METHOD

KNITTING PART

Practical works

WEAVING PART

Teaching courses (course 1 on Jacquard Fabric and course 2 on double weft fabric) and practical works (exercise 1 on Jacquard ribbon and exercise 2 on double weft weaving structure)

ASSESSMENT

KNITTING PART

The assessment is made during practical workshops by a technical report which includes the carrying out of knitted fabrics from a precise schedule of conditions and the results of measurements of characterization (cut or perforation or thermal behaviour)

WEAVING PART

Achievement of a Jacquard ribbon on the weaving machine and production of a double weft fabric on hand insertion weaving loom

| TTMA | Intervenants | GROUPE | CM | TD | TP | DS | EVALUATION | ECTS |
|----------------------------|---------------------|----------------------|---------|-----------|----|----|-----------------|----------|
| SI-PROJTT | TTMA Project | SALAUN Fabien | | 60 | | | | 5 |
| S8 SI TTMA | | VROMAN Philippe | SI-TTMA | | 2 | | Ctrl cont. reg. | |
| | | SALAUN Fabien | SI-TTMA | 1,33 | 2 | | | |
| | | Gr. Projet | SI-TTMA | | 54 | | | |

> LEARNING OUTCOMES

After completing this course, the student will to implement a methodology and carry out a project on a given topic, and will acquire advanced knowledge on a specific subject related to his/her field of studies.

He or she will be able to:

- identify a subject, collect data and review information for a specific topic
- develop a suitable research/project methodology
- convey the outcome of his/her work in written and/or oral form

> PREREQUISITES

Students will require basic knowledge in the field/topic chosen for the project. Have some fundamental skills in information/data research (database, internet, scientific journals/papers etc.).

> CONTENTS/DESCRIPTION

The project can take different forms, depending on the subject and number of ects: literature review, experimental work, research project, survey ... It can be combined with the course PROJTT.

> LEARNING METHODS

Students are assisted by faculty members or doctorate students throughout their research project. Students are expected to meet regularly with their advisors who will be able to guide them throughout the project.

> ASSESSMENT

The assessment depends on the subject and will be defined by the academic advisor at the beginning of the project: written report, oral presentation and methodology/experimental work.

> RESSOURCES

Ensait Library, laboratories, workshops and facilities.