“IBC Spring 2021 @ PURPAN : FRENCH, FOOD & WINE”

“International Bachelor Certificate”
(taught in English)
(Bachelor level / Undergraduate track)

Ecole d'Ingénieurs de PURPAN
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LIST OF IBC COURSES FOR SPRING 2021

“French, Food and Wine at PURPAN”

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- This IBC Program may be switched to virtual teaching if the sanitary situation imposes so.

- **Language of tuition:** English

  Skype interview might be organized to assess the level of English

- **Course load for exchange students:** 30 ECTS for Spring semester

- **Prerequisites:** None. This program is at undergraduate level (end of BSc: 3rd of 4th year).

- **Academic coordinator:** Amélie Jouault, amelie.jouault@purpan.fr
IBC PROGRAM
Semester 2: Spring 2021

FRENCH LANGUAGE

2 ECTS

Instructors: Ms. Marine Puech, visiting instructor

Prerequisites: Some basic French is recommended but not compulsory.

Learning objectives:
- Give students a basic knowledge of French that enables them to deal with simple, everyday situations.

Course topics:
- Introduce oneself or someone else
- Expressing one’s tastes,
- Ask questions and answer them in everyday life situations: at the supermarket, at the doctor’s, in restaurants, with roommates, when travelling etc.
- Be able to describe simple events, in the past and in the future.

Teaching methods:
- Lectures using different teaching material (grammar books and progressive communication books, audio support media like radio/television extracts etc.) and
- Immersion in real situations to build oral comprehension, interaction & fluidity in expression.
- Survey and presentations.

Skills assessment:
Oral and written examination in the 4 competences: oral and written comprehension + oral and written expression.
Attendance and participation will go towards the final grade.

Course readings:
Grammaire en dialogues (niveau débutant), C Miquel / Grammaire progressive (niveau débutant) / Communication progressive (niveau débutants) ...
Authentic documents
CROSS CULTURAL COMMUNICATION

Instructor: Ms. Eleonore Verfaillie, PURPAN eleonore.verfaillie@purpan.fr

Prerequisites: Fluent English

Course Overview:
This short training aims at outlining how cultural difference works, situations that may enfold, and to empower students to face them in a positive and non-violent way so that they can make the most of their experience.

Learning objectives:
- Be aware of cultural differences and social stigma
- Understand the situations, feelings and interactions that you may face, such as cultural shock
- Acquire a few simple steps/tools to help you respond instead of react, and make the most of your experience in another culture

Course topics:
- Basic knowledge of brain reactions vs uncertainty and difference
- What is a culture?
- Communication tools based on Non Violent Communication
- Prevention of Cultural Shock

Teaching methods:
3 hours Workshop in group

Skills assessment:
Participation: 100%

Course readings:
Will be provided during the class
WINEMAKING

3 ECTS

Instructors: Dr. Grégory PASQUIER, PURPAN (France)

Prerequisites: None

Learning Objectives:

- Identify the key stages of grape growth and ripening
- Understand the stages of white, rosé and red wine production
- Know the main families of molecules contained in grapes and wine
- Acquire the basic chemical and microbiological concepts of transforming grapes into wine
- Discover the equipment and technologies used during winemaking
- Know some special winemaking techniques
- Develop basic knowledge of sensory analysis of wine.

Course topics:

- Morphological and physiological evolution of the grape during its growth and ripening (Physiological stage, evolution of compounds of interest, notion of maturity)
- Red, white and rosé wine processing
- Composition of grapes and wines
- Alcoholic fermentation and malolactic fermentation:
  i. Microorganisms associated with these fermentations
  ii. Metabolism and equations balance of fermentations
  iii. Formed by-products
  iv. Fermentations in practice
- Use, chemistry and alternatives of sulfites
- Aging and use of wood in oenology
- Defects, accidents and stabilization of wines

Teaching methods:

Lectures, tutorials, field trips and personal work (assignments).

Skills assessment:

Mid-term test: 20%
Assignment: 20%
Tutorial: 20%
Final comprehensive exam: 40%
IBC PROGRAM

Semester 2: Spring 2021

FOOD SCIENCE

10 ECTS

This major in Food Sciences is divided into 6 main lectures topics:

1. Introduction to Food Science (20%)
2. Process in Food Technology (30%)
3. Microbiological quality of food (20%)
4. Quality Process and Quality Signs & Labels (20%)
5. Sensory analysis (10%)

This major module may be subject to changes in the sub-topics ECTS and/or contents
FOOD SCIENCE
Introduction to Food Science

Instructor: Ms. Sophia El Andaloussi, visiting instructor. To be confirmed for 2021.

Prerequisites: None

Course Overview:
A general introductory course in food science that includes aspects of interactions of molecules in food, food preservation and processing, food additives... Students will be able to test the theoretical principles covered through laboratory experiment. They are given the opportunity to further improve their skills in the areas of observation, measurement, recording, reasoning, and reporting.

Learning Objectives:
- Understand the functional properties of main food compounds (lipids, carbohydrates, proteins, additives...)
- Anticipate the microbiological, physico-chemical and organoleptic degradations of food products and the way to decrease these degradations
- Learn about suitable preserving methods
- Optimize the microbiological, physico-chemical and organoleptic stability of food products.

Course Topics:
- The main compounds of food products
- Degradation and preservation of food products
- Food additives

Teaching Methods:
Lectures/Tutorial classes/Lab work/ Group or Individual presentations

Skills Assessment:
Participation/Attendance: 10%
Lab reports: 40%
Final oral exam: 50%

Course Readings:
Recommended
FOOD SCIENCE
Process in Food Technology

Instructor: Ms. Anabelle Attia, visiting instructor. To be confirmed for 2021.

Prerequisites: Introduction to Food Science lecture from the IBC program

Course Overview:
In this class, students will study different food processes. They will be taught how to produce a finished product (cheese, yogurt, vegetables, beverage, and bakery). They will be introduced to small scale process, industrial process, unit operations and lab equipment. Products’ rheologic characteristics will also be studied.

Learning Objectives:
- Develop knowledge of food process, unit operation
- Produce a food product starting from raw mater to stabilised products
- Understand food production from different documents about raw mater, process, regulations and equipment.

Course Topics:
- Initial operations
- Size decreasing operation
- Separation operation
- Texture mixing
- Stabilization
- Packaging

Teaching Methods:
Lectures, Tutored projects of Food manufacturing, Lab works based on 3 different products

Skills Assessment:
Tutored project: 50%
Lab reports: 50%

Course Readings:
Biochemistry
Microbiology
FOOD SCIENCE
Microbiological Quality of Food

Instructor- coordinator: Dr. Hélène Tormo, PURPAN (France)

Prerequisites: None

Course topics:
Micro-organisms usually found in food processing
   - Pathogenic and spoilage micro-flora
   - Microorganisms useful in food technology,
   - Basics in microbiology: prokaryotes, eukaryotes, virus, nutrition and growth, association to other living beings
   - Food microbiology: microorganisms in food products, fermentation (why fermentation, different types of fermentation, example of fermented food products
   - Initiation lab: identification
   - Food microbiology lab: study of contaminated food products.

Teaching methods:
Lectures, Lab work

Skills assessment:
Lab report
FOOD SCIENCE
Quality Process

Instructor: Ms. Sophia El Andaloussi, visiting instructor. To be confirmed for 2021.

Prerequisites: None

Course Overview:
Hazard Analysis Critical Control Point (HACCP) is a method of controlling food safety. The objective is the prevention, elimination or reduction to an acceptable level of any biological, chemical and physical hazard.

Through the study of food hygiene regulations and several case studies, the objective is to implement the HACCP method in order to be able to identify, analyze and control all chemical physical and biological hazards throughout the food chain.

Learning Objectives:
- Know the regulations concerning the hygiene of foodstuffs (hygiene pack)
- know the good hygiene practices
- Be able to set up a HACCP plan (the 12 steps)
  - Know how to identify, analyze, control hazards
  - Be able to implement corrective actions

Course Topics:
HACCP

Teaching Methods:
Lectures / Tutorial classes / Company visit and case study / Group presentations

Skills Assessment:
Participation/Attendance: 10%
Reports: 40%
Final oral exam: 50%

Course Readings:
FOOD SCIENCE
Sensory Analysis

Instructor: Dr. Olivier GEFFROY, Dr. Grégory PASQUIER, PURPAN (France) / Ms. Eileen HIGHLEY, visiting instructor. To be confirmed for 2021.

Prerequisites: none, but some basic knowledge in sensory analysis is appreciable

Course Overview: Introducing students to sensory analysis through group work and Lab work on one produce

Learning Objectives:
- Acquiring the method to characterize sensory differences between products
- Knowing how to generate relevant sensory descriptors (visual, olfactory & taste testing)
- Being able to organize a sensory analysis (data coding & sampling)
- Carrying a statistical analysis of sensory data (analyzing, interpreting, synthesizing, presenting results)

Course Topics:
- Choosing one produce (in groups of 5 to 6 students) among which cookies, butter, wine
- Generating descriptors and writing a sensory analysis sheet
- Tasting sessions
- Analyzing & presenting results in a graph
- Presenting results

Teaching Methods:
Practical work in groups

Skills Assessment:
Oral presentation of results & Evaluation (100%)

Course Readings:
Will be made available in class
IBC PROGRAM

Semester 2: Spring 2021

FOOD INNOVATION

6 ECTS

Instructors: Dr. Paula Pintro, State University of Maringa (Brazil) and Ms. Isabelle Leclercq, visiting instructor. To be confirmed for 2021.

Prerequisites: 97STA01- Food Sciences

Course Overview:
During this course, students will be introduced to food marketing and food innovation processes. Students will be asked to produce and innovative food product and apply all marketing tools to sell it.

Learning Objectives:
• Develop knowledge of markets, supply & demand issues
• Develop knowledge of marketing tools (Peste analysis, qualitative & quantitative studies, 4P...)
• Develop knowledge of the French Food Industry & market

Course Topics:
• Food product development: ideas generation, screening, feasibility, marketing test, commercialization and life cycle.
• Industrial property - Good practices in Research & Development in food industry
• Innovation project, creation of a new product for a real company.
• Research on food trends.

Teaching Methods:
Lectures/Group presentations/Lab work/Field visits/innovation project

Skills Assessment:
Participation/workshops : 35 %
Food Innovation Oral Exam : 50%
Research on Food Trends Oral Presentation : 15%

Course Readings:
This Is Marketing, Seth Godin
Blue Ocean Strategy, Kim & Mauborgne
Digital Marketing & Marketing For Dummies
IBC PROGRAM

Semester 2: Spring 2021

DIGITAL TRANSFORMATION

2 ECTS

Instructor: Ms. Eleonore Verfaillie, Purpan, eleonore.verfaillie@purpan.fr

Prerequisites: Basics of marketing

Course Overview:
This course exposes how digital technology has changed the entire value chain in depth, from consumption to distribution to transformation to production. Businesses of all size and across markets have to adapt, following new social needs and trends and seizing development opportunities.

Learning objectives:
• Develop a global understanding of the paradigm shift entailed by digital technology for consumers and businesses
• Become aware and develop an interest of ongoing trends
• Discover major tools and methods of digital marketing
  + get a little practice (if workshop)

Course topics:
Digital transformation
Digital consumer/shopper
Big data (and its application to our markets: product assessment and review, blockchain tracking, targeting...)
Food tech and Agri tech
Digital Communication Toolbox & Strategy (workshop 1 to 3 hrs)

Teaching methods:
Lecture (3 hrs) Digital Transformation
Workshop (3 hrs) Digital Marketing Basics

Skills assessment:
Participation: 50%

Course readings:
Will be provided during the class
IBC PROGRAM

Semester 2: Spring 2021

INTERNATIONAL WINE BUSINESS & COMMUNICATION
6 ECTS

Instructors: Mr. Christophe Marquet, visiting instructor and Ms. Ingrid Dauzats, visiting instructor. To be confirmed for 2021.

Prerequisite: None

Course overview:
In this class, students will be introduced to the principles of international wine business management including: global overview, principal tools and key to success. They will also be asked to create and launch a new product.

Educational objectives:
- Understand wines and sparkling wines markets
- Understand export strategies
- Study different cases of wine markets and cellars
- Create and launch a new wine product

Course topics:
- International wine business
- Still wines and sparkling wines markets overview
- Analysis of branding strategies and plans for exports
- Methodology of new brand for export market
- Marketing case studies and in-company training exercises.

Teaching Methods:
Lectures
Case studies
Field visits
Hands-on Innovation project

Skills Assessment:
Participation: 20%
Quizz examination: 20%
Innovation project written report: 20%
Innovation project oral presentation: 40%