

Fiche de cours 2026-2027

Code UE ERA214	Nom de l'UE Supply Chain Management	Bloc 1	Niveau CEC 6
Responsable(s)			
Enseignant(s) Christian COGNAUX			
Crédits ECTS 5.0	Quadrimestre 2	Obligatoire Oui	
Catégories compétences			
Prérequis N/A			
Co-requis N/A			
Est prérequis de N/A			

Langue Anglais

Compétences visées du référentiel

Acquis d'apprentissage intermédiaires et/ou spécifiques (Objectifs)	Learning objectives: • Understand the fundamentals of Supply Chain Management (SCM): acquire theoretical knowledge of the supply chain, its processes, flows, characteristics, and key components. • Develop strategic thinking: learn to bridge corporate strategy and Supply Chain (SC) actions by proposing and developing tailored SC strategies. • Bridge theory and practice: leverage SC data and information to make strategic decisions in a SC simulation environment to improve Return On Investment (ROI). • Understand SC trade-off decisions • Develop interpersonal and soft skills: strengthen problem-solving abilities, teamwork, collaboration, and the capacity to present well-reasoned recommendations. • Acquire international vocabulary: practice using standard SC terminology in English, an essential skill in the field.
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Learning Outcomes:

By the end of this learning activity, the student will demonstrate the ability to:

- **Analyze a SC:** describe its processes, identify flows (physical, financial, information), and understand the interdependencies between various functions (procurement, production, sales).
- **Manage SC performance:** identify and utilize relevant key performance indicators (KPIs) to evaluate operational efficiency and make data-driven decisions.
- **Manage key SC parameters:** understand the impact of demand variability, lead times, process reliability, and information visibility on overall supply chain performance.
- **Formulate a SC strategy:** propose and develop components of a SC strategy aligned with the company's business strategy.
- **Make cross-functional decisions:** actively participate in a Sales and Operations Planning (S&OP) process.
- **Solve complex problems:** diagnose SC challenges, propose actionable solutions, and evaluate their potential impact.
- **Master SC vocabulary in English.**
- **Collaborate and communicate:** work effectively in teams, advocate for recommendations with conviction, and deliver clear, structured executive summaries both orally and in writing.

Contenu Course theory is directly applied through The Fresh Connection (TFC) - a leading business and supply chain simulation utilized by more than 700 universities worldwide. Concepts are studied through their hands-on application within the virtual company.

Course contents:

- **Supply Chain Fundamentals:** Introduction to basic SCM concepts, flows, and processes, alongside exploring the virtual company and its initial challenges.
- **Supply Chain Strategy:** Analysis of the link between corporate strategy and supply chain design, aligning procurement, production, and distribution decisions.
- **Purchasing and Procurement:** Study of sourcing strategies, supplier relationship management, and procurement systems required to ensure smooth operations.
- **Production and Maintenance:** Exploration of LEAN manufacturing, resource planning, and the importance of maintenance in ensuring process reliability.
- **Inventory, Warehouse, and Transportation Management:** In-depth look at inventory management, product flows, warehouse optimization, and transportation modes to minimize costs and lead times.
- **Sales:** Understanding sales contracts, Customer-Product portfolio management, promotions and the critical role of demand forecasting
- **Beer game case study & 3 Vs of SC:** The Beer Game is integrated to illustrate specific concepts

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like the bullwhip effect (variability), the impact of lead times (flow velocity), and information visibility, thereby enriching the simulation experience.

Méthode d'enseignement Teaching Methods:

This course is designed as a real-time simulation laboratory. Learning takes place through experimentation and gamification - an approach proven to solidify knowledge and develop key SCM skills.

- **The serious game "The Fresh Connection" by Inchainge.com:**
Working in teams, students take on the roles of the executive management team of a fruit juice company. Facing performance challenges, they must collaborate to make operational decisions (pricing, volumes, transportation, etc.) and measure their direct impact on the company's ROI.
- **The professor as a coach:** Rather than acting solely as an instructor, the professor coaches the teams, introduces theoretical insights at just the right moments, and guides students in analyzing their results. Additional assignments are provided to delve deeper into key concepts. The critical use of AI co-intelligence is an integral part of the learning journey, empowering students to challenge assumptions and optimize their strategic decisions.
- **From Trial and Error to Predictive Scenario Modeling:** : The simulation allows students to experiment and learn from both their mistakes and successes in a risk-free environment, fostering a lasting understanding of supply chain concepts. Students also learn to progressively transition toward a predictive, data-driven approach by leveraging spreadsheet models to calculate scenarios and evaluate trade-offs.
- **Language requirements:** The instructor and students communicate and write in English. Assessments are conducted in English: questions are provided in English, but students may choose to answer in French.

Supports de cours indispensables

Supports de cours indispensables, sans lesquels l'apprentissage n'est pas possible, sans lesquels l'étudiant ne peut suivre les cours de manière effective et qui sont essentiels pour la préparation de l'évaluation (ex. : exercices, TP, ...)

Forme	Description
Support de présentation	Course support in English consisting of slides and documents provided digitally by the lecturer.

Supports de cours complémentaires

Supports complémentaires (ex. : syllabi, ouvrages ou supports plus volumineux diffusés par la CIACO)

Forme	Description

Modalités d'évaluation générales

%	Période	Nature
65	Evaluation permanente du deuxième quadrimestre	Participation active aux activités pédagogiques en présentiel
35	Evaluation de fin de deuxième quadrimestre	Epreuve écrite et/ou orale

Modalités d'évaluation spécifiques (MES)

%	Période	Nature
100	Evaluation de fin de deuxième quadrimestre	Epreuve écrite et/ou orale

Modalités d'évaluation de seconde session

%	Période	Nature
100	Evaluation de seconde session	Epreuve écrite et/ou orale

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Commentaires concernant les évaluations The end-of-first-semester and second-session assessments cover definitions and the practical application of SC concepts, as well as the TFC simulation game.

Attendance at every class is essential. Each student holds a decision-making role within the team-managed virtual company, and decisions are made in class. Unexcused absences will be penalized.

Continuous assessment throughout the first semester is based on a combination of individual and group assignments, Moodle quizzes, in-class participation and engagement, learning progress reflected in simulation results, class attendance and Dynamo feedback.