Supply Chain Performance Analytics

Titulaire
Alassane Ballé NDIAYE (Coordonnateur)

Mnémonique du cours
GEST-H502

Crédits ECTS
5 crédits

Langue(s) d'enseignement
Anglais

Période du cours
Deuxième quadrimestre

Campus
Solbosch

Contenu du cours

This course is the continuation of the course GEST-H-501 "Logistics Engineering & Management". It is dedicated to supply chain management. As such, it is built around the SCOR pillars: PLAN (demand and supply), SOURCE (sourcing, procurement), MAKE (production/manufacturing, design of services), STOCK (inventory management), WAREHOUSING (warehouse management), DELIVER (transport & distribution system/network) RETURN (reverse logistics).

The course focuses on INTEGRATION & COORDINATION, e.g., on the advanced strategies for an optimal integration of the different functions of the above SCOR pillars. A great deal is dedicated to supply chain management strategies and to supply chain performance modelling and management.

Objectifs (et/ou acquis d'apprentissages spécifiques)

Introduce to the future engineer the advanced concepts of supply chain management while insisting on the underlying principles and assumptions as well as the resulting limitations and practical issues of their application. Familiarize the future engineer with the most advanced methodologies/tools and the best practices for the design, implementation and follow up of value creative and sustainable solutions capable of driving supply chain performance to the next level of excellence.

Pré-requis et co-requis

Cours co-requis

GEST-H501 | Logistics Engineering and Management | 5 crédits

Connaissances et compétences pré-requises

A prior good knowledge of logistics operations and management is recommended.

(The course GEST-H501 "Logistics Engineering & Management" is recommended as a prerequisite.)

Méthodes d'enseignement et activités d'apprentissages

SEMESTER: Second semester of the academic year (February to May).

THEORETICAL SESSIONS: 1 ECTS

> weight 20% of final mark

> 3 consecutive sessions (4h each)

> Participation is required, but not formally evaluated.

PRACTICAL SESSIONS: 3 ECTS in class + 1 ECTS personal work.

- weight 80% of final mark

- Business Case Development (real-life business case to be elaborated in groups of students)

- 9 consecutive sessions (4h each) comprising exercises, illustrations, workshops with industrial experts, coaching and eventual field visits.

- Coaching by scientists, assistants, consultants and field experts

- Take-home exercises

- Attendance to these 9 sessions is mandatory! Every absence is penalized by -1 point

- Individual in-class quizzes are possible and may lead to a 0.5 to 2 points bonus to be added to the final exam grade.

NOTE: The Business Case, which is the essential part of the course GEST-H502, is developed **only** during the 9 dedicated sessions! The physical presence to these sessions is mandatory! Every absence is penalized. Please be aware of the weight of the Business Case, on the final exam mark in particular, and on the exam sessions in general.

* A participation to this course implies an acknowledgement of the above rules and their impact on the exam sessions and marks.

Contribution au profil d'enseignement

(1) - Improve significantly the capacity of the future engineer as regards the integrated and global vision of supply chain management.

(2) - Equip the future engineers with critical knowledge and skills necessary for modelling and managing supply chain performance.

Références, bibliographie et lectures recommandées

> Designing and Managing the Supply Chain: Concepts, Strategies & Case Studies. D. Simchi-Levi, P. Kaminsky, E. Simchi-Levi. Edition McGraw Hill.

- Supply Chain Management: Strategy, Planning and Operation. S. Chopra & P. Meindl. Edition Prentice Hall.

- Management Industriel et Logistique: Conception et pilotage de la Supply Chain. G. Baglin, O. Bruel, A Garreau, M. Greif, et al. Editions Economica.

- Other books, brochures, papers and case studies will be regularly provided to the students.

Support(s) de cours

Université virtuelle

Autres renseignements

Lieu(x) d'enseignement

Solbosch

Contact(s)

Professor Alassane B. NDIAYE

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Méthode(s) d'évaluation

Examen écrit, Projet, Rapport écrit et Présentation orale

Construction de la note (en ce compris, la pondération des notes partielles)

- (WEX) - Written exam: Multiple choice and/or open questions

- (WBC) – Written Business Case Report (evaluated according to a detailed grid).

- (OBC) – Oral Business Case Presentation (evaluated according to a detailed grid comprising distinct criteria for the group and for individual student member).

- (bonus) – Individual in-class quizzes bonuses

- (penalities) – penalities for absences (negative value)

The final mark is computed as follow: 20%WEX + 80%(WBC+OBC) + bonus + penalities for absences

Langue(s) d'évaluation principale(s)

Anglais

Programmes

Programmes proposant ce cours à l'école polytechnique de Bruxelles

MA-IRAR | Master : ingénieur civil architecte | finalité Spécialisée/bloc 2, MA-IRCB | Master : ingénieur civil biomédical | finalité Spécialisée/bloc 2, MA-IRCN | Master : ingénieur civil des constructions | finalité Spécialisée/bloc 2, MA-IREL | Master : ingénieur civil électricien | finalité Spécialisée électronique et technologies de l'information/bloc 2, MA-IREM | Master : ingénieur civil électromécanicien | finalité Spécialisée/bloc 2, finalité Operation engineering and management/bloc 1 et finalité Operation engineering and management/bloc 2, MA-IRIF | Master : ingénieur civil en informatique | finalité Spécialisée/bloc 2, MA-IRMA | Master : ingénieur civil en chimie et science des matériaux | finalité Spécialisée/bloc 2 et MA-IRPH | Master : ingénieur civil physicien | finalité Spécialisée/bloc 2