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**FORMATION : PROJECT MANAGEMENT**

**ANNÉE : 2023/2024**

**Resp. pédagogique : Mr. Bernard AUGE**

**Intervenant(s):**

Dr. Mart S. Zecca, PhD, MBA

Dominique GUVARCH MBA

**MATIERE :**

**Unité d'Enseignement (UE) : UE 7 - Process Management**

**ECTS matière : 4**

**Semestre : 1er**

**Durée : 12 heures**

**Evaluation :** Team Project: 20%; Team Oral Presentations 20%; Examen final: 60%

**Cours dispensé en :** Anglais

(si cours dispensé en anglais, merci de préciser la proportion, complètement ou partiellement, et la langue de l'examen dans les modalités de contrôle des connaissances)

**Pré-requis**

- Read provided material prior to the beginning of class
- Lire le matériel fourni avant le début du cours

**Connaissances acquises à l'issue de l'enseignement**

- At the conclusion of this course, students will be able to determine how best to plan the execution of a project scope, determine who are the stakeholders, steering committee, and sponsors; manage budget and schedule constraints, use different management methodologies and organization, establish the performance measurement baseline. They will also discover keys to identify potential risks in cost, scope, and schedule overruns; master the tools and techniques to compare actual work accomplished against established plans, as well as work accomplished against actual expenditures. They will be introduced to the effects of Agile methodologies on Project Management and the use of Project Phases to manage and execute projects. By identifying early warning indicators, students will gain greater insight into potential risk areas and take the necessary corrective action to keep the project in control. An exam covering the contents of the course will be provided to be administered at a later time in concert with the University's evaluation schedule.

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- A la Fin de ce cours, les étudiants seront en mesure de déterminer la meilleure façon de planifier l'exécution d'un projet, de déterminer qui sont les intervenants, le comité directeur et les sponsors ; gérer les contraintes de budget et de planning, utiliser différentes méthodologies de gestion et organisation, établir la base de mesure de la performance. Ils découvriront également les clés permettant d'identifier les risques en termes de coûts, de périmètre et de dépassement de délai ; maîtriser les outils et les techniques permettant de comparer le travail réel accompli aux plans établis, ainsi que le travail accompli aux dépenses réelles. Ils seront initiés aux effets des méthodologies Agiles sur la gestion de projet et à l'utilisation des phases de projet pour gérer et exécuter des projets. En identifiant les indicateurs d'alerte précoce, les étudiants acquerront une meilleure compréhension des domaines de risques potentiels et prendront les mesures correctives nécessaires pour garder le projet sous contrôle. Un examen couvrant le contenu du cours sera fourni pour être administré ultérieurement, conformément au calendrier d'évaluation de l'Université.

## Compétences visées

- Through discussion and review, the course will allow students to synthesize project management basics, schedule control principles, organization, and risk management principles. Through readings, lectures, and classroom discussions and presentations; students will be exposed to practical project management elements so that they will be able to practice applying the content of the course to scenarios that they will encounter in the workplace. The course will examine organizations structures, planning, and current practices in the industry today. The course will take the students through a progression of the diverse facets and processes of project change management. Students will be guided through an exercise in a case study in the planning of a real-world project. This course is graduate level and is designed to prepare students for real business situations, requirements, and situations!
- Par le biais de discussions et de révisions, le cours permettra aux étudiants de synthétiser les bases de la gestion de projet, les principes de contrôle des horaires, l'organisation et les principes de gestion des risques. Par le biais de lectures, de conférences et de discussions et de présentations en classe ; les étudiants seront exposés à des éléments pratiques de gestion de projet afin de pouvoir s'exercer à appliquer le contenu du cours à des scénarios qu'ils rencontreront sur leur lieu de travail. Le cours examinera les structures des organisations, la planification et les pratiques actuelles du secteur. Le cours guidera les étudiants dans une progression des divers aspects et processus de la gestion du changement de projet. Les étudiants seront guidés à travers un exercice dans une étude de cas dans la planification d'un projet du monde réel. Ce cours de niveau supérieur est conçu pour préparer les étudiants à des situations, exigences et situations professionnelles réelles !

## Contenu du cours

<b>Thèmes abordés</b>
Identify work packages using a work breakdown structure (WBS).
Create project scope documents based on limited budget and/or resources.
Establish an integrated cost/schedule performance measurement baseline.
Evaluate change management processes.
Identify Project Phases and the effects of Agile Methods on Project Management
Understand risk management and develop risk aversion techniques.
Establish project control and management artifacts.

## Bibliographie

### Ouvrage de référence :

#### Thématique détaillée / Detailed Subjects Developed

#### **Session 1 - Project Definition and Work Breakdown Structure**

##### 1. Introductions:

Instructor and Student introductions

Assignment of Group Members

Review Syllabus and Agenda of the Course

##### 2. Required Readings:

a. Brotherton, S.A., Fried, R. T., Norman, E.S. (2008). Applying the WBS. *PMI Global Congress Proceedings*; Denver, CO.

b. Rouse, M. (2011). Work breakdown structure. IBM Tech Target retrieved on May 5,2011 from <http://searchsoftwarequality.techtarget.com/definition/work-breakdown-structure>.

##### 3. Lecture:

**Work Breakdown Structure.** From the readings and other material, a graphic example of a work breakdown structure (WBS) hierarchy will be presented. A description of a three-level product based WBS will be covered along with a description of a project goal and presentation of a graphic representation of a WBS hierarchy. A description of the following component will be covered and how each relates to the WBS:

- Three main deliverables

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- A unique numbering scheme
  - Three work packages
  - Objectives
4. Classroom Discussion:  
 Questions and answers on WBS. Students share examples from their experiences in building a WBS from real-life experiences.
5. Group Exercise  
**Create a Work Breakdown Structure.** Using the graphic example of a work breakdown structure (WBS) hierarchy from the readings and the lecture, create a three level product based WBS from a project you have managed or have experience with as a team member, and present a graphic representation of your WEIS hierarchy. Include a description of the following components and how each relates to the WBS:
  - Three main deliverables
  - A unique numbering scheme
  - Three work packages
  - Objective

## **Session 2 & 3 (Combined for this Virtual Course) - Project Management Principles & Risk Management**

1. Readings:  
 Read the following in Smith's (2013), *Teamwork and Project Management*:
  - a. Chapter 4 Project Management Principles and Practices Thompson, L.A. (2009, March). Leadership Model for Professionals. *Strategic Finance*, 90(9), 25.
  - b. de Bakker, K., Boonstra, A., & Wortmann, H. (2011). Risk management affecting IS/IT project success through communicative action. *Project Management Journal*, 42(3), 75-90.  
 doi: 10.1002/pmj.20242
  - c. Thamhain, H. (2013). Managing Risks in Complex Projects. *Project Management Journal*, 44(2), 20-35. doi: 10.1002/pmj.21.325
2. Lecture  
**Project Models and Features** - A review of the evolution of project models. A review of the various project elements or features...what makes up a project? Project Variables: Cost, Time, and Performance as well as client success. Understanding the Project Life Cycle-S General Phases (and the 7 phases of a Construction Project).
3. Classroom Discussion  
**Risk Management** - Analysis demonstrates stakeholders deliberately use risk management to convey messages to others, with the aim of influencing their behavior, synchronizing their perception, and making them aware of the context and their responsibilities. Stakeholders perceive these effects as contributing to project success. Risk centers around three key elements: forecasting individual risks, assessing their importance, and identifying an appropriate response (remediation). Understanding the five lures that leave projects vulnerable to risks.

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## 4. Group Exercise

**Telstar Case Study** - Read the Case Study given to you by your instructor. In your Group, determine the Risks that you can see in the company project. Categorize the Risk in accordance with the 5 Lures above and report out to the class.

## Session 4 - Project Organization

## 1. Reading

Read the following in Smith's (2013) Teamwork and Project Management:

- Chapter 5 The Project Manager's Role
- Anonymous. (2008). Best practices for working in a virtual team environment. Library Technology Reports, 44(1), 28-31 .
- Schwartz, M. (2017). A Seat at the Table. Transformation, Chapter 6. Portland, Oregon: IT Revolution Press (Hand out).

## 2. Lecture

**The Project Manager & the Team** - Attributes of a good Project Leader. Understanding the trends that affect Projects. Understanding the skills necessary for Effective Project Managers. A review of the Project Team Heuristics. The Project Manager's role over the Life Cycle of a Project: Planning, Organizing, Staffing, Directing, Controlling.

## 3. Classroom Discussion

**Critical Success Factors** - A discussion on the critical success factors and how they affect the implementation of a project. See page 81 of Smith (2013) Teamwork and Project Management

**Transformation: Agile Project Management**. See handout from Schwartz's book: A Seat at the Table.

## 4. Group Exercise

**SWOTing the Team** - A SWOT analysis is where you look at Strengths, Weaknesses, Opportunities, and Threats to any endeavor or situation. Using the case study provided by the instructor, use the skills and attributes of a great Project Team covered in the lecture, and then do a SWOT Analysis on studies situation of the involved Project Team.

## Session 5 - Project Management (Scheduling) & Monitoring

## 1. Readings

Read the following in Smith's (2013) *Teamwork and Project Management*:

- Chapter 6: The Project Scheduling
- Chapter 7: Monitoring & Evaluation

## 2. Lecture

**Critical Paths** - Understanding the critical path networking practice. How to keep track of tasks using the Forward Pass, Backward Pass and Critical Path methods. Determining a time estimation of tasks. Resource leveling and planning. Cost considerations. The role of Computer Based Project Management Software. Ways of monitoring projects.

**Project Phasing** - The various phases of a project, including gateways and roles within the phases. The Effect of Agile methodology on Project Phasing. Suggested Project Phases and tasks within them. (Material from special handout)

3. Classroom Discussion

**Meetings** - What are the critical elements of a meeting? What makes a good meeting? What does it mean to hijack a meeting? How can meetings be productive? How do you know when a meeting is productive?

4. Group Exercise

**Feedback** - Read the guidelines for Constructive Feedback on page 106 of Smith's (2013) Teamwork and Project Management. For Each element in the Guideline, write a two-to-three-line example that demonstrates the feedback element.

### **Session 6 - Group Exercise**

1. Group Exercise

Kombs Case Study - Information Technology/Engineering Case Study

2. Report Out

Choose a recorder and a Presenter for the group. Read the Kombs Case Study and discuss the situation at Kombs amongst the group. Answer the following questions of the Case Study and prepare a 10-minute presentation or report out to the class on your findings:

QUESTIONS:

1. What was the reason for the loss of the contract?
2. Could it have been averted?
3. Does it seem realistic that proposal evaluation committees could consider project management expertise to be as important as technical ability?

### **Planning de cours -6 séances de 2 heures / Course Agenda - 6 session of 2 hours**

Session #	Thèmes	Support de cours	Hour
Session 1	Introductions Subject: Project Definition & Work Breakdown Structure	Required Readings <sup>1</sup> Lecture Classroom Discussion Group Exercise	1 - 2
Session 2	Subject: Project Management Principles (combined with session 3)	Required Readings <sup>1</sup> Lecture Classroom Discussion Group Exercise	3 - 4
Session 3	Subject: Risk Management (combined with session 2)	Required Readings <sup>1</sup> Lecture Classroom Discussion Group Exercise	5 - 6
Session 4	Subject: Project Organization	Required Readings <sup>1</sup> Lecture Classroom Discussion Group Exercise	7 - 8
Session 5	Subject: Project Management (Scheduling) & Monitoring	Required Readings <sup>1</sup> Lecture Classroom Discussion Group Exercise	9 - 10
Session 6	Case Study – Kombs Information Technology Project Management Exercise	Required Readings Group Exercise Report Out	11 - 12

<sup>1</sup> Required Reading must be completed prior to the course meeting.

## Bibliographie

### Ouvrage de référence:

The following readings must be completed prior to the start of the course. Course lectures, discussions, and exercises rely on the student's understanding of the readings and their content.

Les lectures suivantes doivent être terminées avant le début du cours. Les cours, les discussions et les exercices dépendent de la compréhension des lectures et de leur contenu par l'élève.

1. Smith, K.A., & Imbrie, P.K. (2007). *Teamwork and project management*. (3<sup>rd</sup> ed.) Boston, MA: McGraw-Hill. ISBN 978-0-07-310367-9. Chapters: 4 through 7.
2. Brotherton, S.A., Fried, R. T., Norman, E.S. (2008). Applying the WBS. PMI Global Congress Proceedings: Denver, CO.
3. Rouse, M. (2011). Work breakdown structure. IBM Tech Target retrieved on May 5, 2011 from <http://searchsoftwarequality.techtarget.com/definition/work-breakdown-structure>.
4. Thompson, L.A. (2009, March). Leadership Model for Professionals. *Strategic Finance*, 90(9), 25.
5. de Bakker, K., Boonstra, A., & Wortmann, H. (2011). Risk management affecting IS/IT project success through communicative action. *Project Management Journal*, 42(3), 75-90. doi:10.1002/pmj.20242
6. Thamhain, H. (2013). Managing Risks in Complex Projects. *Project Management Journal*, 44(2), 20-35. doi:10.1002/pmj.21325
7. Anonymous. (2008). Best practices for working in a virtual team environment. *Library Technology Reports*, 44(1), 28-31.

### Autres ouvrages:

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Antonioni, D. (2009, Jan/Feb). Crafting the art of stakeholder management. *Industrial Management*, 51(1), 18-24.

Brotherton, S.A., Fried, R. T., Norman, E.S. (2008). Applying the WBS. PMI Global Congress Proceedings: Denver, CO.

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Evans, M. (2013, October 31). Why value propositions are important (and how to create them). *Forbes*. Retrieved from <http://www.forbes.com/sites/markevans/2013/10/31/why-value-propositions-are-important-and-how-to-create-them/qewruuiop>

Jedd, M. (2006, January). Project rescue. *PM Network*, 20(1), 64-68.

Kutsch, E., Browning, T. R., & Hall, M. (2014). Bridging the Risk Gap. *Research Technology Management*, 57(2), 26-32. doi:10.5437/08956308X5702133

Lipnack, J., & Stamps, J. (1999). Virtual teams: The new way to work. *Strategy & Leadership*, 27(1), 14-19.

Nedelko, Z. (2008, Summer). The Role and Importance of Groupware for Teamwork. *The Business Review, Cambridge*, 10(1), 211-218.

Reinhold, Barbara (2009). Are You Cut Out for Teamwork?. Retrieved March 20, 2009, from Monster Web site: <http://content.monster.ie/tools/quizzes/teamplayer/>

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ISBN 978-0-07-310367-9. Chapters: 3 through 7.

Teller, J., Kock, A., & Gemünden, H. G. (2014). Risk Management in Project Portfolios Is More Than Managing Project Risks: A Contingency Perspective on Risk Management. *Project Management Journal*, 45(4), 67-80. doi:10.1002/pmj.21431

Teller, J. (2013). Portfolio Risk Management and Its Contribution to Project Portfolio Success: An Investigation of Organization, Process, and Culture. *Project Management Journal*, 44(2), 36-51.  
doi:10.1002/pmj.21327

Thamhain, H. (2013). Managing Risks in Complex Projects. *Project Management Journal*, 44(2), 20-35.  
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Thompson, L.A. (2009, March). Leadership model for professionals. *Strategic Finance*, 90(9), 25.

Visitacion, M. (2007, October). Exemplary EVM at Lawrence Livermore Labs. *Contract Management*, 47(10), 75-77.

Visitacion, M. (2007, September). Debunking commonly held EVM myths. *Contract Management*, 47(9), 51-52.

## Modalités de contrôle des connaissances

The Student's Total Score consists of:

**Group Participation:** Group Artifacts/Assignments (4pts a piece) – Total 20% (20 points)

**Final Group Exercise** (Everyone in the Group gets the same score) 20% (20 points)

**Final Exam** (written test) - 60% (60 points)

A final exam will be administered at the completion of the class or at a later time with other examinations managed by the University. The final exam will cover the Required Readings, Lecture Material, and the results of the report-outs from the exercises. The exam consists of Multiple Choice, fill-in, and true-false questions. There is a total of 30 questions at 2-points apiece. The grading criteria is simple: grades are a complement of three elements Class Participation, Group Exercise Outcome, and the Final Exam.

Un examen final sera administré à la fin du cours ou ultérieurement, avec d'autres examens gérés par l'Université. L'examen final portera sur les lectures obligatoires, le matériel de cours et les résultats des comptes rendus des exercices. L'examen comprend des questions à choix multiples, à compléter et vraies fausses. Il y a un total de 30 questions à 2 points chacune. Le critère de notation est simple: les notes sont un complément de trois éléments: participation à la classe, résultat de l'exercice en groupe et examen final.

**Grading Chart**

<b>Letter Grade</b>	<b>Percent</b>	<b>Lower Level of Grade</b>	<b>FR Grade correspondence</b>
A	0.933	93	20 / 20
A-	0.900	90	18.5 / 20
B+	0.866	87	16.5 / 20
B	0.833	83	15 / 20
B-	0.800	80	13.5 / 20
C+	0.766	77	11.5 / 20
C	0.733	73	10 / 20
C-	0.700	70	8.5 / 20
D+	0.666	67	6.5 / 20
D	0.633	63	5 / 20
D-	0.600	60	3.5 / 20
F	0.590 or lower		1.5 / 20

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