COURSE OUTLINE ACADEMIC YEAR 2017/2018

Course Title: Asset Knowledge Management			
Course Code: AMPC 205	**Schedule Type Code:** online	**Instruction Hours:** 30 hours	**Credits:** AMPC 201
Prerequisite(s): AMPC 201			
Program: Asset Management Certificate Program			

Approved By: Pat Tait

Signature: *Pat Tait*   Date: July 2017

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Course Description

Asset Knowledge Management covers Asset Information and Knowledge Management across the full asset lifecycle from Front End Engineering Design through Operate and Maintain and eventually Asset Retirement. The course provides a strategic level view of the important role that information and knowledge management plays in asset dependent businesses. The course also provides a practical hands on framework for implementing an Asset Information and Knowledge Management system. The course is targeted to both managers and practitioners with a responsibility to manage and improve asset performance who want to understand how to achieve their goals through better information and knowledge management practices.

Learning Outcomes

Upon successful completion of this course, students will be able to:

- Identify the full asset information lifecycle, and the ecosystem of information types and applications, in use across the asset lifecycle.

- Develop and Implement an Asset Information Management Strategy for their department or business.

- Make better and more informed decisions regarding the frequency and type of asset related data and knowledge they should be capturing (and leveraging) to meet their department or company business objectives.

- Recognize the role of, and develop strategies for the use of, industry standards such as ISO14224, ISO15926 and ISO55000 as part of their Asset Information Management strategy.

- Implement strategies and tactics to leverage asset information as a shared corporate asset and foster collaboration across participants departments, companies, and industry.

- Implement strategies and tactics to address changing demographics; capturing knowledge from an aging workforce and engaging the digital generation.

- Describe the organization of the future and the increasing role of asset information, the industrial internet, and the Internet of Things (IoT) in the "Information Driven Organization"

- Implement metrics, KPI's and dashboards to more effectively communicate and share knowledge.
    - Implement tactics to establish a solid Asset Information Foundation plus strategies to effectively protect, govern, and sustain this critical foundation over time. Use word order for clarity and/or emphasis
    - Keep the focus on the reader
    - Edit online documents
    - Develop productive relationships with subject matter experts and writers

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Learning Resources

Lost Knowledge: Confronting the Threat of an Aging Workforce Part II; by David W. DeLong
ISBN: 978-0195170979

Students should also be familiar with the following references before Week 2

- GFMAN's Asset Management Landscape Document
- IAM's An anatomy of Asset Management

Delivery Format

Class format is online.

Course Content

UNIT	TOPIC(S)	OBJECTIVES
1.	- Welcome - Course overview - What is asset knowledge management?	- Understand the course, schedule and deadlines, expectations, and available resources - Understand what is meant by asset knowledge management and why asset dependent businesses require an asset knowledge management strategy - Complete a facilitated self-assessment exercise to estimate asset knowledge management maturity in your own department or business
2.	The asset information lifecycle from a systems and data perspective	- Understand information and knowledge management in the context of the asset lifecycle - Understand the ecosystem of computer systems, data, and information and solution types common in most organizations today - Assignment # 1 - map the ecosystem in your business and the systems and data types captured in each; rate your maturity level
3.	The asset information lifecycle from a People and knowledge perspective	- Understand the silos of information and knowledge typical in most organizations - Understand the impact that an organization's culture can have on your company' ability to collaborate and capture knowledge - Reading assignment **Quiz # 1**

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4.	• The role of Industry standards in your asset information and knowledge management strategy • The impact that industry regulations will have on your asset information and knowledge management strategy	• Understand the relevant industry standards to asset information management. • Understand how present and future industry regulations will impact your asset knowledge and information management strategy • Discuss recent examples where better information and knowledge sharing and management practices could have reduced industry risk. • **Assignment #1 due**
5.	• Introduction to a framework to develop an asset information and knowledge management strategy that is right for your department or business	• Review and understand the framework for developing an asset information and knowledge management strategy • Understand how to define the scope of information to include in your strategy. Master vs. transactional vs. other data types • Develop an ability to determining what information and knowledge is most important to your business • Introduce assignment #2; Develop an asset knowledge management and asset information management strategy for your business
6.	• Developing your Asset Information and Knowledge Management Strategy – Part 1; Building the Foundation	• Understand how to develop a global asset registry and structure • Identify criticality, attributes and other data essential to associate with your assets to meet your reporting and business objectives • Review a framework to identify which asset information must be captured for various combinations of criticality and attributes (i.e., safety critical rotating equipment)
7.	• Developing your Asset Information and Knowledge Management Strategy – Part 2; Information Driven Asset Performance	• Understand how to develop, apply, and share Asset Performance Standards • Understand when and how to apply additional information to Assets (i.e., Maintenance Tasks, Spare Parts, Procedures, etc.) • Develop an understanding of which data and information should be centralized vs. localized • **Quiz # 2**
8.	• Organization structure, roles, and responsibilities essential for effective knowledge and information management • Information Accessibility, Analytics, Data Visualization, security and governance	• Understand the Structure, roles, and responsibilities that should be in place to better manage asset information and knowledge • Strategies and technologies for ensuring information is accessible to those who need it, where and when they need it. • Understand the importance of security and governance over your asset information and knowledge. • Understand the top 10 metrics you should be tracking • **Assignment # 2 due**

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9.	• Organization of the Future – The Information Driven Organization and the impact this will have on you and your business	• Develop an understanding of what is meant by an "Information Driven Organization" • Develop an understanding of the skills necessary to succeed in this environment • Reading # 2
10.	• Summary and review of Blueprint for developing Asset Information and Knowledge Management strategy in your business • Final Exam	• Summarize course by working through a blueprint for developing an Asset Information Management Strategy in your business • **Complete final exam**

Please note: this course schedule may change as resources and circumstances require.

Student Evaluations

A minimum grade of 60% is required to pass the course.

Quizzes (2 x 15% each)	**30%**
Assignments (1 x 10%, 1 x 20%)	**30%**
Participation	**20%**
Final Exam	**20%**
Total Marks	**100%**

Grade Report, Transcript, and Certificate

Upon completion of a course, student access grades by logging into Myhumber at www.humber.ca/myhumber using the Humber issued username and password. For assistance logging in, or for a password reset, visit www.its.humber.ca. Grades will not be released over the phone or by email.

Tests and Assignments

Assignments must be submitted on or before the "due date", as directed by the instructor. Late submissions, without valid reasons (such as illness or emergency) or without prior arrangement may be penalized by the instructor, normally at 10% per day, or as announced by the instructor. Days of lateness will include weekends and holidays. If for valid reasons, an assignment/evaluation cannot be completed on time, then a reasonable penalty-free time extension may be given by the instructor. Claims of illness or other emergencies may have to be documented, if required by the instructor or the administration.

Advanced notice by email is required if you are going to miss a test or exam for valid reasons, and supporting documentation must be submitted. If you miss an exam without prior notice due to illness or some emergency, you must provide the reason in writing to the instructor along with supporting documentation, within 3 days of the missed exam, **with a copy to the program liaison at ceparttime@humber.ca.** If your reason is accepted, arrangements will be made for you to write the exam.

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Accessible Learning Services

Humber strives to create a welcoming environment for all students where equity, diversity and inclusion are paramount. Accessible Learning Services facilitates equal access for students with disabilities by coordinating academic accommodations and services. Staff in Accessible Learning Services are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. If you require academic accommodations, contact:

Accessible Learning Services: http://www.humber.ca/student-life/swac/accessible-learning
North Campus: (416) 675-6622 X5090
Lakeshore Campus: (416) 675-6622 X3331

Accommodations for Religious Observance

Humber College is committed to respecting the religious/spiritual beliefs and practices of all members of the community, and making accommodation for religious/spiritual observances.

Students who require an accommodation for a religious/spiritual observance must notify the professor as soon as the time conflict is known. It is the student's responsibility to contact the professor to arrange the accommodation for a lecture, test, exam, clinical placement, work placement or any other academic situation that conflicts with a day or time period for religious observances of special significance to them. Ideally, students will provide their professor with three weeks notice for a required accommodation. In all cases, the request for an accommodation must be made in writing.

Standards
1. Expectations for maintaining a Positive Learning Environment
   Attendance is essential for academic success. Therefore, you are expected to attend 100% of all classes and complete <u>all</u> assignments.

   It is your responsibility to be aware of your attendance record and the progress of your work and grades.

   In order to maintain a positive and productive learning environment, you are expected to
   - Turn off and put away all cell phones and remove headphones in class
   - Maintain a courteous and respectful attitude

2. Use of Laptop Computers
   Your professor sets the policy for laptop use in the classroom. If permitted, you may use your laptop to take notes and complete class-related activities. The Internet is to be accessed for class purposes only **and** with explicit instructions from your professor.

   E-mailing and chatting are strictly prohibited. On the first offence, you will be asked to put the laptop away. On the second offence, you will be banned from using the laptop and may be asked to leave the class.

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Discrimination and Harassment

At Humber College, students, staff and faculty represent the broad spectrum of diversity and richness that is characteristic of our society. All students and employees have the right to study, live, and work in an environment that is free from discrimination and harassment. It is therefore the policy of Humber College that it's working, living and learning environments assert the personal worth and dignity of each individual. In order to achieve this objective, Humber College will not tolerate any form of discrimination or harassment in its employment, education, accommodation, or business dealings. Information and assistance are available from Nancy Simms, Manager, Human Rights & Diversity at (**416) 675-6622, ext. 4425,** or by email at nancy.simms@humber.ca .

For further information please visit: www.hrs.humber.ca/diversity

Policies and Procedures

It is the student's responsibility to be aware of the College Academic Regulations **Policy** which can be found at: http://www.humber.ca/academic-regulations.

Copyright

Copyright is the exclusive legal right given to a creator to reproduce, publish, sell or distribute his/her work. All members of the Humber community are required to comply with Canadian copyright law which governs the reproduction, use and distribution of copyrighted materials. This means that the copying, use and distribution of copyright- protected materials, regardless of format, is subject to certain limits and restrictions. For example, photocopying or scanning an entire textbook is not allowed, nor is distributing a scanned book.   See the Humber Libraries website (http://library.humber.ca) for additional information regarding copyright and for details on allowable limits.

Academic Integrity

Academic integrity is essentially honesty in all academic endeavors. Academic integrity requires that students avoid all forms of academic misconduct or dishonesty, including plagiarism, cheating on tests or exams or any misrepresentation of academic accomplishment.

Academic Dishonesty

Plagiarism is the serious offence of academic fraud that involves using someone else's words and/or ideas in whole or in part from any printed or electronic media without documentation

Cheating is the serious offence of academic fraud that involves obtaining answers to exam and test questions through unauthorized means, such as hidden or electronic notes, accessing unauthorized test questions from an electronic database, or copying from another student.

Students are responsible for knowing what constitutes an academic offence and for being aware of the applicable requirements that may apply within their program.   Any student responsible for academic misconduct will be dealt with according to the department policy in accordance with Humber's Academic Regulations Policy, and can face various sanctions such as a grade of zero for the course, suspension from the program, or expulsion.

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Academic Concerns/Appeals

If a student has questions or concerns regarding a grade on an assignment or test, the student should discuss the matter with the faculty member. The Program Liaison be asked to assist if the faculty member and student are unable to resolve issues. For additional information please refer to Section 13 of College's Academic Complaint and Appeal Policy at the web site identified above.

Disclaimer

While every effort is made by the professor/faculty to cover all material listed in the outline, the order, content, and/or evaluation may change in the event of special circumstances (e.g. time constraints due to inclement weather, sickness, college closure, technology/equipment problems or changes, etc.).   In any such case, students will be given appropriate notification in writing, with approval from the Program Liaison.

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