School of Accounting and Finance

AFM 241: Introduction to Business Information (A Business Analytic Approach)

Spring 2016

Course Syllabus

Course Instructor

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Office Hours:	Mondays and Tuesdays 3:30-4:30 pm. Other times by appointment

Course Description

This course considers various aspects of information technology from a business analytic perspective. It is intended to provide a foundation for understanding the potential benefits and problems in using information technology to improve business performance.

Course Goals

Worldwide companies and organizations spend trillions of dollars on information technology (IT), i.e., hardware, software, services, and telecommunications.[1] Our focus will be on the following three questions:

1. Why firms invest in technology, i.e., what are the expected benefits, costs, and risks.
2. What are some of the most common information technology investments that firms undertake.
3. How do companies justify, monitor, and control IT spending, and how they evaluate the expected payoffs from these investments.

The approach that we will be using to address these questions is based on business analytics. This means that we will justify our answers/decision based on data supported evidence.

Programs delivered by the School of Accounting and Finance (SAF) are designed to provide students with the competencies, professionalism and practical experience that they need to excel in their chosen careers. With this in mind, SAF programs (and AFM241) are created to deliver the knowledge, skills and competencies identified in the School Learning Model illustrated below:

By the end the course, the students should be able to achieve the following objectives:

1. <u>Understand</u> appropriate accounting, business and IT strategy concepts in order to explain why firms invest in IT, what investments they make, and how firms justify, monitor, and evaluate IT investments.

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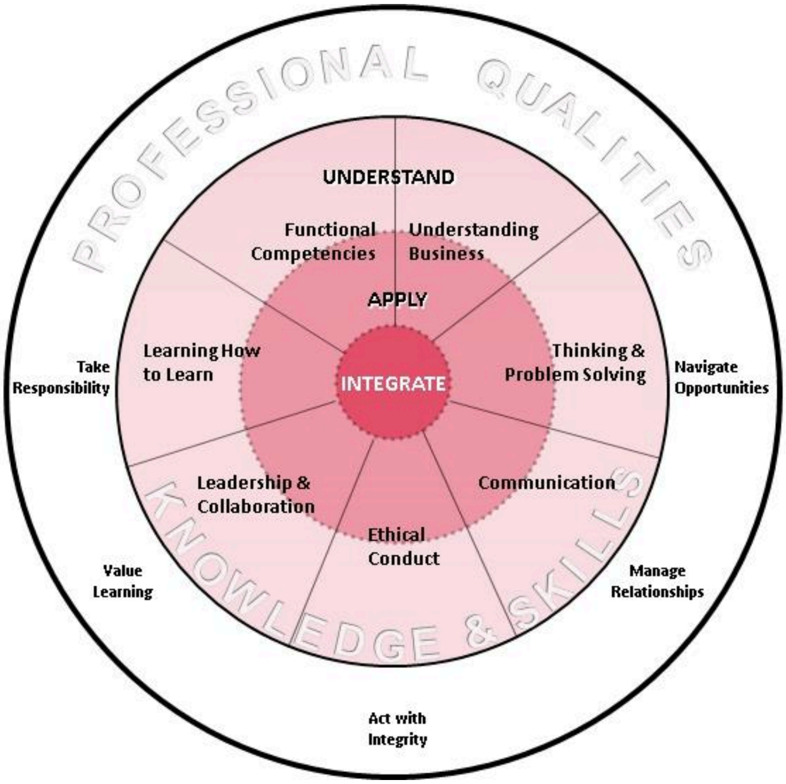
[1] Gartner. 2013, March 28. Gartner Says Worldwide IT Spending on Pace to Reach $3.8 Trillion in 2013. Gartner Press Release.

2. Leverage and apply appropriate structured/unstructured data and business analytics tools in order to answer questions related to why, what, and how of IT investments.
3. Integrate appropriate accounting, business and IT strategy concepts with facts based evidence from business analytics in order to make recommendations on how to justify, monitor, and evaluate IT investments.



Course Resources

1. Stratopoulos, T. C. 2016. *Business Value of Information Technology: A Business Analytics Approach*. University of Waterloo, ON.
    - The text is available from the University of Waterloo bookstore. Please note that the price charged by the bookstore is just the printing cost.
2. Ruback, R. S., Balachandran, S., and Aldo Sesia 2001. *Whirlpool Europe*. *Case Study*, Boston: Harvard Business School.
    - You can purchase/download the case from the following URL: http://hbr.org/product/whirlpool-europe/an/202017-PDF-ENG?Ntt=%2520whirlpool%2520europe
3. Tools (for the business analytics component):
    - R (Rstudio) - open source
    - Spreadsheet (Excel or Google Sheets)
4. Data sets (for the business analytics component)
    - WRDS (Compustat Capital IQ and CRSP) - SAF provided subscription
    - Capital IQ - SAF provided subscription
    - Quandl - free or free trial component
    - Tweets

Course Evaluation

Class Participation	5%
Weekly Quizzes	15%
Mid-Term Exam	25%
Assignment	10%
Final Exam	45%
	100%

Class Participation

Active participation leads to higher retention and understanding. Students should review assigned material before they come to class. Participation includes answering questions, making comments, and asking questions that help students understand the material, as well as contributing in online class discussions.

Weekly Quizzes

Every week there will be an online quiz based on the material covered in class during the previous week. The objective of these quizzes is to make sure that you understand and use concepts or tools appropriately.

- You can drop the lowest three quiz scores.
- *There are no make-ups for quizzes missed*.
- Please, note if you miss a quiz *for any reason* it will have to be part of the lowest score(s) that you can drop.

Team Assignment - Business Analytics

The focus of the team assignment this year will be on Blockchain; a technology that could have very significant implication for the financial services industry and accounting firms. The objective of the assignment is to prepare a report explaining the business value proposition and/or implications of Blockchain adoption for the financial services industry or accounting firms. Proper justification should be based on expected adoption patterns of blockchain. This means identifying factors that could affect blockchain adoption pattern, collect and analyze data to support recommendations. More detailed description regarding deliverables will be available from the course website.

- The project is due on July 18th (8:30 am).
- The project has a mandatory peer evaluation component that can significantly affect individual students' grades. Should any significant teamwork issues arise, see your instructor as soon as the issue occurs, not after the assignment has been evaluated. See details below (under Course and SAF policies - Peer evaluated contribution & effect on mark).

Midterm and Final Examinations

There is going to be a midterm and a final exam. Both exams may include material from the text, assigned additional readings, assignments, lectures and seminars. Exams are a combination of mini-essay and multiple choice questions. The midterm will be based on material covered up to the mid-term, while the final exam is cumulative. Both exams are open books and will take place at the computer labs. During the exams you will not have access to internet. The exam duration for both of them will be 90 minutes.

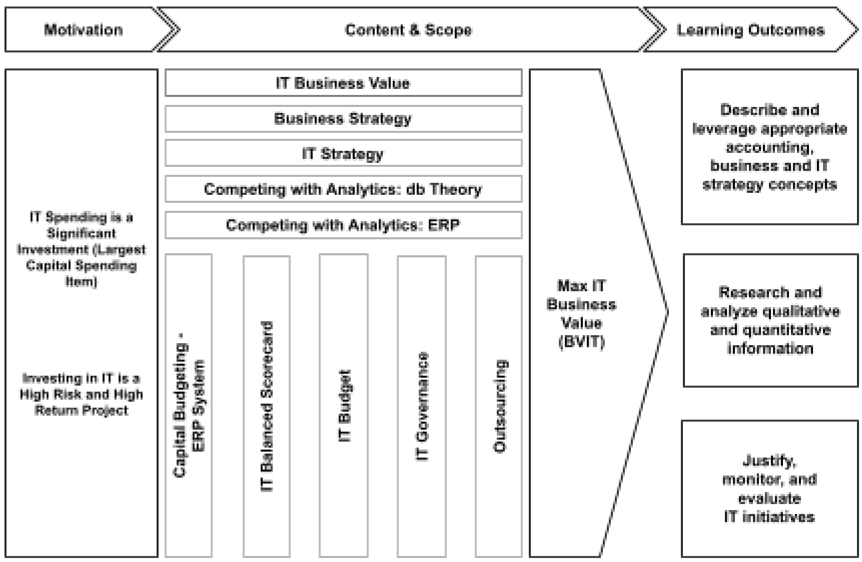
- The date of the midterm exam has been scheduled for the Friday, June 17th. The exact location will be posted on Learn.
- The time and location of final exam will be scheduled by Registrar's Office.
- If you miss the midterm exam for excused reason, the weight will be carried in your final. For any other reason the midterm score is zero.
- I maintain the right to replace midterm score with final score, if final is higher than your midterm. I will make this adjustment for students that have been active and respectful during classes, with no more than two absences in seminars, and have taken the midterm

Tentative Course Lecture Plan (Week - Material Covered)

Week 1	Whirlpool Case and Introduction to R
Week 2	IT Business Value - R: Data extraction, transformation, visualization
Week 3	Business Strategy - R: Strategic analytics
Week 4	IT Strategy - R: Strategic analytics
Week 5	Business Analytics - R: text/sentiment analytics
Week 6	Database Theory - R/sql: Operational analytics
Week 7	Review and Midterm
Week 8	Enterprise Systems - Excel: Capital budgeting
Week 9	Capital Budgeting - Excel: Capital budgeting
Week 10	BSC and Sensitivity Analysis of IT investments - "Monte Carlo" simulation
Week 11	IT Budgets and IT Portfolio Management - "Monte Carlo" & regression with R
Week 12	IT Governance - Review

At the end of every week I will post an announcement on Learn covering the following topics:
1. Summary of material covered during the week.
2. Reading material and suggested homework assignments for the following week.
3. Assignments, quizzes, and exams that are due or will be administered in the following week.
4. Other course related information.

Course Concept Map



Course & SAF Policies

Exam policy

Students are expected to complete all course assessments and write their examinations as regularly scheduled; however, there may be circumstances where accommodating a missed assessment is approved. Accommodation is not automatic upon the presentation of documentation. Instructors will use the documentation along with all information available to them, when determining whether accommodation is warranted.

Please note, there will not be deferred mid-terms or final exams for this course. Based on an approved absence, the weighting of the final exam will be adjusted to make up for an excused absence from a mid-term or any other component of the course. If you are excused from the final exam, due to an approved absence, you will be required to write the exam, the next time the course is offered. At the end of the current term you will receive an INC course grade. When you have written the final exam, a grade revision will be submitted based on the results of the final exam and your other coursework. Failure to write the deferred exam the next time the course is offered will result in a course grade based on the elements of the course that you completed.

Team Assignment - Peer evaluated contribution & effect on mark

You will be using an online software to evaluate contribution of individual team mates in this project. Participation in the peer-evaluation process is mandatory. Failure to contribute to the evaluation process will lead to maximum of ten (10) point penalty on your score on the team project. This will not affect the scores of the other members of your team.

The assessment of your contribution by your teammates (% score) will affect your individual score on assignment.

- If your assessed contribution is 80% or above (≥ 80) you will received all points that the team received.
- If your assessed contribution is below 80% (<80) you will receive the same percentage of the team's score.
- If your assessed contribution is below 50% you will not receive any credit for the team assignment.

Example:

- My team received 90 for our assignment and my assessed contribution was 70%. What is my score? Individual Score = 90 x .70 = 63.
- My team received 85 for the team assignment and my assessed contribution was 89%. What is my score? Individual Score = 85.

Team Assignment - Late submissions

- There is a penalty of ten points per day for late assignment submissions.

Documentation requirements supporting requests for accommodation

UW's policy regarding documentation to support requests for accommodation due to illness can be found at http://www.registrar.uwaterloo.ca/students/accom_illness.html. To support requests for accommodation due to illness, students should seek medical treatment and then provide a completed University of Waterloo Verification of Illness Form. This form is normally the only acceptable medical documentation and is available on line at http://info.uwaterloo.ca/infoheal/_StudentMedicalClinic/VIF Online.pdf. For other requests for accommodations, such as death of a family member, appropriate documentation should be provided within a reasonable time period. Students who miss the final exam also must provide the Faculty of Arts Incomplete Grade Agreement Form which is available on line at http://arts.uwaterloo.ca/sites/ca.arts/files/download_doc/INC Grade Agreement Form - final June 2012.pdf

School of Accounting and Finance students should provide supporting documentation to the SAF Undergraduate Coordinator, Carol Treitz at HH 3156 (if the Undergraduate Coordinator is not available, the documentation should be provided to the receptionist in the Program Office), **within 2 working days of the missed assessment**. School of Accounting and Finance students must also complete and submit the *SAF Request for Exam Accommodation Form* (mid-term or final exams) in addition to the supporting documentation noted above. This form can be obtained from the SAF Undergraduate Coordinator at HH 3156. All forms must include student name, ID number, course number of missed examination, and instructor's name. The SAF Undergraduate Coordinator will complete the bottom section of the *SAF Request for Exam Accommodation Form*, and provide a copy to the instructor. The Coordinator will maintain a record of missed exams by student (name, ID #), so that unusual situations can be identified and addressed.

Recording of Lectures

The SAF recognizes that recording (e.g., audio, video) a class for the purpose of private study may be a useful learning tool. Any student wanting to record (in whole or part) a lecture is required to seek the consent of the instructor before doing so and the instructor may, at her/his discretion, withhold consent. Where recording is required as part of disability accommodation, as a matter of professional courtesy the instructor should be advised and completion of appropriate Office of Persons with Disabilities paperwork typically achieves this purpose. In the event that consent is provided by an instructor, unless otherwise stated in writing, the consent for recording is strictly limited to the purpose of private/personal study and for no other reason (i.e., loaning the recording or reproducing a copy for another student, contesting grading, posting in whole or part online, etc.). Any failure to abide by these requirements will be treated by a course instructor and the SAF as a misuse of intellectual property and a violation of the university's academic integrity requirements and dealt with accordingly.

University of Waterloo Policies

Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect, and responsibility. Academic Integrity Office (UW): www.uwaterloo.ca/academicintegrity/ Academic Integrity (Arts): http://arts.uwaterloo.ca/current-undergraduates/academic-responsibility

Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section www.adm.uwaterloo.ca/infosec/Policies/policy70.htm.

Discipline

A student is expected to know what constitutes academic offence, to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offences and types of penalties, students should refer to Policy 71 - Student Discipline, www.adm.uwaterloo.ca/infosec/Policies/policy71.htm.

Appeals

A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances, (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals, www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

Academic Offenses and Implications

Students majoring in accounting programs at UW should be aware that, due to the highly structured nature of the study plans and the fact that many AFM courses are offered on a limited basis, a penalty imposed as a result of an academic offence could result in a significant delay of the student's degree completion and convocation dates - particularly if the penalty involves a suspension.

Avoiding Academic Offences

The Faculty of Arts has prepared a website dealing with ways to avoid academic offences. http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

Violation of Standards by Another Student

Allowing another student to obtain course marks by deceit contributes to a general lowering of the ethical standards of the University and contributes to deception of potential employers and other academic institutions. Thus, you have an obligation to take some action when you know another student is violating the course's academic integrity standards. This is a difficult personal trial to face, but it is an important part of your ethical obligation as a student. If you know that another student is violating the standards, it is your responsibility to inform the student's instructor. This requirement closely parallels those found in the standards of conduct of all of the professional accounting bodies in Canada (see, for example, the Institute of Chartered Accountants of Ontario, *Rules of Professional Conduct,* section 211).

Note for Students with Disabilities

The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

Turnitin

Plagiarism detection software (Turnitin) will be used to screen assignments in this course. This is being done to verify that use of all materials and sources in assignments is documented. In the first week of the term, details will be provided about arrangements for the use of Turnitin in this course. The specific arrangements for the use of Turnitin in this course will be explained during the first week of classes. However, the basic characteristics will be: (1) Students will submit their assignment to Turnitin through Desire2Learn for screening, unless they indicate that they do not wish to have that done; and, (2) if a student chooses not to have their assignment screened by Turnitin, an alternative arrangement will be made in advance of any submission. The alternative could include providing an annotated bibliography for all references used and/or providing an original copy of ALL rough drafts of the assignment, along with the version submitted.