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**University Studies Master Syllabus**

**Course:** *Charlton College of Business,*

*MIS462 Advanced Business Information Systems Projects*

**Cluster Requirement:** *5A & 5B*

**Course Overview:**

MIS462 is the capstone course in the Management Information Systems major. Overall, the course introduces concepts in project management and teamwork as used in the development and implementation of information technology-based solutions to real business problems. Students will individually apply these concepts in a semester long project as presented in the textbook. In addition, students will work in a team along with a local client and business to design and build an information technology product. Project types covered include software applications, hardware and systems development.

Throughout the course, students will develop an understanding of the purpose and benefits of project management by examining the concepts, practices, processes, tools, techniques and resources used by the project manager throughout the project lifecycle. Topics include project leadership, project lifecycle methodology, business process development, best practice benchmarking, business requirements and benefits, business justification, project planning, execution and control, communications, organizational change, customer acceptance, performance metrics and project closure. Lectures, case studies and projects are combined to develop skills needed by project managers in today’s environment.

**Learning Outcomes:**

Project management is a challenging and complex profession. This course provides a framework that will provide the basic knowledge and tools the project manager needs to be successful as well as experience in using the tools in a real-word project.

Organization support and project resource commitment (including manpower, tools and processes) often fluctuates in cycles. The successful manager applies project fundamentals, best practices and lessons learned to advance:

1. Individually, by successfully completing projects, and
2. Organizationally, by supporting continuous improvement of the strategic and tactical project management methodology.

Ultimately, value added is validated by the satisfied customer.

One of the primary goals for this class is to give students an opportunity to work through an IT project from start to finish and to develop each student’s project management and technical skills. Specifically, each student will

° Work in a project team to develop and deliver an IT project to an organization

° Work with MS Project and a Project Management book to develop project management skills

° Work with an external resource (e.g., a book) to awareness of the corporate environment and the need for personal time management and personal career management skills.

MIS462 is a course based on practical and proven information technology project management methodology and best practices. The course provides a fundamental framework for understanding and managing projects in the fast-paced information technology environment. Project management standards presented, based on the industry-standard PMBOK (Project Management Body of Knowledge), provide a basic and flexible framework from which projects can be proposed, planned, controlled and implemented successfully. Readings and cases provide exposure to real world situations including organizational requirements, technology considerations and management challenges. Students should be able to meaningfully apply what they have learned to develop, manage, critique and continuously improve 1) individual project performance and 2) the project management methodology for their respective organizations.

Students will demonstrate knowledge of project management fundamentals and the ability to apply concepts to diverse situations in an information technology environment by:

* Articulating the purpose and benefits of project management.
* Displaying project management and information technology business acumen.
* Applying standard project management processes to information technology projects.
* Integrating overall project and software development life cycles.
* Identifying project roles and responsibilities by lifecycle phase.
* Using estimation (resource, cost and scheduling) and risk management techniques.
* Developing a solid decision-making foundation throughout the project lifecycle.
* Demonstrating written and oral communications skills required for status reports, leading team meetings and senior management presentations.
* Developing streamlined and easily understandable business cases, project plans and status reports (for both working teams and management) that serve as living documents throughout the lifecycle process.
* Building team level, organizational, end-user and management support.
* Positioning projects per business strategies, goals and objectives.
* Demonstrating the ability to plan, execute and control projects in a manner that will increase customer and shareholder value. Integrating provisions for quality management.
* Developing an appreciation for the difficult role of the manager in complex business and technology environments and the importance of peer, management and mentor support.

**Sample Course Outline:**

*Week 1: Introduction to IT Projects Ch 1*

 *Individual: Semester Case Introduction*

 *Group: Team and Project Formation*

*Week 2: Initializing the IT Project Ch 2*

 *Communication: Meetings*

 *Individual: The Business Case, part 1*

 *Group: First Client Contact, Status Report*

*Week 3: The Project Charter Ch 3*

 *Individual: The Business Case, part 2*

 *Group: Business Case Presentation*

*Week 4: The Human Side Ch 4*

 *Defining Project Scope Ch 5*

 *Individual: Stakeholder’s Analysis & Scope Management Plan*

 *Group: MOVs, Status Report*

*Week 5: The WorkBreakdown Structure (WBS) Ch 6*

 *Individual: WBS & Gantt Chart MS Project Tutorial #1*

 *Group: WBS & Gantt Chart, Status Report*

*Week 6: Managing Project Risk, Network Diagrams Handout*

 *MS Project Tutorial #2*

*Group: Gantt Chart/ WBS Presentation*

*Week 7: Managing Project Risk, Network Diagrams Handout*

 *MS Project Tutorial #3*

 *Job Survival Skills*

 *Group: Work on Project, Status Report*

*Week 8: Project Tracking and Reporting Ch 9*

 *Individual: Earned Value Analysis*

 *Group: Work on Project, Status Report*

 *Job Survival Skills*

*Week 9: Managing Change Ch 11*

 *Individual: Change Management*

 *Group: Work on Project, Status Report*

 *Job Survival Skills*

*Week 10: Agile Separate Book*

 *Group: Work on Project, Status Report*

*Week 11: Closing the Project Ch 14*

 *Individual: Project Closure Plan*

 *Group: Work on Project, Status Report*

*Week 12: Closing Project Ch 14*

 *Group: Preparing Final Presentation*

*Week 13: Group: Final Presentation*

**Examples of Texts and/or Assigned Readings:**

Required Textbooks:

(1) **Marchewka, Jack, Information Technology Project Management**

Go with the version offered by the bookstore—NOTE: you DO NOT need to get the MS Project Disc with it.

However, do get a version with the MS Project tutorials in it.

You can also rent an e-version of the book – let me know if you have any questions.

**(2) Scrum: a Breathtakingly Brief and Agile Introduction, Chris Sims & Hillary Johnson**



**** Print Length: 54 pages  Publisher: Dymaxicon (July 30, 2014)

 Publication Date: July 30, 2014  Language: English

**(3) Your Job Survival Guide: A Manual for Thriving in Change, Gregory Shea, Robert Gunther**

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 Print Length: 272 pages  Publisher: FT Press; 1 edition (August 11, 2008)

 Publication Date: August 11, 2008

1. **MS Project – Check for details in the 2nd week of class. We will be accessing MS Project through Dreamspark – the University’s academic alliance with Microsoft.**

**(5) Additional readings will be assigned and provided, in particular items from** [*www.cio.com*](http://www.cio.com).

**Evaluation Policy**

***Five quizzes during the semester,***

 @ 10%, Project Management text

 @ 10% Measuring Project Risk, from supplemental material

 @ 8% MS Project quiz

 @ 6% Job Survival Guide Quiz

 @ 6% Agile Quiz ***40%***

***Homework 10%***

***Class attendance 5%***

***Group Project, including:*** **45%**

 Weekly Group Status Report from Project Manager

 Business Case report & presentation

 Detailed Project report & presentation, including Gantt Chart

 Final Report

 TOTAL **100%**

Examinations will be based on the relevant textbook material, lectures, and class discussions.

Homework will be due on the day it is due and should look professional – clear handwriting is OK but no raggedy paper edges or folded corners instead of stapes. Late homework will not be accepted without extenuating circumstances such as a note from a doctor.

 Grading will be standard:

 90% and Up A (A or A-)

 80% - 89% B (B+, B, or B-)

 70% - 79% C (C+, C, or C-)

 60% - 69% D (D+, D, or D-)

 Less than 60% F

**University Studies Course Rationale**

The MIS462 capstone class for the MIS concentration provides students the opportunity to integrate many of the subjects they have taken into a single group project, in a real client setting. Students typically take the class in their last semester before graduating. Before taking MIS462, MIS majors in the Technology and Management Option are required to take a number of closely related topics – MIS212 Programming with Problem Solving, MIS322 Systems Analysis and Design, and MIS432 Database Design and Implementation (or, for the E-Commerce/Digital Business Option, MIS322 Systems Analysis and Design and MIS481 Electronic Commerce / Electronic Business). In the capstone class, MIS majors are expected to integrate their previous studies into a “soup-to-nuts” design and develop project where each student team develops an actual IT application for a real company or agency in the region.

**5A: Capstone Study**

**University Studies Learning Outcomes:**

*Approved courses will give students the opportunity to integrate their learning and produce an original expression of knowledge or understanding. Students will also demonstrate mastery of both written and oral communication.*

*Upon completion of the capstone study, students will be able to:*

*1. Synthesize the knowledge and skills gained within major courses, independently complete a research-based project or creative work and integrate the results of both in an open-ended project or experience (projects within the major are encouraged).*

*2. Integrate knowledge and principles from the field of study with those of the broader University Studies curriculum.*

*3. Demonstrate advanced information literacy skills by selecting, evaluating, integrating and documenting information gathered from multiple sources into discipline-specific writing.*

*4. Communicate effectively, both orally and in writing, the results of the project or experience.*

**Example Learning Activities, Assignments and Outcome Map:**

*The outcome map is a table in which each row focuses on one of the University Studies Learning Outcomes for the Cluster requirement. The first column provides the number of the Univ St outcome, the second column describes the teaching and learning activities that will foster students’ development of mastery of that outcome, and the third column explains what student work products (tests, assessments, assignment work, papers, etc.) will be created that document students’ competency on the outcome. The teaching and learning activities listed here will include the specific assignments described more fully above, but they can also encompass other kinds of activities, like lectures, group discussions, readings, etc., that may not be associated with an assignment that bears on students’ grades.*

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| **Univ St Learning Outcome** | **Teaching and Learning Activities** | **Student Work Products** |
| 1 Synthesize the knowledge and skills gained within major courses, independently complete a research-based project or creative work and integrate the results of both in an open-ended project or experience (projects within the major are encouraged). | Individual: Apply programming skills, design skills, and implementation skills through a semester long case project.Group: As a team, design and build an IT product for a regional client in a company or agency. Skills needed include programming, design and implementation skills like the individual project but also team and leadership skills as part of a group.  | Individual: Most weeks include a specific work product, including: a business case, a Stakeholder’s Analysis, a scope Management Plan, a Gantt chart, earned value analysis, a task sensitivity analysis, and change management. Group: Three major deliverables including a report and a presentation – the Business Case, the detailed project plan (Gantt Chart), and Final Presentation. |
| 2 Integrate knowledge and principles from the field of study with those of the broader University Studies curriculum. | This class mostly relates to Part I, III and IV the University Curriculum. *1. PART 1: Foundations for Engagement: Skills for the 21st Century*A/B/C. Critical Writing and Reading I & II & Intermediate- multiple written homework assignment mostly from text material, nearly weekly written products for the Individual Semester long case, 3 major group papers and presentation. Group project demands critical thinking to assess the “As Is” system and define a viable “To Be” system. The Weekly Status report requires integration.D. Mathematics (3 credits)The Managing Project Risk component for 2 weeks involves a multiple step process for evaluating task sensitivity including formulas, algebra and the application of the Z table. E. Foundation for Learning through Engagement The semester long group project with a real client requires effective engagement throughout the semester with the client. Each team member is required to be project manager for a minimum of 2 weeks during the semester. Numerous deliverables. For Parts (2) and (3), the following discusses items from the class but their liberal arts foundation contributes to a great degree. The best way to frame this is the student’s regular need to have effective client relations and team relations – dealing with people in a professional setting. Psychology, Sociology, Political Science, Literature and other classes all contribute to a person’s ability to successfully navigate through the complexities of project teams and project clients. *2. PART III. The Cultural World: Aesthetic and Interpretive Understanding, Subcategory B – Visual and Performing Arts.*Communication with the client and among their team members of the major project (45% of the course grade) is essential. The major “performance” pieces by the students are (i) team meetings, (ii) weekly status reports presented to the class weekly, (iii) 3 major group presentations to the class – a business case, the detailed project and the final report, and (iv) communication with the client via email, phone and in-person. For (i) Team Meetings: The class is asked to reflect on team meetings throughout their time at UMD and, as a group, discuss why and when meetings are useful as well as what makes a good meeting vs. a bad meeting. By the second week of class each group is required to define and document their team meeting expectations and each team member signs the document. For (ii) Status Reports. The Project Manager for the team (a rotating position) is required each week to present in front of the class to their fellow Project Managers (in a meeting setting) with myself as instructor and the rest of the class as the audience. The status report has a specific format. Project Managers are asked questions. For (iii) 3 Major Presentations. Students are encouraged to be at their very best for these 3 presentations. A dress code is discussed and developed as a class. Time is spent discussing how to bring the elements of a good oral story into a business presentation and a 7 slide model is presentedFor (iv). There is ongoing discussion throughout the semester about how to have successful client relations, beginning with a long discussion about how to have a successful initial meeting along with how to close a project well which incorporates textbook material. One component of their final project report is a one page review of how well the team worked as a project team and with their client.3. *PART IV: The Social World: Humanity and Society, Subcategory B & C – The Nature of US Society and Global Society.* The professional world is quite different from 20 years ago and substantially different from 40 years ago. The “Job Survival” book is used to present a coherent perspective on how to succeed in a world of great opportunity as well as rapid, ongoing change. The metaphor of the book is white water rafting – highlighting the importance of both preparation and adaptation along with the role of the individual and the role of the group. Each project group is required to present a portion of the book to the class which is followed by discussion.  |
| 3 Demonstrate advanced information literacy skills by selecting, evaluating, integrating and documenting information gathered from multiple sources into discipline-specific writing. | The nature of the capstone class, in MIS and a projects course, means using advanced information literacy skills. The project definition, planning, managing and execution require ongoing integration and documentation. See #1 for details which apply to this category as well. |
| 4 Communicate effectively, both orally and in writing, the results of the project or experience. | Project management, the core of the textbook used in this class, covers communication and managing groups.  | The 3 major group deliverables are a report and a group presentation – the business case, the project detail, and the final report.  |

**5B: Learning Through Engagement**

**University Studies Learning Outcomes:**

*Through engagement, students deepen their understanding and appreciation of their academic study, while also reflecting on the connections between their learning and the broader communities of which they are a part. These communities may be professional, scholarly, social, cultural, economic or political. These activities provide an opportunity for students to better understand their roles as members of these communities. Service learning courses, internships, study abroad programs, independent research or creative work and experiential learning courses or practica that foster engagement and reflection may be used to meet this requirement. Capstone courses may also qualify.*

*Upon completion of this requirement, students will be able to:*

*1. Identify the needs and resources of the communities to which they belong.*

*2. Apply knowledge and skills gained through academic study to real problems and/or opportunities within their communities.*

*3. Describe the connections between learning on campus and the issues and needs of broader academic, professional or civic communities.*

*4. Articulate the value of engagement to other members of their communities.*

**Example Learning Activities, Assignments and Outcome Map:**

The outcome map is a table in which each row focuses on one of the University Studies Learning Outcomes for the Cluster requirement. The first column provides the number of the Univ St outcome, the second column describes the teaching and learning activities that will foster students’ development of mastery of that outcome, and the third column explains what student work products (tests, assessments, assignment work, papers, etc.) will be created that document students’ competency on the outcome. The teaching and learning activities listed here will include the specific assignments described more fully above, but they can also encompass other kinds of activities, like lectures, group discussions, readings, etc., that may not be associated with an assignment that bears on students’ grades.

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| **Univ St Learning Outcome** | **Teaching and Learning Activities** | **Student Work Products** |
| 1 Identify the needs and resources of the communities to which they belong.  | * + Introduction to Project Management and the Project Management Institute (PMI), the preeminent PM organization in the world – including their Project Management Body of Knowledge (PMBOK) which the textbook is based upon.
 | * + Homework based on text book, the PMI site, job sites and PM job requirements, and supplemental material such as short videos.
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| 2 Apply knowledge and skills gained through academic study to real problems and/or opportunities within their communities. | * + Work as a team to develop a functioning, useful IT product for a local company or agency. The problems are real, the solution is real.
 | * + Three major reports and presentations as well as a weekly status report to be sure the student projects are moving forward in a productive way.
 |
| 3 Describe the connections between learning on campus and the issues and needs of broader academic, professional or civic communities. | * + The group projects, worth 45% of each student’s grade, regularly produces meaningful results in the community – e.g., a hair salon is more competitive, a NFP can now communicate more effectively as a community with its associate agencies, or a student in the class now has a website to help with his dream of managing bands.
	+ As a service learning class, we discuss our role, including when the end of semester service learning survey is taken.
 | Three major reports and presentations as well as a weekly status report to be sure the student projects are moving forward in a productive way. Plus the many day-to-day interactions between the client and the team. This is not your regular project assignment. The end product will either help or hurt the client’s business.  |
| 4 Articulate the value of engagement to other members of their communities.              | * + Working with a real person on a real project with a real deadline provides a rich environment for developing personal and professional skills.
	+ In addition to the success of the projects from a technical and business sense, the students also are engaging with small agencies or small businesses within the local community. Their interaction with the clients is very valuable.
 | * + Three major reports and presentations as well as a weekly status report to be sure the student projects are moving forward in a productive way.
	+ At the end of the class each group has to have a sign-off document signed by the client. It is a good opportunity to assess the effectiveness of the group.
	+ At the end of the Project Final Report each team is required to write a page where they assess their success as a team (process and product), including client relations.
	+ At the end of the semester the Service Learning Survey, provided by the Leduc Center, is distributed to be filled out by the class. An extended conversation before and after the questionnaire discusses service learning and the learning opportunities with engagement – both as a professional and as a community service. The second half of the conversation focuses on the question “For the next time this class is taught, would you recommend keeping the project with an external client as the centerpiece of the class?” This leads to a discussion about the role of a capstone class and the relative value (for learning) of having a real client versus a classroom/textbook project. For the past 10 years the class has voted, almost unanimously, to keep the outside client project. The students are very clear about the learning benefits that come with engagement with an external client.
 |