Course Syllabus

Accounting and Management Information Systems
7620 – Management of Corporate Date

Autumn 2016

Class Meetings
Tuesday and Thursday, 4:30 – 6:00 p.m. (August 23 – October 6)

Location
305 Gerlach Hall

Final Exam
Tuesday, October 11 (time and location TBD)

Instructor
Professor Chris Debo
debo.3@osu.edu

Office Hours
After class or by appointment

Description/Rationale

This course is a seven-week foundational course designed to give students an understanding of the concepts of corporate data governance and decision support.

Data forms the core of 21st century decision making for all organizations. Effective business leadership relies heavily on relevant, timely, accurate and actionable information. However, many business leaders and analysts are not “data savvy”. The leaders of tomorrow must not just be effective managers, they must also have the ability to work with data and not rely on analysts or IT for actionable information. This course will teach students the core concepts required to build a business career that leverages data for decision making.
Course Objectives

The objectives for this course are centered on data usage for decision-making within a business environment. As such, students are expected to be able to develop both technical and soft skills needed to liaise with both business and technology leadership and demonstrate effective communication and presentation skills. Therefore, the content of this course will be divided evenly between problem-solving skills, technical ability, and communication skills.

By the conclusion of this course, participants will:

- Have a strong understanding of how data is used within corporations for decision making;
- Be familiar with the universe of technologies used to support decisions within organizations, and the specific strengths and weaknesses of select software;
- Know the differences between various data structures, including big data;
- Have gained hands-on experience building databases, analysis, and reports;
- Have learned data analysis skills using Excel and SQL that will be useful in a business setting;
- Know the different stages of data flow in a business environment;
- Understand the star schema, including purpose and design;
- Familiarize themselves with OLAP, data cubes, and aggregates;
- Understand the purpose of metadata and the importance of good documentation in a healthy data governance structure; and
- Enhance their written and oral presentation skills.

Topical Outline, Format & Schedule

This course has been organized to progress through the stages of data maturity, beginning with raw unstructured data and ending with structured data presented using analytical toolsets. Each week will be divided between a conceptual lecture (Tuesdays) and technical, lab-based lecture (Thursdays). After the first week there will be a quiz each Thursday on the lecture content and readings since the last quiz. At the end of each Thursday class there will also be a lab assignment based on the technical content discussed during class. These assignments will be due by 11:59pm the Monday before the following week’s class. The breakdown of subject matter is as follows:

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<tr>
<th>Week of</th>
<th>Tuesday Lecture</th>
<th>Thursday Lecture</th>
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<tr>
<td>23-Aug</td>
<td>Introduction to Corporate Data</td>
<td>Raw Data: Excel</td>
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<tr>
<td>30-Aug</td>
<td>Data Quality and Governance</td>
<td>SQL Server</td>
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<td>6-Sep</td>
<td>Relational Database Concepts</td>
<td>SQL and Advanced DB Concepts</td>
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<td>13-Sep</td>
<td>Reporting and Analysis</td>
<td>Tableau</td>
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<td>20-Sep</td>
<td>Data Warehousing and Business Intelligence</td>
<td>SSIS</td>
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<td>Week of</td>
<td>Tuesday Lecture</td>
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<td>27-Sep</td>
<td>Big Data and Analytics</td>
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<td>4-Oct</td>
<td>Lab Presentations</td>
<td>Course Review</td>
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<td>11-Oct</td>
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**Carmen**

We will be using Carmen extensively in this course. On the site you will find the course slides, reading list, technical data and assignments outlined for each week. Course slides will not be available until after each class. You will also find resources based on each day’s discussion, links to class activities, instructions for all assignments, and discussion forums. We will be using the drop-box function for all assignments and the quiz functionality for all quizzes. I will post grades, along with applicable feedback, in Carmen. If additional feedback or explanation is desired, please set aside time to meet with me before or after class.

**Reading Material**

There is no textbook to purchase for this course. The primary content will be provided via slide decks that will be used for each session. Readings will also be assigned from publicly available material that will either be published to the course portal on Carmen or will be distributed in class. To ensure that emphasis is being placed on the applicable course material at the time, readings and assignments will be distributed on a weekly basis. You are expected to come to each class having read all items assigned for that day. Class activities and discussion will rely heavily on your reading and understanding of the items due for that day.

**Course Requirements and Evaluation**

Data concepts are often difficult to grasp and as such my expectations of student effort are high; therefore attendance at each class is mandatory (especially given that we only meet for seven weeks). Students unable to attend must inform the instructor prior to class and have a valid excuse.

**Quizzes**

There will be five quizzes given during the course; these will be administered via Carmen during class and will be based on the reading material and lecture since the last quiz. Quizzes will consist of 5-10 randomized questions (no students will have the same quiz). Quizzes will comprise 20% of the student’s final grade.

**Data Analysis Assignments**

Students will also be given five data problem-solving assignments during the semester. These assignments will require students to manipulate data in various formats using tools such as Excel and SQL. The datasets to be used by each student will vary (no students will have the same data set) and it is expected that students work independently and develop their own solution. Students are required to submit their solution via Carmen no later than
11:59pm on the Monday evening preceding the next class. Late submissions will not be accepted and issues with Carmen are not an acceptable excuse (students can e-mail me their solutions if necessary). These assignments will be graded based on the viability of the approach, the organization of the final solution, and comprehensiveness of associated documentation. Data assignments will comprise 20% of the student’s final grade.

**Final Lab and Presentation**

Students will be required to build a reporting presentation that demonstrates their ability to present information in a way that provides insight to business users. The students will have their choice reporting software, although Tableau will be recommended as this will be what is covered during class. The system must, at a minimum, comprise the following:

- Two separate but related data sources
- A SQL Server database source where the data is loaded
- 4-6 charts/analysis
- 1 dashboard

Students will work in groups of two. For each, the students must import the data into the SQL Server database as well as the reporting engine and build at least four data visualizations and one dashboard. Each student will then make a 3-5 minute presentation as-if they were explaining the data to a business decision maker. The final lab will be graded based on functionality, originality, output quality, accuracy, and the overall presentation quality. The final lab will comprise 25% of the student’s final grade. The data used must be business-related (no political or controversial datasets are permitted); students must first get approval from me prior to proceeding with their data sets.

**Final Exam**

A final exam will be administered on October 11 and will consist of 40 multiple choice questions. The exam will consist of material covered during course lectures and reading assignments. The final exam will comprise 25% of the student’s final grade.

**Class Participation**

Learning these concepts will require a great deal of in-class participation; as such, students are expected to attend each class, pay attention, and participate. Participation will comprise 10% of the student’s final grade.

**Technical Requirements**

This course will utilize several software tools, many of which are not available in the Fisher or Ohio State computer labs. As such, each student MUST have their own laptop. The majority of labs will be delivered virtually via Fisher’s remote lab environment:

[https://remotelab.fisher.osu.edu](https://remotelab.fisher.osu.edu)
Students should verify that they can access this environment as soon as possible. Students will be able to save their work on each virtual machine. There is no need to download the required software on your laptop; however, Fisher does have an agreement with Microsoft that allows students to freely download software. It is recommended that students take advantage of this while enrolled as it is not available after class.

Software that will be utilized in class includes:

- Microsoft Excel
- Microsoft Word
- Microsoft Powerpoint
- Adobe PDF
- Notepad
- Microsoft SQL Server
- Microsoft SSIS
- Tableau (not Microsoft)
- R (not Microsoft)

Open is open source software that is freely available for download. Tableau is free to students and can be downloaded via [http://www.tableau.com](http://www.tableau.com).

**Backups**

Students are required to back up their data. Data can be backed up to whatever location the student prefers (cloud, disk, another laptop, etc.), but failure to complete assignments and labs due to malfunctioning software or hardware, or because of data loss, is unacceptable and makeups will not be accepted. Labs done via Fisher's remote lab will be automatically saved and backed up; therefore it is recommended that this environment be used whenever possible.

**Student/Instructor Code of Conduct**

As a student in this course, you are an integral part of the learning community we will create. To support this community, we each have a responsibility to contribute to it in a positive and productive way. I expect the following conduct from each student:

1. Aside from the final group lab, all students are expected to perform their own work.
2. All cell-phones must be turned OFF during class (not on vibrate). Any phones going off during class will be confiscated and returned at the end of class, and points will be deducted from the student's grade for each disturbance. Any students caught using their phone during class will receive the same disciplinary action.
3. Attend class and submit assignments on-time. If you must miss a meeting, you are expected to let me know in advance. There will be no make-up quizzes and late homework will not be accepted unless the student can provide documented evidence of events that prohibited them from attending class.
4. Prepare for each meeting. Readings and activities assigned to class sessions will help you reflect on the issues and articulate your ideas. The materials are meant to help you prepare for the class.

5. Take time to learn outside of class. Many of the concepts discussed are highly technical in nature and as such, will require a significant investment of time and effort to master them. As with a real-world business setting, not all answers to technical problems will be given in class. It is up to each student to hold themselves accountable and apply their knowledge to solve the problems placed before them.

6. Participate in class discussions and activities. This course will include discussion within a collaborative learning environment.

7. Respect each other. Communities thrive when each member respects all others, demonstrated not just in what we say, but also in listening intently, sharing ideas, and supporting each other when challenges arise.

As the instructor, I promise you that I will work hard to maintain a supportive environment, be available both in person and electronically when needed, take into account each student’s individual needs, use a variety of teaching techniques, keep the material for this class organized, accessible, and meaningful. I do take feedback very seriously; if you feel that the course can be improved in any way, or if you are struggling to meet the demands of the course, please let me know immediately.

Statement of Student Rights

This syllabus and course materials are available in alternative media on request. The Ohio State University encourages qualified persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation for this course or have questions about the physical access provided, please contact me privately to discuss your specific needs as early in the semester as possible to receive effective and timely accommodations. Please also contact the Office for Disability services at 292-3307, 150 Pomerene Hall, to coordinate reasonable accommodations and to document disabilities.

Statement of Academic Integrity

You are expected, at all times, to act with academic integrity. At its core, academic integrity requires honesty. This involves giving credit where it is due and acknowledging the contributions of others to one’s own intellectual efforts. It also includes assuring that one’s own work has been completed in accordance with the standards of one’s course or discipline. Without academic integrity, neither the genuine innovations of the individual nor the progress of a given field of study can adequately be assessed, and the very foundation of scholarship itself is undermined. Academic integrity, for all these reasons, is an essential link in the process of intellectual advancement.

The values that underpin the concept of academic integrity go beyond simply not cheating or plagiarizing. Embracing these values means that you are responsible for your own learning; you have an obligation to be honest — with yourself and others; and you have the
responsibility to treat other students and your professors with respect and fairness. Per University Rule 3335-31-02, “Each instructor shall report to the committee on academic misconduct all instances of what he or she believes may be academic misconduct.” Ignorance of the University’s Code of Student Conduct is never considered an “excuse” for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

**Taking Care of Yourself**

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact the OSU Counseling and Consultation Services (614-292-5766) for assistance, support, and advocacy.