

## Course Syllabus

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**Jahangir Karimi** received the Ph.D. degree in management information systems from the [University of Arizona](#). He is the Accenture Term Professor of Information Systems and serves as the discipline director for [Information Systems Program](#) at the [School of Business University of Colorado at Denver and Health Sciences Center](#).

His research interests include information technology management in national and international environments, information systems modeling, analysis and design, software engineering, IT-enable E-business transformation, and new E-business models. He has published in [MIS Quarterly](#), [Information Systems Research](#), [Communications of the ACM](#), [Journal of Management Information Systems](#), [IEEE Transactions on Software Engineering](#), [IEEE Transactions on Engineering Management](#), [Decision Sciences](#), [Journal of Systems and Software](#), [Information and Software Technology](#), [Concurrency: Practice and Experience](#), several books, and conference proceedings.

He is on the editorial board of [International Journal of Electronic Commerce](#) and [IEEE Transactions on Engineering Management](#) Journal. Dr. Karimi is member of the [Association for Information Systems](#).

**Course Description**

This course covers technical and managerial issues associated with the development and use of decision support systems, expert systems, executive information systems, and advanced intelligent systems. The DSS component covers decision theory, model management, and business intelligence with an emphasis on how decision-making can be supported using data warehouses, OLAP, and data mining and visualization tools. The ES component focuses on knowledge acquisition, representation, reasoning, and using advanced intelligent systems over the web. In addition, collaboration, communication, enterprise decision support systems integration, impacts, and the future of MSS are discussed.

Print a hardcopy of the course syllabus: [Course Syllabus](#)

**Course Overview**

The use of DSS and online analytical processing (OLAP) and the selection of decision support applications and tools are important learning objectives for this course. Critical to the success of DSS is the use of data warehouses. The basics of data warehousing are covered through a variety of companies experiences.

The course also covers Business Performance Management (BPM) and the use of digital dashboards and balanced scorecards as evolution of EIS. Hands-on experience is provided through the use of leading-edge technologies including MicroStrategy business intelligence tool.

**Course Learning Objectives**

Upon completion of the course the students will be able to:

- Learn the major frameworks of computerized decision support: decision support systems (DSS) and business intelligence (BI).

- Understand the foundations, definitions, and capabilities of DSS and BI.
- Understand the drivers for BI initiatives in modern organizations
- Learn about the different models of Business Analytics (BA).
- Learn about Business performance management (BPM)/ corporate performance management (CPM).
- Describe decision support systems (DSS), group support systems (GSS), collaborative computing, knowledge management systems (KMS) enterprise information systems (EIS), executive information systems (EIS), expert systems (ES), intelligent agents (IA), and artificial neural networks (ANN), and their support of managerial decision-making.
- Describe the decision-making process and how it can be enhanced by information, and by mathematical and other models.
- Describe alternate decision-making models, their strengths and weaknesses.
- Describe how personality (temperament), gender, cognitive style, and decision style can influence decision-making and the kinds of support systems to be developed and used.
- Describe the modeling process and build simple models that represent organizational problems.
- Describe, enterprise resource planning (ERP) / enterprise resource management (ERM) its importance, structure, accomplishments, characteristics and benefits.
- Describe, supply chain management (SCM), its importance, structure, accomplishments, characteristics and benefits.
- Describe, knowledge management systems (KMS), its development, importance, structure, accomplishments, characteristics and benefits.
- Describe and know when to use the various methods of knowledge representation and build simple rule-based knowledge bases.
- Describe and know when to use the various methods of inference. Conduct manual backward and forward chaining inferences.
- Describe and know when to use a variety of reasoning methods.
- Develop a real expert system.
- Describe cutting edge AI technologies and methodologies (e.g., artificial neural networks, genetic algorithm, fuzzy logic, qualitative reasoning, etc.).
- Describe the potential benefits and issues of MSS integration.
- Describe the future directions of MSS in light of new technologies.

### Course Approach

It is assumed that you will read the assigned chapters and readings in advance. The material covered in each unit closely follow the course text and the assigned readings (See the calendar and units for details). Each **audio** will give you an overview of the material covered in each unit and will highlight the important points only. The best way to approach the material for each unit is for you **to read the (required) assigned readings in its entirety first and then listen to the audio for the given unit**. You will have a hard time following the lectures on an audio if you do not read the material first (just like normal class sessions).

**Note we will cover one unit per week. The date for each unit is the date by which you should finish all the work associated with that unit.** For each unit, learning objectives are specified. The web document in the reading summarizes important points in the chapter and my own notes. You need to read the book chapter (s) first, then review and understand the notes. All the chapters slides are provided to you in the "document sharing".

Examinations will be based on the textbook (learning objectives for each chapter), readings, and class

discussions. There are assignments and/or threaded discussions for each unit. You are expected to participate in the threaded discussions by the due dates. There are late penalties for late assignments (see section on late work).

**Course Prerequisite** The recommended prerequisite for this course is ISMG 6080. If you are familiar with database management systems and have worked with such systems (e.g., ACCESS) in the past you satisfy the prerequisite requirements for this course.

**Required Texts** [Decision Support and Business Intelligence Systems, 8/E 2007](#) ( ISBN-10: 0131986600; ISBN-13: 9780131986602), and [CORVID ExSYS Student edition](#) software. For ordering CORVID software separately click here: [CORVID software License Ordering Form](#)

### Course Outline Schedule

Unit	Date	Topic	Readings	Activity/Assignment	Due Date
1	1/16-1/19	Decision Support Systems & Business Intelligence	<ul style="list-style-type: none"> <li>ET: Chapter 1</li> </ul>	<ul style="list-style-type: none"> <li>Individual Threaded discussion (DSS Web Tour)</li> </ul>	1/19
2	1/20-1/26	Decision-Making, Systems, Modeling, & Support	<ul style="list-style-type: none"> <li>ET Chapter 2 &amp; 3</li> </ul>	<ul style="list-style-type: none"> <li>Small Group Discussion (End of Chapter Case: FedEx)</li> <li>Introduction to MicroStrategy Software Tutorial</li> <li><b>BI Warm-up Assigned</b></li> </ul>	*D: 1/26 **BI Warm-up: 2/9
3	1/27-2/2	Modeling and Analysis	<ul style="list-style-type: none"> <li>ET: Chapter 4</li> </ul>	<ul style="list-style-type: none"> <li>Individual Threaded Discussion (Modeling tools)</li> </ul>	D: 2/2
4	2/3-2/9	The Essentials of Business Intelligence & Data warehousing	<ul style="list-style-type: none"> <li>ET: Chapters 5 &amp; 6</li> <li>Business Intelligence</li> <li>Competing on Analytics</li> <li>Data Warehouses, Metadata, and Middleware</li> </ul>	<ul style="list-style-type: none"> <li>Small Group Discussion (Continental Airlines)</li> <li>Tutorials</li> <li><b>BI Warm-up Due</b></li> <li><b>BI Project Assigned</b></li> </ul>	D: 2/9 ***BI Project P: 3/16
5	2/10-2/16	Business Analytics and Data Visualization	<ul style="list-style-type: none"> <li>ET: Chapter 6</li> <li>GIS</li> <li>Data Visualization</li> </ul>	<ul style="list-style-type: none"> <li>Small Group Discussion (End of Chapter Case: State Governments)</li> <li>MicroStrategy</li> </ul>	D: 2/16

				<ul style="list-style-type: none"> <li>Tutorials</li> <li>• Web Seminar</li> </ul>	
6	2/17-2/23	Data, Text, and Web Mining	<ul style="list-style-type: none"> <li>• ET Chapter 7</li> <li>• Data Mining Primer</li> <li>• Evaluating Data Mining Tools</li> </ul>	<ul style="list-style-type: none"> <li>• Small Group Discussion (End of Chapter Case: HP &amp; Text Mining)</li> </ul>	D: 2/23
7	2/24-3/2	Neural Networks for Data Mining	<ul style="list-style-type: none"> <li>• ET Chapter 8</li> </ul>	<ul style="list-style-type: none"> <li>• Small Group Discussion (End of Chapter Case: Sovereign Credit Rating)</li> <li>• Web Seminar</li> </ul>	D: 3/2
8	3/9	<b>Midterm Exam</b>			
9	3/10-3/16	Business Performance Management	<ul style="list-style-type: none"> <li>• ET Chapter 9</li> <li>• What is Balanced Score Card?</li> <li>• Managing Master Data</li> <li>• Dashboard Development</li> </ul>	<ul style="list-style-type: none"> <li>• Small Group Discussion (Vigilant IS)</li> <li>• Web Seminars</li> <li>• <b>BI Project Due</b></li> </ul>	D: 3/16
10	3/26-3/30	Artificial Intelligence and Expert Systems	<ul style="list-style-type: none"> <li>• ET Chapter 12</li> <li>• Introduction to ES</li> <li>• Building ES</li> <li>• Evaluating ES</li> </ul>	<ul style="list-style-type: none"> <li>• Individual Threaded Discussion (CORVID)</li> <li>• Tutorials</li> <li>• <b>ES Warm-up Assigned</b></li> </ul>	D: 3/30 Warm-up: 4/13
11	3/31-4/6	Advanced Intelligent Systems	<ul style="list-style-type: none"> <li>• ET Chapter 13</li> <li>• Dashboards &amp; Scorecards</li> </ul>	<ul style="list-style-type: none"> <li>• Small Group Discussion (Eden Case-Part A)</li> <li>• Download Hyperion</li> </ul>	D: 4/6
12	4/7-4/13	Intelligent Systems over the Internet	<ul style="list-style-type: none"> <li>• ET Chapter 14</li> <li>• Intelligent Agents</li> </ul>	<ul style="list-style-type: none"> <li>• Small Group Discussion (Eden Case-Part B)</li> <li>• <b>ES Warm-up Due</b></li> <li>• <b>ES Project Assigned</b></li> </ul>	D: 4/13 P: 5/4
13	4/14-4/20	Collaborative Computing-supported Technologies & Group Support Systems	<ul style="list-style-type: none"> <li>• ET Chapter 10</li> </ul>	<ul style="list-style-type: none"> <li>• Small Group Discussion (Boeing Case/ Groupware Products)</li> </ul>	D: 4/20
14	4/21-4/27	Knowledge Management	<ul style="list-style-type: none"> <li>• ET Chapter 11</li> </ul>	<ul style="list-style-type: none"> <li>• Small Group Discussion (End of Chapter Case: Daimler Chrysler EBOKs)</li> </ul>	D: 4/27

15	4/28- 5/4	Systems Development, Acquisition, Integration, Impact, and the future of Management Support Systems	<ul style="list-style-type: none"> <li>• ET Chapters 15 &amp; 16</li> <li>• The soft side of Real-time BI</li> <li>• Building the Real-time Enterprise</li> </ul>	<ul style="list-style-type: none"> <li>• Web Seminars</li> <li>• <b>ES Project Due</b></li> </ul>	P: 5/4
16	5/11	<b>Final Exam</b>			

\* D: Threaded discussion \*\* W: Warm-up, \*\*\*P: Project

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## TERADATA STUDENT NETWORK

The class will use many of the resources on the Teradata Student Network. Its URL is <http://www.teradatastudentnetwork.com> . The password to access to material is : **PANTHERS**

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**Projects** You will develop DSS and ES in your projects. For DSS project, You need to access [Teradata Student Network](#) using password SPARTANS. You need to log on the e-Trainer site and set up a user ID and Password. [MicroStrategy eTrainer](#) teaches you about using MicroStrategy Web and tests your knowledge.

For ES warmup and project, you need to use CORVID ES shell (<http://www.exsys.com/> ). The software for the shell comes with the book [CORVID ExSYS Student edition](#) and is available at the book store.

**BI warm-up, BI project, and ES warmup are individual projects.** You can work in a group of two or work alone on ES projects however. I will not assign you to groups for these projects, you need to select your teammate.

*For the descriptions of the projects check the units 2, 4, 10, and 12 under BI Warmup, BI Project, ES Warmup, and ES Project. You can also check a sample of students' ES projects in the document sharing area for the course.*

See the grade determination table for the weights associated with each project and warm-up. Your ES warm-up project, for example, worth 5% and will be graded out of 5%.

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## Submission of Assignments / Projects

You should submit your projects / assignments **to Digital drop box** for the given project / assignment and not to the course document sharing area. **In no case you should submit your projects to me via an e-mail attachment. Such submissions will be deleted without grading.**

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## Communication with the Instructor

I am available regularly during the week via phone and email. I can do face-to-face meetings on campus. Simply get in touch with me to schedule. For urgent communication, for which you need an immediate personal response. contact me at [jahangir.karimi@cudenver.edu](mailto:jahangir.karimi@cudenver.edu) . This is my personal e-mail account and please use it with discretion. **Class assignments and questions should not be directed at this address.**

As a general policy, I will respond to phone calls and emails within 5 hours. Typically, I can respond to emails within in a hour. Face-to-face meetings can be scheduled by calling or emailing. You may call my number at any point. I work variable hours in my office, so there is no predictable time to reach me. Typically, I am in my office from 8 am to 4pm. **Because**

**this is an online course, it is up to each student to be sure to address questions, comments and concerns to me in a timely manner. Likewise, I will work to quickly answer your questions and ensure you have the information you need to be successful in this course!**

**All students are responsible for keeping all contact information up to date with the University. University policy is that email is the preferred form of contact. If you do not update your email address, you will be missing important information from the College.**

[helpdesk@cuonline.edu](mailto:helpdesk@cuonline.edu): For technical problems not directly related to the course content, such as inability to access the discussion boards, login problems, etc. The technology (servers, communication links, etc.) for CU-Online is managed by an independent company called eCollege.com, based in the Denver Tech Center, and the University or I have no control or jurisdiction over technology-related problems.

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**Announcements** We will use the course home page for announcements. I will also be sending more urgent announcements to the class via an email mailing list, and will be happy to answer any questions in the Q & A for each unit.

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**Important Dates** **Important Dates** Classes start on Jan 16 this year; final exam is on May 11. The last day to add courses, or drop courses with a tuition adjustment, is Jan 18. The last day for students to drop a course without petition and special approval from the Associate Dean is Jan 25. On May 22 grades will be available to students on S.M.A.R.T.

**IMPORTANT:** Work is due by 11:59 PM on the specified due date. Each new week starts on the following Saturday and runs through Friday.

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**Course Policies** **Examination Policy:** Make up exams are not typically given. The only acceptable excuses for missing an exam are circumstances clearly outside your control, such as illness, death in family, etc. If you miss an exam, notify me as soon as possible. I may require documentation of the circumstances.

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## Participation

The purpose of the threaded discussions is to learn from personal knowledge and/or experiences of each other. Active participation in the threaded discussion is an important component of this course. It is expected that you enrich the course through relevant discussions and contribution of personal knowledge and experience. You should read over comments made by others and respond to the comments rather than just repeating what was said. I encourage you to add value to the discussion by bringing a new perspective to what was said rather than simply repeating the points. Examples of acceptable discussion material are (1) your own interpretations of issues discussed in the readings, (2) relating conceptual material from the readings to real-world examples, (3) drawing parallels with or integrating ideas covered in previous classes, (4) critiquing a classmate's analysis, (5) applying outside readings to the discussion at hand, and (6) demonstrating that you have carefully read the material and thought about it. Evaluation of your participation will be based on substantive contribution to the class or group learning experience, and not merely on how many times you entered your comments.

The course schedule identifies the reading materials to be covered in each course unit. The threaded discussion is where you will have a lot of your interaction with your classmates and me. Think of it as an in-class discussion, only better.

- You don't have to worry about being interrupted.
- You can take as long as you want to come up with a witty reply and no one will know.

- You can hold up your end of the conversation at 3 AM if you want to.
- You have time to consult your sources.
- You can reply to as few or as many threads as you want, in any order, no matter how old or new they are.

In a typical threaded discussion for a unit, I will pose a topic for discussion or a series of topics and you as the student, can respond to the topics and/or respond to the other students' responses. You enter the threaded discussion by clicking on the respond button in the thread page. We will have both individual and small group discussions. Small discussion groups will be formed following the first couple of units. For each group discussions, each group needs to determine who will be group secretary to post the group's findings in the digital drop box for the case summary on a rotating basis.

**Your participation will be evaluated as follows:**

<b>Rubric for Online Content Assessment</b>	
<b>Points</b>	<b>Skills</b>
9-10	Demonstrates excellence in grasping key concepts; critiques the work of others; provides ample evidence of support for opinions; readily offers new interpretations of discussion material.
7-8	Shows evidence of understanding most of the major concepts; is able to agree or disagree when prompted; is skilled in basic level of support for opinions; offers an occasional divergent viewpoint.
5-6	Has mostly shallow grasp of the material; rarely takes a stand on issues; offers inadequate levels of support.
1-4	Shows no significant understanding of material.
<b>Rubric for Assessing Online Participation</b>	
<b>Points</b>	<b>Skills</b>
9-10	Contributions are prompt, timely, relevant, self-initiated; remarks are posted freely on all assignments throughout the course; there is no attempt to dominate conversation.
7-8	Student generally keeps up with the discussion; needs an occasional prompting to contribute; might participate in some discussions more than others.
5-6	Participation is spotty; picks and chooses topics to get involved in; offers short, perfunctory postings when prompted; takes limited initiative.
1-4	Student rarely participates freely; makes short, irrelevant remarks.

**Please note: Late threaded discussions will NOT be accepted. Each individual thread worth 10 points. Each small group threaded discussion worth up to 20 points.**

**For small group discussions, each member of the group needs to answer each question and build on the answers that have already been given.** The actual discussion should take place on small group discussion page. Case summary posting is done by the secretary for the group. Prior to posting and during a given week all the discussion should take place within the small group discussion page. The discussion for each group is viewable by the group members only.

**See rubrics above for assessing the threaded discussions. Occasionally extra credits up to 3 points are given for extra efforts.** The points will add up and as a whole will be counted as your threaded discussion percentage of your grade (20%).

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## Grading

**Policies** **Grade Determination:** Below is the weight given to each assignment and exam. Failure to participate in class discussions will negatively impact your grade. Your grade will be based on the following:

BI Warm-up:	5%
BI Project:	15%
ES Warm-up	5%
ES Project:	15%
Threaded Discussions	20%
Exam I:	20%
Exam II:	20%
Class Participation & Instructor's discretion	(+/-) 5%

Letter grades will be assigned using the following scale:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-
95%	90%	87%	83%	80%	77%	73%	70%	67%	63%	60%

At the discretion of the instructor, grades will be "curved." However, you will not receive a grade less than that prescribed by the above schedule.

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### Attendance / Work Completion Policy

You should expect to spend between 4-6 hours per unit on this course. This includes the time you will need to complete the readings, as well as any quiz or discussion work that week. Do not expect to succeed in this course if you do not allocate 4-6 hours a unit for this class!

**Late work: There will be absolutely no extensions to any deadlines.** Late work, with the exception for the threaded discussions, will be accepted up to one week following the scheduled due date. Late work is subject to a penalty of 10% of the maximum possible credit for the assignment.

**Completing assignments on time is critical to your success in the course!**

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### TEST Banks

You can use the test banks for quick "self-checks." Instead of having a graded quiz every week, this will give you a quick knowledge check that includes answers and explanations that would allow you to test your understanding of specific material at your own pace. Use the test bank only when you are ready to do so. You have to take the test and check the grade book for your score. Note: just the multiple choice questions are graded. For short essay questions you need to check the book for correct answers. Test banks before the midterm exam are open till the midterm exam date. The test banks after the midterm exam will be open till the final exam date. Test banks will help you in midterm and final exams. **The grades will not count in any way in your final grade computations.**

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### Etiquette and Conduct

As a University of Colorado at Denver student (or taking a UCD class) you are expected to abide by the University of Colorado at Denver Student Code of Conduct. The following is a link for the University of Colorado at Denver Student Code of Conduct:

<http://carbon.cudenver.edu/public/studlife/01pages/Codeofconduct.html>

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### Technical Requirements

Students are responsible for maintaining or accessing a computer system capable of participating in all aspects of this course. This includes, but is not limited to, running the eCollege software, running the

Tegrity streaming lectures, Real One player and Web browsing.

At this point, a Windows PC is required to access all of the course material. If you use a Macintosh or other system, you will need to find access to a PC to view the streaming course lectures. The other course content, including reading guides, quizzes and discussions should work fine without a PC.

While a broadband connection to the Internet is not required for this course *it is highly recommended that you access the course with a DSL or cable modem* Most of the materials for this course are available online. Many of these materials are large streaming media files. Access of this course over a dial-up connection may require significant waiting periods for download.

If for any reason you are having technical difficulties that are limiting or preventing your full participation in the class, please notify the instructor immediately! I will work with you to ensure that your online learning experience is not hampered by technical issues.

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### **Succeeding online**

Learning online is both a great educational opportunity and challenge. Although you can better schedule your course time around your needs, you also must take a greater responsibility for managing your time and getting work done. Not having to travel to campus is a great advantage (and saves on parking!) but you will find that not having a class means you have to do more written work since you cannot receive grades for class participation or attendance.

This course is structure with work every week and graded assignments due most weeks. The best way to succeed in this environment is to plan on doing weekly work to stay on top of the course load, and don't fall behind. I suggest you schedule at least 6 hours of time each unit to handle the course work. This equates to roughly 3 hours of "in-class" time and 3 hours of homework time for a 16 units typical course schedule.

Students who fall behind may find it very difficult to catch up. The best approach is to schedule the time and keep up with work. Saving study and assignment completion until Sunday evening is not typically the most successful approach.

Online classes promise to provide an excellent educational opportunity. But the ultimate success of the course sits on your shoulders.

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### **Academic Honesty**

**Scholastic Dishonesty:** Any time you put your name on a piece of work for this course, you are asserting that it is your own work, except as otherwise indicated and permitted. If that is not the case, it is academic dishonesty, and under Business School rules, I am required to submit the matter to the College Internal Affairs committee for a decision. Regarding plagiarism, the source of any information you use must be reported using an appropriate citation format. Direct quotations must be indicated with quotation marks and page references.

Academic honesty is everyone's responsibility--report instances of cheating.

You are expected to do you own work. All work submitted should include citations or other indications when other's work is included with your own. Representation of other's work as your own is considered cheating. This includes plagiarism, work purchased from "paper mills" and sharing of test answers.

If the instructor suspects cheating he may, at his discretion, provide an alternate or make-up assignment.

The instructor may make use of anti-cheating services to ensure that submitted work is original.

Finally, cheating diminishes the value of your learning. If you find yourself struggling in this course, please contact the instructor!

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**IW/IF Policy** According to college policy, in order to receive an IF or IW the following five items must have been completed or approved:

- Student must have completed at least 75% of the course with a passing grade and there must be compelling extraordinary verifiable circumstances beyond the student's control which made the completion of the course impossible.
  - Student must submit a copy of the syllabus and verification of reason (e.g., doctor's note, letter the dean explaining situation, etc.).
  - Form must be signed by faculty and have attached documents before being submitted to the Associate Dean.
  - Paperwork must be processed and approved by the dean before grades are assigned.
  - Student has one academic year to complete the work as noted by the instructor.
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**Other Policies** You must not produce inflammatory, profane, plagiarized or otherwise inappropriate material for this class. Failure to comply with this policy will result in an "F" for the semester and immediate dismissal from class. You may also face other repercussions from the Business School and the University of Colorado. When in doubt, ask the instructor.

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**Disability Services Information** To ensure disability-related concerns are properly addressed, students with disabilities who require assistance to participate in this class are expected to contact me as soon as possible. For further information regarding disability-related accommodations, please contact the Office of Disability Resources and Services, 177 Arts Building at 303.556.3450.

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**Family Educational Right and Privacy Act (FERPA)** FERPA was created to protect the privacy rights of the students. Due to the privacy restrictions, you will need to refer to your syllabus for each class for specific information regarding the collection and the return of student work.

For more information on FERPA please go to: <http://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html>

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