IIST636 - Systems Analysis in the Information Environment  
Course Syllabus - Spring 2017 – Fully Online (100%) – Asynchronous

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Detail</th>
<th>Page#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Description</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Prerequisite Courses</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Learning Outcomes</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Textbooks &amp; Readings</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Communication</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Course Requirements</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>HBS Case Analysis</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Team Project</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Discussions</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Assessment &amp; Grading</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>Delivery of Course Content</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Course Policies</td>
<td>9</td>
</tr>
<tr>
<td>13</td>
<td>University Policies</td>
<td>8</td>
</tr>
<tr>
<td>14</td>
<td>Course Calendar</td>
<td>10</td>
</tr>
</tbody>
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Contact Information:

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Dawit [David] Demissie</th>
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<tbody>
<tr>
<td>Office Location</td>
<td>Draper Hall, 140-D</td>
</tr>
<tr>
<td>Office hours</td>
<td>Friday, 2:00–3:30pm, by appointment (phone or email/Blackboard)</td>
</tr>
<tr>
<td>Telephone</td>
<td>518-421-5506; 518-442-5110</td>
</tr>
<tr>
<td>E-Mail</td>
<td><a href="mailto:ddemissie@albany.edu">ddemissie@albany.edu</a> * In most cases, I will return your emails &amp; calls within 12 hours</td>
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Course Information:

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<tr>
<th>Course / Semester</th>
<th>IIST636-Systems Analysis in the Information Environment, Spring 2017</th>
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<tbody>
<tr>
<td>Date/Time/Place</td>
<td>Online via <a href="https://blackboard.albany.edu/">https://blackboard.albany.edu/</a></td>
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<tr>
<td>Course webpage</td>
<td><a href="http://www.albany.edu/~dd536519/cs/s17/ist636/">http://www.albany.edu/~dd536519/cs/s17/ist636/</a></td>
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1. Course Description:

This course systematically describes the entire life cycle needed to create an information system, including aspects such as system architecture, requirements analysis, interface design, output design, and project management issues. This class focuses on both theory and methods of systems analysis as applied to information systems and services. It is intended to give students a solid foundation in information systems design and analysis using an object-oriented approach. This approach is widely accepted in the information industry and academic environments. The text integrates case studies to present and apply the concepts of the analysis of information systems most commonly used in business applications.

2. Prerequisite Courses:

- IIST611 or graduate standing.
- Good understanding of modern trends in business information analysis, in information technology, requirements analysis, database modeling, object-oriented principles and agility are a plus.
- Undergraduate software engineering provides a good foundation for success in this class.

3. Learning Outcomes:

The following key learning outcomes have been identified for this course. The course content, readings, discussions, and assignments have been specifically designed to help students successfully fulfill these outcomes. Upon successful completion of this course, students will be able to:

- Have a theoretical and conceptual understanding of systems analysis and design methods.
- Identify and apply major alternative methodologies used in developing information systems.
- Analyze and track issues that arise during systems analysis processes and develop an appropriate strategy to solve them and provide the required information service.
- Prepare and interpret a variety of system description documents, including physical and logical data flow diagrams, entity-relationship diagrams.
4. **Textbooks & Readings:**
   - Case Package: This package was specifically designed for this course and contains seven case studies. It is available through Harvard Business School Publishing at [http://cb.hbsp.harvard.edu/cb/access/11988198](http://cb.hbsp.harvard.edu/cb/access/11988198)

5. **Communication:**

   **E-mail** – Any email I write will be sent to your UA email address, which is the official email of the University. Any emails you send to me must be sent using your UA email. It is highly recommended that you access your UA email at least once daily.

   **Blackboard Messages** – Messages can be sent back and forth through Blackboard. Messages you receive will show up in the message box on the side panel in your course.

   **Forum on Blackboard** – I will use Blackboard to post announcements and provide general news.
   I have also created a forum for students to post current events relevant to the course. Unless noted elsewhere, contributions to this forum are voluntary.

   **Assignments** – There will be required assignments for this course. Unless indicated otherwise, submit your completed assignments via Blackboard. After grading your assignment, I will return it via Blackboard with comments and a grade.

   **Course Website** - The course website will be used to post lecture notes, cases and other relevant course materials. However, this is not an online course and all course materials will not necessarily be available online or in Blackboard.

6. **Course Requirements:**
   - **Mid-term Exam** - (20 points)
     We will have an in-class open book exam on the topics covered during the first part of the semester.
   - **Final Exam** - (20 points)
     We will have an in-class open book exam on the topics covered during the second part of the semester.
**HBS Case Analysis - (10 points)**

In preparing for class, read the case three times. The first reading should be a quick run-through of the text in the case. It should give you a feeling for what the case is about and the types of data it contains. During the case discussion, you should be prepared to share your thoughts on the real problems and issues of the case and present a persuasive summary of your recommendations. Be prepared to explain why you rejected any obvious alternative courses of action and provide vital facts supporting acceptance of your recommendation. Your goal is to convince the class that your recommendation is the best. However, a rigorous approach will consider both sides to every recommendation. You should be up-front about potential problems you might expect in implementing your recommendation.

Here is a useful framework for your case analysis:

- **Situation** – What is the company doing? Under what circumstances? With what results? Try to grasp the important facts and critical interrelationships.

- **Strategy** – What’s the current business and technology strategy (ies)? The strategy (ies) that you focus on will depend on the case. Is the current strategy appropriate given the situation?

- **Issues and Options** – What are the critical issues and associated options? For each issue you should have several options for addressing the issue or eliminating the problem.

- **Analysis** – The quality of your solution is a function of the effort expended here. Analyze each option. Perform both qualitative and quantitative analyses. After you perform your analyses the recommendations will be straightforward.

- **Recommendations**: What will you recommend? Be specific and demonstrate the benefits. What issues are resolved? How will it save or earn the company money?

- **Implementation** – How will you implement your recommendations? What’s going to happen? When? Who’s involved? What are the risks? How will you measure success?

**Team Project - (30 points)**

The final course project will be a group project demonstrating the use of the principals introduced in this course. Each group must choose one case, or any real or fictitious organization that uses information systems, and be able to demonstrate the use of several tools and applications introduced in this course. Podcast presentation of the completed project, including project artifacts, will be made to the class by the entire group.
Discussions- (15 points)
Each student is expected to participate in an online discussion. Positive participation means speaking so everyone can hear; asking appropriate questions; replying to questions, contributing ideas and participating in discussion without dominating it; and helping others. Positive participation creates a supportive learning environment in which other students feel comfortable asking questions and everyone contributes to the discussion.

Positive participation requires that students come prepared for class. This means distilling the terminology and major concepts of assigned readings; having points of personal interest in mind for discussion; having questions in mind for ideas that are unclear; knowing what the day’s topics will be and what assignments are due; and bringing appropriate texts, materials, and tools for the day’s class. Your participation grade (and your personal satisfaction) will be helped by contributions that make the class better for yourself and others. These include:

- Asking relevant questions
- Presenting alternative views to those raised by class readings, other students, or the instructor
- Comments that encourage other speakers
- Comments that clarify or summarize ongoing class discussion
- Contributions which demonstrate connections you see between material in this course and other experiences or courses you have had
- Asking questions of guest lecturers
- Being a good listener (participation does not have to be verbal; being alert and attentive is a positive contribution)

7. Assessment & Grading:
The first test and the final exam will cover the assigned book chapters and readings, as well as the material presented in class. The project and case discussions are team-based. The composition of the teams is left to the students in view of the problems of organizing team meetings outside class hours. Each team is expected to lead a case discussion at least once during the semester.

** The following grading scale will be used:**

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<th>Percent</th>
<th>Grade</th>
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<tbody>
<tr>
<td>98%-100%</td>
<td>A+</td>
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<tr>
<td>93%-97%</td>
<td>A</td>
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<tr>
<td>90%-92%</td>
<td>A-</td>
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<tr>
<td>88%-89%</td>
<td>B+</td>
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<td>83%-87%</td>
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<td>80%-82%</td>
<td>B-</td>
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<tr>
<td>Below 60%</td>
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<table>
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<th>Percent</th>
<th>Grade</th>
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<td>78%-79%</td>
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<td>73%-77%</td>
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<td>70%-72%</td>
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<tr>
<td>60%-62%</td>
<td>D-</td>
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<tr>
<td>Below 60%</td>
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8. Delivery of Course Content:
This course is organized by week (or topic). Each week (module) there will be an introduction to the topic. The format will vary and could include in-class lecture, text, audio, and/or video. This will be followed by readings, a discussion, and an assignment.

9. Course Policies:
   - **Course Changes**
     The instructor reserves the right to make changes to the course schedule, assignments or other course policies as necessary and with advance notice.

   - **Classroom Discussions**
     While debate is natural and healthy in an academic setting, disagreement (and agreement) should be done with respect and civility. Attacks of a personal nature or comments made that are offensive based on race, sex, religion, sexual orientation, age, national/regional origin, or other descriptors will not be tolerated.

   - **Attendance**
     Your in-class performance is a key to your success in this course. Attendance, itself, is not graded. Instead, graded in-class activities and assignments constitute an important part of the course grade. It is not possible to maintain a passing average without consistent attendance. Missing class means the student earns an automatic zero for the activities or assignments missed. Because of the nature of the assignments, no make-up opportunities will be available.

   - **Blackboard**
     If an assignment is to be submitted on Blackboard, then only submissions on Blackboard will be accepted --- email submissions will not be accepted except without suitable excuse. (“had difficulty” is not a suitable excuse.) If you fail to submit an assignment on Blackboard by the date it is due, then barring extenuating circumstances such as sickness or a death in the family you will receive a zero for that assignment.

   - **Tardiness**
     Missing an assignment or activity that happened before a student arrives or after a student leaves also earns a zero. No make-up opportunities will be available. If you know that it will be difficult for you to consistently get to class on time and stay for the entire period, you should take this course at a time that better fits your schedule. Missing or being late frequently will guarantee a low grade for the course.

   - **Make-up Policy**
     There are generally no make-up opportunities for missed assignments except in extenuating circumstances. Instead of asking to make up missed work, please see the course 'safety valves' described below. Since there will be occasions in your life when missing a class meeting is simply unavoidable, this course has a no-fault safety valve.
- **Late Homework**
  Homework is due on the due date, in class or submitted through Blackboard, depending on the assignment. Late individual assignments will be accepted, but at the cost of a full letter grade for missing the first, in-class deadline and an additional letter grade for each additional 24 hours late. In-class assignments may be done only on the days they are scheduled.

- **Extra Credit**
  There will be no extra credit work. All students will be expected to complete, and be graded on, the same set of assignments.

- **Withdrawal from the course**
  For the drop date please see academic calendar posted at http://www.albany.edu/registrar/academic_calendar.php

- **Incompletes**
  As per the Graduate Bulletin, the grade of Incomplete (I) will be given "only when the student has nearly completed the course requirements but because of circumstances beyond the student's control the work is not completed." A student granted an incomplete will make an agreement specifying what material must be made up, and a date for its completion. The incomplete will be converted to a normal grade on the agreed upon completion date based upon whatever material is submitted by that time. Incompletes will not be given to students who have not fulfilled their classwork obligations, and who, at the end of the semester, are looking to avoid failing the course. This is asking for special treatment.

- **Cell Phones & Laptops**
  Please make sure your electronic devices are turned off before entering the classroom unless we are doing a team exercise where they are helpful. Use of phones, tablets, computers, etc. for non-class purposes during class will count against you in your class participation grade. While you will be using laptops in class, texting, using Facebook, etc., are not appropriate uses of class time and your instructor-evaluated grade will suffer for it.

10. **Weather-Related Delays/Closings:**
- Information on weather-related College delays or closing will be listed on MyUAlbany Announcements and available on the following TV and radio stations:
  - **TV:** Channel 6, 9, 10, or 13
  - **Radio:** WGY (810 AM), WFLY (92.3), WYJB (95.5), WRVE (99.5)
  - **Phone:** (518) 422-SNOW

- **Other Cancellations**
  Although it is unlikely, there is always the possibility that a class session will need to be cancelled without advance notice. If this should happen, an email will be sent as soon as possible. A notice will also be posted on the classroom door.
11. University Policies:
Americans With Disabilities Act

The University is committed to providing equal access and responding to the needs of students with disabilities, as defined by the Americans with Disabilities Act. A student seeking academic adjustments under the Americans with Disabilities Act must register and provide documentation to the Director of Disabilities Services. Any student in need of classroom assistance or modification under the Americans with Disabilities Act must inform the instructor of the needed adjustment by first obtaining the necessary accommodation letters from the Director of Disabilities Services in order for reasonable accommodations to be provided. It is recommended that students do so at the onset of classes as reasonable prior notice needs to be given. The Disability Resource Center is located in the Campus Center 137, 1400 Washington Avenue Albany, NY 12222 and can be contacted via phone at (518) 442-5490.

Policy On Academic Honesty

Students are responsible for planning and completing their assignments. They are encouraged to invite peer review and comments; they should not collaborate on writing papers. In addition, the availability of relevant texts on the Web should not tempt students to "cut and paste" without attribution. Both of these practices are wrong-headed in any context and especially troublesome in a class that attempts to foster professional responsibility. University rules are quite strict and can be found at http://www.albany.edu/undergraduate_bulletin/regulations.html. Any student caught violating these norms will receive a failing grade for the course.

For guidance in proper referencing of sources, as well as how to avoid plagiarism, consult the most recent editions of the following works, which are available in the reference section of the libraries on the Troy and Albany campus.


Religious Observance

The University recognizes the value of participation in and observance of religious obligations and practices by individual students. No student will be penalized because a religious observance prevents participation in any course requirement. An opportunity will be provided for each student to make any requirement missed for an absence due to religious observance. A student who intends to be absent from classes for a religious observance must notify each instructor in advance and make arrangements to cover
missed course materials and to complete the course requirement(s) missed. The University reserves the right to confirm the existence of the observance through an interfaith calendar.
# 12. Course Calendar:

<table>
<thead>
<tr>
<th>Module/Date</th>
<th>Lecture/Activity/Discussion</th>
<th>Kendalls</th>
<th>Satzinger et al</th>
<th>HBS Cases</th>
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| **Module 1** | - Course logistics, introduction.  
- Group Assignments/Course Project: Team formed initial topic discussion.  
- Systems, Roles, & Development Methodologies  
- Discussion: “No Silver Bullet” (Fred Brooks, 1986)  
- Reading: 2nd reading assigned | Chapter 1 | Chapter 1 | **SYSTEMS ANALYSIS FUNDAMENTALS** |
| **Module 2** | - Understanding & Modeling Organizational Systems  
- **Project meetings**  
- Reading: 3rd reading assigned | Chapter 2 | Chapter 2 | |
| **Module 3** | - Information Gathering: Unobtrusive Methods  
- Information Gathering: Interactive Methods  
- Project meetings  
- Reading: 4th reading assigned | Chapter 4 & 5 | Chapter 3, 4 & 6 | **INFORMATION REQUIREMENTS ANALYSIS** |
| **Module 4** | - Project Management  
- Project meetings  
- Reading: 5th reading assigned | Chapter 2 | | |
| **Module 5** | - Agile Modeling & Prototyping  
- Project meetings  
- Reading: 6th reading assigned | Chapter 6 | Chapter | **THE ANALYSIS PROCESS** |
| **Module 6** | - Using Data Flow Diagrams  
- Analyzing Systems Using Data Dictionaries (Mid-term Exam, via Blackboard)  
- Reading: 7th reading assigned | Chapter 7 & 8 | | **THE ESSENTIALS OF DESIGN** |
| **Spring Break** | | | | |
| **Module 7** | - Process Specifications & Structured Decisions  
- Object-Oriented Systems Analysis & Design Using UML  
- Project meetings  
- Reading: 8th reading assigned | Chapter 9 & 10 | Chapter 10 & 11 |
| **Module 8** | - Designing Effective Output  
- Designing Effective Input  
- Project meetings  
- Reading: 9th reading assigned | Chapter 11 & 12 | | |
| **Module 9** | - Designing Databases  
- Project meetings | Chapter 13 & 14 | Chapter 12 | |
<table>
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<tr>
<th>Module</th>
<th>Reading &amp; Topics</th>
<th>Chapter</th>
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<tr>
<td>Module 10</td>
<td>- Human-Computer Interaction</td>
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<td></td>
<td>- Project meetings</td>
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<td>Module 11</td>
<td>- Designing Accurate Data Entry Procedures</td>
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<td>- Project meetings</td>
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<td>Module 12</td>
<td>Quality Assurance &amp; Implementation</td>
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<td>- Project meetings</td>
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<td>Group Project Presentations</td>
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<td>** Final Exam</td>
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Note: topics and dates (but not the test or project) are subject to change. All necessary changes will be announced in class.

### Harvard Business School (HBS) Cases:
- **HBS Case #1**: CMM Versus Agile: Methodology Wars in Software Development
- **HBS Case #2**: Cisco Systems Inc.: Implementing ERP
- **HBS Case #3**: Keda's SAP Implantation
- **HBS Case #4**: IBM Canada Ltd.: Implementing Global Strategy
- **HBS Case #5**: Red Hat Global Support Services: The Move to Relationship-based Customer Servicing and Knowledge Centered Support
- **HBS Case #6**: ERP Software- Ongoing Maintenance Cost Benefit Analysis
- **HBS Case #7**: Web Services and Systems Integration Supplementary
- **HBS Case #8**: F-Secure Corporation: Software as a Service (SaaS) in the Security Solutions Market