The University of North Carolina at Greensboro  
The Bryan School of Business and Economics  
Department of Information Systems and Operations Management

ISM 301 SYSTEMS ANALYSIS

<table>
<thead>
<tr>
<th>Instructors:</th>
<th>Rahul Singh, PhD</th>
<th>Office: Bryan Room 481</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email:</td>
<td><a href="mailto:rahul@uncg.edu">rahul@uncg.edu</a></td>
<td>(email is my preferred method of communication)</td>
</tr>
</tbody>
</table>
| Office Hours:| Tuesday 11:00 am to 2:00 pm; Wednesday 11:00 am to 1:00 pm  
Other times by appointment |

Course Web Site:
The course is hosted on Canvas – http://canvas.uncg.edu. Please choose the appropriate course after you login.

Required Materials:

Note: The book has a sixth, seventh and eighth edition. Any of these editions will work for the class. Should you be able to find an older edition of the text at a cheaper price, don’t hesitate to buy it.

(We will not be using the supplemental materials or discs included with the book, should yours be missing.)

Additional readings will be given in class and/or posted on Canvas.

Software:
We will need a diagramming tool for you to develop the analysis and design models. I recommend that if you intend to use your own computer, you should get and install Visio. It is available as a free download to ISSCM students through the MSDN Academic Alliance(MSDNAA). Instructions to help you access MSDNAA are posted on Canvas.

Also, students can obtain Visio and other related Microsoft software through the university’s academic alliance program with Microsoft available at: https://its.uncg.edu/Software/Available/Microsoft/ and information on office 365 specifically is here: https://its.uncg.edu/office365/

You can get information about Microsoft and other related software at: https://its.uncg.edu/software/available/windows/

All UNCG software is available as a virtual computer for you at: https://mycloud.uncg.edu

Alternatively, you are welcome to use diagramming software freely available over the web, such as Gliffy (https://www.gliffy.com/) or Lucid Chart (https://www.lucidchart.com/).

Other Suggested Readings:
• Martin, J., and Odell, J., Object-Oriented Analysis and Design, Englewood Cliffs, NJ:
Course Description:
Systems Analysis is concerned with the mechanisms for creating conceptual blueprints of systems that support management strategies and enable business processes. This area of study encompasses technical, economic, social, organizational, and political elements. ISM 301 Systems Analysis will help students understand and appreciate system and process concepts such as system boundaries, automation boundaries, feasibility assessments, performance measures, information modeling, process re-engineering, systems quality, and value-added processes through information systems. Students will acquire the knowledge and skills necessary to collect data, analyze the data and create knowledge, and use analysis methodologies and tools to formalize their blueprints. The course emphasizes the skills necessary to "ask the right questions", analyze systems and process information requirements, model systems requirements using standard systems methodologies and techniques, and communicate resultant analyses to others using well-understood conceptual representations.

ISM 301 takes a pragmatic approach to demonstrate the role of systems analysis grounded in Satzinger’s object oriented analysis. More recent technologies such as computer-aided software engineering (CASE), reengineering, prototyping, JAD/JAR, Project Management, PC-based and client/server tools, and fourth-generation languages will also be examined.

Relationship to Other Courses:
You will discover that systems analysis embodies technical, economic, social, organizational, and political components. As such, the course bridges the skills and knowledge you've acquired in many other courses within and outside the ISOM department. Students will see the relationships between topics covered in their database class and topics covered in programming classes. In addition the course content links topics from courses in business processes, operations management, economics, and statistics and other business fields. Whatever your background or interest in IS, remember that all parties must recognize, understand, and manage competing viewpoints for successful projects.

OBJECTIVES: ISM 301 aims to develop the following knowledge and skill sets:

<table>
<thead>
<tr>
<th>KNOWLEDGE SETS</th>
<th>SKILLS SETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Business and Strategic Information Systems</td>
<td>1. Produce Process and Data Models</td>
</tr>
<tr>
<td>2. Automated Business Processes</td>
<td>2. Data Gathering Techniques</td>
</tr>
<tr>
<td>3. Request for Proposals, Procurement Processes</td>
<td>3. Produce Data Models</td>
</tr>
<tr>
<td>4. Requirements Analysis</td>
<td>4. Produce USE Case Diagrams</td>
</tr>
<tr>
<td>5. The Nature of Problem-Solving</td>
<td>5. Produce Structural Models</td>
</tr>
<tr>
<td>6. Analysis Methodologies</td>
<td>6. Presentation Skills (verbal and written)</td>
</tr>
</tbody>
</table>

Instructional Methodology: Lecture, readings, class discussion, and web-based content.

Academic Integrity Policy:
All students are required to follow the UNCG Academic Integrity Policy in completing course work. If you do not know provisions of the Honor Policy, make time to study it.

Emergencies:
Hopefully, none of you will encounter an emergency this semester. If you do encounter a situation that prevents you from fulfilling your responsibilities, please contact me as soon as possible. In inclement conditions, use your best judgment when deciding to attend class. I will be here unless UNCG cancels classes! If in doubt, you should call 334-4400 to inquire about UNCG closings or postponements.

**Study Groups:**
I strongly recommend that students form study groups of about three or four persons early in the semester. While in your group, quiz each other to explain and give examples of topics we discuss in class. Some of the material we cover will seem "obvious" but, in fact, is much more complicated than it appears.

**Performance Evaluation:**
ISM 301 course grades will be determined by the combination of individual assignments, quizzes, in-class tests, article presentation and one major group project.

<table>
<thead>
<tr>
<th>Class exercises and Class Participation</th>
<th>10 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>10 %</td>
</tr>
<tr>
<td>Midterm</td>
<td>20 %</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35 %</td>
</tr>
<tr>
<td>Group Project</td>
<td>25 %</td>
</tr>
</tbody>
</table>

**Class Exercises and Participation (10 %):**
Students will be required to contribute to class discussion and to present review and analysis of current research on technical and business aspects of information systems.

**Quizzes and Assignments (10 %):**
In-class quizzes may be in the format of multiple choice, and short conceptual questions. Questions will be derived from the text, other distributed articles, class discussions, Web discussions, videos, and/or guest lectures. Many questions will be drawn from in-class discussion, placing extra emphasis on the importance of attendance and attentiveness. History indicates that there is a strong correlation between students reading their chapters prior to class discussion and effective test performance. Quizzes will assess your knowledge of concepts and terms. If a student is late for a test, they will be given only the time remaining to complete the quiz. No make-up quizzes will be offered, but in cases of documented absence, make-up work will be assigned. There will be five individual assignments intended to help you develop higher-level understanding of major concepts.

**Midterm and Final Exams (55%):**
Examinations will cover multiple topics covered in class on systems analysis concepts and will be designed to evaluate students’ understanding of systems analysis, requirements specification and systems modeling concepts. Exam questions will be derived from the course text, other articles, class lectures and in-class discussions.

Please note the exam dates. It takes considerable effort on my part to create another exam (i.e. makeup). Only in extreme emergency cases will makeup exams be given. Any absence needs to be documented. Likewise, if you miss classes on group presentations your individual grades will be affected. You will be graded on individual presentation skills and hence any presentation requires all members of the group to present in class.

**Group Project (25%):**
Project teams from ISM 301 will develop complete systems analysis documentation for a real business problem based on systems requirement information. This project will require students to utilize all the skills learned in the class using object-oriented analysis methodologies. The final deliverable for the group project includes requirements specifications, object-oriented analysis documentation and documentation from the student groups that asserts how their analysis solves the business problem identified. Students
submit a final report in written format and present their analysis in a role-playing format where the class assumes the role of the client. Presentations will be made to your peers in the sister section of ISM 301, rather than to your own classmates. Your peers in the other section will vote by secret ballot to select the best project. Whichever team garners the best peer evaluation in these projects will earn an A as their team project grade (one team from each section of the course). Much of your group project will be completed in class. Therefore, attendance is critical and poor attendance will negatively impact your individual project grade. Starting in the 5th week of class, teams will randomly be asked to give status reports of their project as part of their grade.

Teamwork:

One of the critical skills required in business is teamwork. It is important that teams are able to manage themselves to accomplish shared goals. In the most effective teams, interactions are managed between ALL team members rather than between any two members. To facilitate healthy team interaction, teams are encouraged to take this collective approach to managing team member expectations and within-team conflict. Teams should strive to be democratic and fair-minded, rather than allow unilateral decision-making.

Teams in this course are required to complete and turn-in minutes from each weekly team meetings. A template has been placed in the course documents section of Canvas which should be used for this purpose. Team minutes are intended to help establish agreed upon expectations among team members, to assign responsibility for various deliverables, and to document the degree to which members meet agreed upon goals. Each team member plays a pivotal role in the outcome of the team. Therefore attendance, effort, quality of work, and participation are critical components in team members contributing their fair share within the team. Team minutes for all meetings are due no later than Tuesday of the week following that meeting, and must be signed by all members attending the meeting.

One problem that occasionally plagues teams is free-riders; team members who exploit the work of others while contributing little themselves. As this course is partially project-based, free-riding should not be tolerated. In the case that all other members of a team agree that one member is habitually failing to contribute their fair share, teams can move to fire that member from the team. Justification for this decision must be based on failure to participate in scheduled team meetings, missed deadlines for scheduled deliverables, poor quality work, of inadequate effort leading to poor team performance. This decision must be justified by the team minutes and represent the consensus of the entire team. Fired members will receive no credit for subsequent project work by their team. The issues leading to firing a team member will be apparent in the minutes of the team, and should be discussed with the instructor prior to the team taking action.

Note on Grading: Group project grades will not be counted if other (individual) grades are not at least at the C level.

Extra Credit:

Information systems research is ongoing at UNCG. Occasionally, students might be offered the opportunity to participate in this research by completing brief a survey or sitting for an interview. If such opportunity should arise, students who wish to participate will be offered a small amount of extra credit (typically 1 point toward the final course grade). Students who wish NOT to participate will be offered an alternative assignment requiring similar effort to receive the same amount of extra credit.

The final grade is then determined using the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>97 – 100%</td>
</tr>
<tr>
<td>A</td>
<td>94 – 96.9%</td>
</tr>
<tr>
<td>A-</td>
<td>90 – 93.9%</td>
</tr>
<tr>
<td>B+</td>
<td>87 – 89.9%</td>
</tr>
<tr>
<td>B</td>
<td>83 – 86.9%</td>
</tr>
<tr>
<td>B-</td>
<td>80 – 82.9%</td>
</tr>
<tr>
<td>C+</td>
<td>77 – 79.9%</td>
</tr>
<tr>
<td>C</td>
<td>73 – 76.9%</td>
</tr>
<tr>
<td>C-</td>
<td>70 – 72.9%</td>
</tr>
<tr>
<td>D+</td>
<td>67 – 69.9%</td>
</tr>
<tr>
<td>D</td>
<td>65 – 66.9%</td>
</tr>
<tr>
<td>F</td>
<td>0 – 64.9%</td>
</tr>
</tbody>
</table>

Keep a record of all points possible and earned on each. This will make it easy for you to determine your exact grade status throughout the course. They may also be needed to resolve any discrepancies in your record.
Class Expectations:
The last page of the syllabus explains what you can expect of me and what I expect of you. Please review this page carefully and discuss with me any questions or concerns you have. My goal is to provide a professional course where you may learn productively and effectively. Specific expectations follow:

1. You are expected to attend class. Professional behavior and attendance is expected in the profession you are training to enter. You are responsible for all information, announcements, and course material presented in class. ISM 301 is a pivotal class in the study of Information Systems and class sessions will rely heavily on examples and discussion not covered in the textbook. Should you miss a class for any reason, it is your responsibility to discover that which you missed from your classmates. Students are expected to be present at the beginning of class and remain in class for the entire period. The instructor should be notified before class for special circumstances.

2. The reading assignments for each class session are provided. You are expected to complete the readings before coming to class. Students should be prepared to discuss the contents of the readings in class.

3. Each UNCG student has been assigned a computer account and it is assumed that students know how to access and use email. Students are expected to check Email regularly and know how to use a Canvas. Requirements for assignments and various soft-copy documents may be distributed electronically via Canvas.

4. Due dates for assignments will be announced in class and will be adhered to.

5. The ISOM Department has approved a policy NOT to post grades (on doors!!!). Furthermore, students are requested NOT to call the department office for grades. However, the Registrar's Office at UNCG has developed a phone-based system for the distribution of final grades.

6. Students are expected to follow the policies of the UNCG Academic Honor Code. Individual assignments are to be completed on an individual basis. Sharing of ideas is encouraged but the actual work that is submitted is to be the student's own. You must formally indicate on all deliverables that you have abided by the Academic Honor Code.

COURSE CONTENT and PERSPECTIVES

Oral & Written Communications Content:
Much of ISM 301 is spent looking at the theory of analysis from a hands-on practitioner perspective. Students are expected to attend class prepared to think and communicate their thought process. Analysis questions frequently do not have only one correct answer so students should be prepared to defend the conclusions they reach! Students may be required to participate in web-based threaded discussions of questions or issues that are distributed by the instructor. Effective written communication is stressed through written assignments, web discussions, e-mail communications, and short essays on tests and the final case study. Since this class teaches professional analysis behaviors, it is expected that all communications are prepared and presented professionally.

Technology Applications:
Discussion of information technology is a major component of the course and, although this class is not a programming class, technology is used as a tool in ISM 301. Knowledge of graphics diagramming software, a spreadsheet, and a word processor is assumed.

Ethical Perspectives:
The importance of ethical considerations in the management and use of technology by business will be addressed because systems analysts frequently must use their professional judgment to make difficult decisions. Specific ethical issues such as software piracy, confidentiality of data and databases, software licensing and copyright protection (among others) may be discussed. Other ethical issue discussions may relate to uses of the Internet, e-mail, threaded discussion groups, groupware, and other electronic tools.
Global Perspectives:
Although globalization of IT is an emerging topic, global aspects of business and technology are not (or are only superficially) covered in this introduction course.

Demographic Diversity Perspectives:
Many information systems deal with and about an increasingly diverse workplace. Many exercises within analysis deal with breaking myths and get to core values and core "truths" about systems and the people that make them work. A by-product of this course is to learn how to triangulate and respect perspectives that may be different than our own.

Political, Social, Legal, Regulatory, and Environmental Perspectives:
Coverage of political, social, regulatory, and environmental perspectives is limited to the context of business issues in general and newsworthy developments that are both business-related and technology related (which may be considerable this semester).
Statement of Students' Rights and Responsibilities

As a student in my class you have explicit rights and responsibilities. Your full understanding and acceptance of the following rights and responsibilities can lead to more effective learning and more productive use of our class time.

You have the right to expect:
1. Your professor to be prepared for each class, to start class promptly at the designated time and to end class at the designated time.
2. Your professor to teach all scheduled classes or arrange for a qualified substitute if it is necessary to miss class because of illness or University approved commitments.
3. Clear statements of course expectations, policies, testing and grading practices.
4. Your professor to hold a reasonable number of office hours to discuss assignments or to assist you with course matters.
5. Knowledgeable assistance from your professor regarding assignments and course content.
6. Professional behaviors reflecting equitable treatment, ethical practices and respect for your rights.
7. Opportunities to challenge ideas and defend your beliefs in a professional manner.
8. To be challenged to grow both academically and professionally.
9. Information regarding career opportunities related to ISM and other business programs.
10. Your professor to abide by University policies.
11. Fairness and clarity in evaluation of your performance.
12. Adequate opportunity to appeal any perceived violations of the above rights.

You have specific responsibilities to:
1. Plan your study and work schedule appropriately to allow sufficient time to do quality class work. (Please review "Suggested Academic Workload Guidelines" for the Bryan School of Business and Economics published in the UNCG Undergraduate Bulletin.) I suggest you devote at least 3.0 hours per class period to this class.
2. Arrive at each class on time and prepared to discuss assigned readings and participate in discussions.
3. Complete assignments by dates due and submit quality work.
4. Understand and follow course policies as explained in class and in the syllabus.
5. Conduct yourself to grow both academically and professionally.
6. Work effectively and cooperatively as a team member on group projects if so assigned.
7. Practice ethical behaviors and display respect for rights of others.
8. Contact your instructor and discuss circumstances which may prevent acceptable performance and to make such contact on a timely basis.
9. Fully understand & abide by UNCG Academic Integrity Policy and other policies related to student conduct.