Algoma University
School of Computer Science & IT

COSC 2296
SYSTEMS ANALYSIS & ANALYTICS FOR PROJECT MANAGEMENT

Winter 2023

1. Instructor Information

Instructor: Dr. Mahreen Nasir
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Note: Only email originating from a valid Algoma university student account will be accepted from students wishing to contact the instructor. Please include your full name, student ID and related course section in your correspondence. Do not spam with multiple or lengthy emails. Kindly expect a maximum of 48 hrs response time (excluding weekends).

2. Course Information

Course Calendar Description:

This course aims to introduce and develop student's analysis skills. It Identifies the various systems development methodologies and how they are utilized in today's world. The course introduces the various roles in systems development, particularly the project managers. The student will review discovery techniques as part of the solution development process for various types of problems, as well as, the various artefacts that an analyst would produce.

Method of Instruction:

- Online Asynchronous Content Delivery and Quizzes
- Online Synchronous Midterm and Final Exams

Learning Outcomes:

By the end of this course, students will be able to:

1. Define a system, describe its' components, and identify its' purpose.
2. Demonstrate the importance of system analysis in deploying effective systems by identifying the costs and impacts of inadequate analysis.
3. Compare and contrast at least 2 frameworks for describing how system analysis fits into the system development process.
4. Provide a detailed description of a systems development project identifying the product

5. (deliverables), the people involved, the process followed and the technological and business factors that are driving the development.
6. Describe at least 3 different system development processes (SDP's) (and understand the distinction between an SDP and the system life cycle (SLC).
7. Describe how system analysis contributes to the development of effective project management, quality management and configuration management plans for a system development project.
8. Describe models and strategies for improving the quality of information systems and identify how improving systems analysis improves quality in the system development project deliverables.
9. Describe the various roles that people play in deploying information systems with emphasis on the role of a system analyst.
10. Apply the knowledge of system development roles to describe the interactions between the systems analyst and other people involved at various stages of the development of systems development in the context of a specific real-world case or scenario.
11. Describe the methods and techniques used in systems analysis including problem solving methods, fact finding techniques for requirements discovery, use case modeling, data modeling, process modeling and object modeling.
12. Describe computer-based tools available to help the systems analyst perform various systems analysis tasks.
13. Apply the understanding of systems analysis techniques and tools to develop system requirements and models of system behavior for a real-life case or scenario.
14. Describe the activities of feasibility analysis and the content of a system proposal.
15. Understand the analytics space and what is involved to develop analytic systems

Required Textbook(s):

1. Modern Systems Analysis and Design, 9th Edition, Joseph S Valacich & Joey F. George, 2020 Pearson
2. Systems Analysis and Design, 10th Edition, Kenneth E. Kendall & Julie E Kendall, 2019 Pearson
3. Data Analytics in Project Management, 1st Edition, Seweryn Spalek, 2019 CRC

Additional Readings: Will be made available on Course site on Moodle

3. Course Requirements and Assessment

Information on course requirements and assessments.

Assessment	Date of Evaluation (if known)	Weighting
Tests/Quizes (5 * 8%)		40%
Mid term Exam	See Tentative Schedule below	25%
Final Exam	See Tentative Schedule below	35%
Total		100%

Final Exam:

The final exam will be comprehensive, covering all material in the course. It will contribute 35% towards your final grade.
The Final Examination Policy can be found at:
https://algomau.ca/wp-content/uploads/2018/10/Final-Examination-Policy.pdf

Missed Tests and Exams:

Make up examinations for mid term and final term will ***not*** be conducted.

The Final Examination Policy can be found at:
http://algomau.ca/media/styleassets/pdf/final_examination_policy.pdf

4. Class Schedule (Tentative)

Week	Date (Tentative)* and subject to change	Topic, activity, assignment, etc.	Textbook Chapter or Readings
1	Jan., 9-13	Review of course outline, Structure and Policies	
		Module 1 - The Systems Development Environment	**Chapter 1**
2	Jan., 16-20	**Module 2 - Managing the Information Systems Project** Quiz-1	**Chapter 3**
3	Jan., 23-27	**Module 3 - Identifying and Selecting Systems Development Projects**	**Chapter 4**
4	Jan., 30-Feb., 3rd	**Module 4 – Initiating and Planning Systems Development Projects** Quiz-2	**Chapter 5**
5	Feb., 6-10	**Module 5 – Determining Systems Requirements**	**Chapter 6**
6	Feb., 13-17	**Module 6 – Structuring Systems Process Requirements** Quiz-3	**Chapter 7**
7	Feb., 20-24	Reading Week (No Classes)	
8	Feb., 27-March 3rd	**Module 7 - Determining Systems Requirements**	**Chapter 8**
9	March 6-10	**Module 8 - Structuring Systems Data Requirements** Quiz-4	**Topics & Content from other recommended readings**
10	March 13-17	**Module 9 - Introduction to analytics**	
12	March 20-24	**Module 10 – Data analysis and algorithms** Quiz-5	
12	March 27-31	**Module 11 – Case study of a Data Analytics Project**	
13	April 3-7	**Module 12 – Testing Methodologies and Approaches**	
	TBA	Final Exam	

5. Important Dates:

Jan., 9: First day of classes

Jan., 18: Last day for registration or course changes permitted for 23W courses

Feb., 20-24: Winter Study Week

March 3: Last day to withdraw from 23W courses without academic penalty.

April 6: Last day of classes for 23W courses; 22FW courses recess

Academic Dishonesty:

The University takes a very serious view of such offences as plagiarism, cheating, and impersonation. Penalties for dealing with such offences will be strictly enforced.

The following web site contains a complete policy statement on academic dishonesty and attendance. Students are encouraged to read this policy for further clarification of these issues:
http://algomau.ca/media/styleassets/pdf/disciplinary_regulations_on_academic_dishonesty.pdf

Attendance Policy:
The general regulations of the University require punctual and regular attendance at the various academic exercises. If there are extenuating circumstances related to an absence, the instructor should be notified. Absences in excess of 20% may jeopardize receipt of credit for the course.

Disability Accommodation:

If you are a student with a physical, learning, and/or psychological disability and plan to request any academic accommodations for this class, you are required to bring in an authorization letter from Disability Services listing the permitted accommodations. I will work with you to arrange your accommodations from the point in time that you deliver and discuss such an authorization letter with me. The Coordinator of Disability Services will keep your disability documentation confidential. Contact information is as follows: Coordinator of Disability Services 705-949-2301 ext. 4221; learning@algomau.ca