CANADORE
college

COURSE NAME:	ITM120 Fundamentals of Systems Development Life Cycle (SDLC)

Credit Value: 3
Total Course Hours: 42
Prerequisite Course(s): None
Corequisite Course(s): None

COURSE DESCRIPTION

Managing a modern systems development life cycle (SDLC) project requires a thorough understanding of the various roles that must come together in order to create a successful application. This understanding begins by recognizing the need to work within a multidisciplinary environment. Knowing which tool or technique to use in any particular situation is the key to success. This course will give students the knowledge they need to help them choose the methods, tools, and artifacts so that they can quickly and efficiently take their SDLC project from concept to working implementation.

PLAR INFORMATION

This course is eligible for Prior Learning Assessment and Recognition. Students are advised to discuss options with their program coordinator.

COURSE LEARNING OUTCOMES

Upon completion of this course, the student will have reliably demonstrated the ability to:

1.0 Compare various software development life cycle models.

    1.1 Describe SDLC models.

    1.2 Analyze the strengths and weaknesses of Traditional vs. Iterative vs. Agile (e.g., XP, Scrum) life cycle models.

    1.3 Map project management processes to SDLC.

2.0 Create a software development project plan.

    2.1 Describe how to obtain initial top-down estimates and realistic bottom-up estimates.

    2.2 Identify tasks and phases using a Work Breakdown Schedule (WBS).

    2.3 Sequence tasks into a network diagram.

    2.4 Construct Gantt charts to assess resource needs.

    2.5 Identify methodology for testing the project plan.

    2.6 Identify how to assess the project using risk management.

    2.7 Describe an effective approach to sell the project plan to stakeholders.

3.0 Characterize the software development process.

3.1 Analyze how the SDLC drives deliverables.

3.2 Identify common pressure point to expect at each stage.

3.3 State the major stages of the software development process and how they relate.

3.4 Determine the working practices in traditional, iterative and Agile developments that offer the greatest impact.

4.0 Explain methods for building successful teams.

    4.1 Describe ways to promote collaborative work among technical teams.

    4.2 Identify strategies for engaging and empowering the team in the planning process.

    4.3 Describe the stages of effective management of team development.

5.0 Explain controls required for tracking, change, risk management.

    5.1 Describe strategies to measure software progress.

    5.2 State the principles of change control.

    5.3 Describe ways in which risk can be identified and mitigated in the SDLC process.

6.0 Explain the necessary steps to effectively close the SDLC project - close project and close

procurement.

    6.1 Describe the elements of project closure.

    6.2 Describe the elements of procurement closure. Sharpening your project management skills.

    6.3 Discuss approaches to Influence the continuous improvement process of an organization.

GENERAL EDUCATION

This is not a General Education course.

ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES

This course contributes to the following Ministry of Colleges and Universities approved essential employability skills (EES) outcomes:

1. Communicate clearly, concisely, and correctly in the written, spoken, and visual form that fulfils the purpose and meets the needs of the audience.

2. Respond to written, spoken, or visual messages in a manner that ensures effective communication

3. Execute mathematical operations accurately

4. Apply a systematic approach to solve problems

5. Use a variety of thinking skills to anticipate and solve problems

6. Locate, select, organize, and document information using appropriate technology and information systems.

7. Analyse, evaluate, and apply relevant information from a variety of sources.

8. Show respect for the diverse opinions, values, belief systems, and contributions of others

9. Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.

10. Manage the use of time and other resources to complete projects.

11. Take responsibility for one's own actions, decisions, and consequences.

EXTERNAL COURSE ACCREDITATIONS AND CONDITIONS

COURSE EVALUATION

Quizzes - 5%

Tests - 40%

Assignments - 20%

Final Exam - 35%

TOTAL - 100%

PROGRAM SPECIFIC GRADING

A minimum grade of 50% is required to pass this course.

GRADING SYSTEM

A+:	90-100%	B+:	77-79%	C+:	65-69%	D:	50-54%	S - Satisfactory
A:	85-89%	B:	73-76%	C:	60-64%	F:	0-49%	I - Incomplete
A-:	80-84%	B-:	70-72%	D+:	55-59%			F- Repeat Course, included in GPA
								FS- Failure Supplemental
								FR- Repeat course, excluded from GPA

*For a complete chart of grades and descriptions, please see the Grading Policy.

LEARNING RESOURCES

Other Resources:

All course materials or online links to course materials will be provided during the course.

Students are not required to purchase the following resources which provide additional reference to the course materials:

-- Lean-Agile Software Development ISBN13 - 9780321532893

-- Introduction to Software Project Management ISBN13 - 9781466559530

-- Software Extension to PMBOK Guide (PMI)

Resources listed on the course outline support the achievement of learning outcomes, and may be used throughout the course to varying degrees depending on the instructor's teaching methodology and the nature of the resource.

LEARNING ACTIVITIES

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DELIVERY MODE

This course may be delivered, in whole or in part, in a number of modalities, including in class, online, hybrid, in a synchronous or asynchronous manner or a combination thereof, as per accreditation and/or regulatory standards where appropriate.

ACADEMIC POLICIES

Canadore College is committed to the highest standards of academic integrity, and expects students to adhere to these standards as part of the learning process in all environments. The College's Academic Integrity policy seeks to ensure that all students understand their rights and responsibilities in upholding academic integrity and that students receive an accurate and fair assessment of their work. Please review the Academic Integrity policy (A-18) and other academic policies found on our website: https://www.canadorecollege.ca/about/policies.

COLLEGE POLICIES

- Protecting human rights in support of a respectful college community

For college policies please see: http://www.canadorecollege.ca/about-us/college-policies.

STUDENT SUCCESS SERVICES - Your Success Matters!

Student Success Services provides student-focused services to facilitate students' success in their studies. Staff provide support by reducing and/or removing educational–related barriers through individualized accommodations and supports to students with disabilities.

Please visit our webpage to learn more: https://www.canadorecollege.ca/support/student-success-services or look for our events on social media.

To connect with Student Success Services email studentsuccessnow@canadorecollege.ca or call 705.474.7600 ext 5205.

FIRST PEOPLES' CENTRE:

A culturally safe environment offering CONFIDENTIAL student focused services, drop in or make an appointment to access:

- One on one counselling
- Elder in residence program
- Peer tutoring
- Peer mentorship
- Lunch & learn workshops on study skills, self-care, life skills
- Learning Resource Centre

Drop by our offices at C254 College Drive, E101 Commerce Court or call 705 474 7600 Ext. 5961 College Drive / 5647 Commerce Court.

https://www.canadorecollege.ca/experience/indigenous-student-experience

WAIVER OF RESPONSIBILITY

Every attempt is made to ensure the accuracy of this information as of the date of publication. The college reserves the right to modify, change, add, or delete content.

HISTORICAL COURSE OUTLINES

Students use course outlines to support their learning. Students are responsible for retaining course outlines for future use in applications for transfer of credit to other educational institutions.