



ALA-TOO INTERNATIONAL UNIVERSITY

Business Administration

SOFTWARE

Spring Semester 2025-2026

Lecturer



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Monday–Friday, 08:00–17:00



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Every company is a software company, whether it knows it or not.

– Satya Nadella

COURSE INTRODUCTION

WHAT THIS SUBJECT IS



Practical + conceptual

Designed for IT students

Focus on how companies really work

CROSS FUNCTIONAL WORK



Technical decisions affect business outcomes

Developers work with managers
Engineers interact with finance and HR

KEY CONCEPTS

WHAT YOU WILL LEARN

BUSINESS PROCESSES

Understanding how finance, sales, HR, and operations function inside organizations.

DIGITAL WORKFLOWS

Learning how these processes are executed, automated, and monitored using software systems.

SOFTWARE CATEGORIES

Identifying the purpose and role of major business software platforms such as ERP, CRM, accounting, project management, and analytics tools.

SYSTEM INTEGRATION

Understanding how different systems share data, depend on each other, and form a unified digital environment.





TOOLS OVERVIEW

SOFTWARE YOU WILL SEE



EXCEL / GOOGLE SHEETS

Used as foundational tools for working with business data, reports, and simple analytics

ERP PLATFORMS

Introduced to demonstrate how organizations integrate finance, HR, inventory, and operations within a single system.

CRM SYSTEMS

Used to explain how companies track customers, sales pipelines, and customer-related data.

DASHBOARDS

Used to illustrate how business data is transformed into visual reports that support managerial decisions.

COURSE STRUCTURE

SEMESTER FLOW



Foundations → Systems → Integration → Assessment

COURSE STRUCTURE

SEMESTER FLOW

FOUNDATIONS

The core concepts such as business processes, digital workflows, and the role of software in organizations

SYSTEMS

The course then focuses on major categories of business administration software, including ERP, CRM, accounting, project management, and analytics tools

INTEGRATION

In the final stage, you will need to analyze how different systems exchange data and form a unified digital business environment

ASSESSMENTS

Learning is evaluated through an online midterm and a final examination, using scenario-based questions

HOW YOU ARE GRADED

ASSESSMENT METHODS



Final Grade = Midterm Assessment (40%) + Final Assessment (60%)

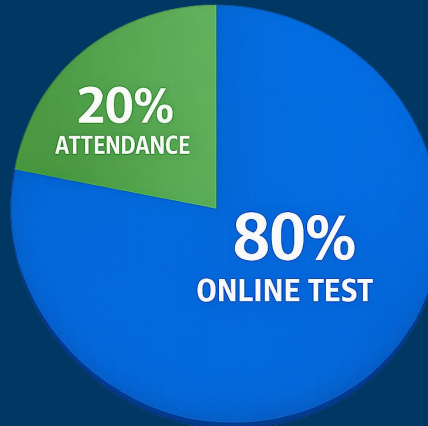
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Midterm Assessment = accumulated score (attendance + test)

Final Assessment = exam

MIDTERM ASSESSMENT BREAKDOWN

100 POINTS



20% - attendance

80% - online test (openbook)

FINAL ASSESSMENT

100 POINTS



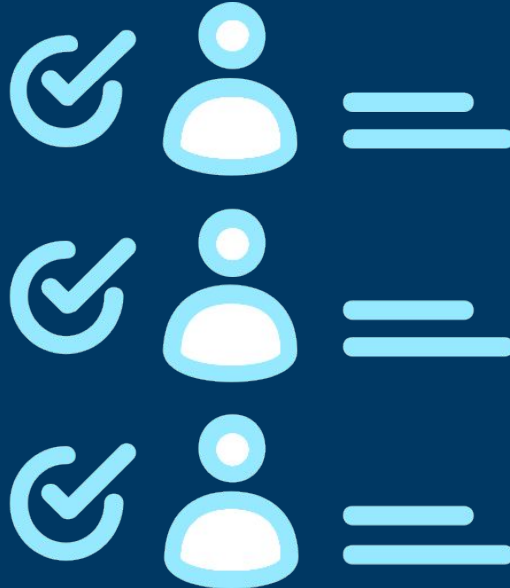
100% - online exam (openbook)

STUDENT RESPONSIBILITY

WHAT IS EXPECTED FROM YOU

ATTENDANCE

You are expected to attend classes consistently, as course concepts build progressively



STUDENT RESPONSIBILITY

WHAT IS EXPECTED FROM YOU

ACTIVE PARTICIPATION

Engagement in discussions and in-class activities is essential for understanding real-world business software scenarios.



STUDENT RESPONSIBILITY

WHAT IS EXPECTED FROM YOU

CONCEPTUAL UNDERSTANDING

The course emphasizes understanding how systems work and interact, rather than memorizing definitions or tools.



STUDENT RESPONSIBILITY

WHAT IS EXPECTED FROM YOU

PROFESSIONAL BEHAVIOR

You are expected to communicate respectfully, meet deadlines, and follow academic integrity standards.



PRACTICAL VALUE

HOW THIS HELPS YOUR CAREER

INDUSTRY READINESS

You gain exposure to software systems commonly used in real organizations, reducing the learning curve during internships.

INTERVIEW CONFIDENCE

Understanding how business software works allows students to answer scenario-based interview questions more effectively.

SYSTEM LEVEL UNDERSTANDING

The course develops the ability to see organizations as integrated digital systems rather than isolated applications.

BUSINESS AWARENESS

Students learn how technical systems support business decisions, operations, and management goals.

THE SOFTWARE RUNS THE WORLD

INDUSTRY REALITY CHECK



Modern businesses operate through software

Decisions, money, customers, employees are all DIGITAL

IT specialists work inside business systems, not outside them

TODAY'S INDUSTRY REALITY

ENTERPRISE RESOURCE PLANNING



TODAY'S INDUSTRY REALITY

ENTERPRISE RESOURCE PLANNING



Enterprise Resource Planning (ERP) systems are integrated software platforms designed to manage and coordinate all major business processes within a single organization. Instead of using separate systems for finance, human resources, inventory, and operations, an ERP system centralizes data and workflows into one unified environment.

TODAY'S INDUSTRY REALITY

ENTERPRISE RESOURCE PLANNING



ERP systems provide a single source of truth, meaning all departments work with the same data in real time. This reduces inconsistencies, improves coordination between teams, and enables management to make informed decisions based on accurate, up-to-date information.

TODAY'S INDUSTRY REALITY

CUSTOMER RELATIONSHIP MANAGEMENT



TODAY'S INDUSTRY REALITY

CUSTOMER RELATIONSHIP MANAGEMENT

Customer Relationship Management (CRM) systems are software platforms used to track, organize, and manage all interactions between a company and its customers. A CRM system stores customer information, communication history, sales activities, and transaction data in one centralized system. These systems allow companies to treat customers not as isolated contacts, but as long-term business assets whose behavior, preferences, and value can be analyzed and managed over time.



TODAY'S INDUSTRY REALITY

ANALYTICS TOOLS

Analytics tools are software systems that collect, process, and visualize business data to support managerial and operational decision-making. Instead of relying on intuition or manual reports, organizations use analytics tools to transform raw data into meaningful insights. These tools aggregate data from multiple systems such as ERP, CRM, accounting software and present it in the form of dashboards, reports, and performance indicators.



TODAY'S INDUSTRY REALITY

IT TEAMS

Modern IT teams do not work with a single system in isolation. In real organizations, IT specialists are expected to understand how multiple business software systems interact and how changes in one system affect others. ERP, CRM, accounting, project management, and analytics tools form a connected ecosystem. Effective IT work requires awareness of this ecosystem rather than deep focus on only one application.



BIG PICTURE VIEW

HOW COMPANIES ACTUALLY OPERATE



MONEY FLOWS DIGITALLY

Financial transactions, invoices, salaries, and budgets are recorded and processed through accounting and ERP systems, enabling real-time financial control and reporting.

CUSTOMERS LIVE IN DATABASES

Customer information, interactions, purchases, and support history are stored in CRM systems, allowing organizations to manage relationships and analyze customer behavior

EMPLOYEES ARE MANAGED BY SYSTEMS

HR information systems track employee records, roles, access rights, attendance, and payroll, supporting structured workforce management.

DECISIONS RELY ON DASHBOARDS

Managers use dashboards and analytical reports to monitor performance, identify trends, and make data-driven decisions based on aggregated system data

SOFTWARE CATEGORIES OVERVIEW

ECOSYSTEM MAP



Accounting systems

ERP platforms

CRM systems

Project management tools

Analytics and reporting tools

ACCOUNTING SOFTWARE

MONEY AS DATA



Tracks income and expenses

Generates financial reports

Used by managers, not just
accountants

ERP SYSTEMS

DIGITAL BACKBONE

Integrates all departments

Single source of truth

Finance, HR, inventory, operations

Core system of medium & large companies



CUSTOMER MANAGEMENT

CRM SYSTEMS



Tracks leads and customers

Sales pipelines and funnels

Customer data = business value

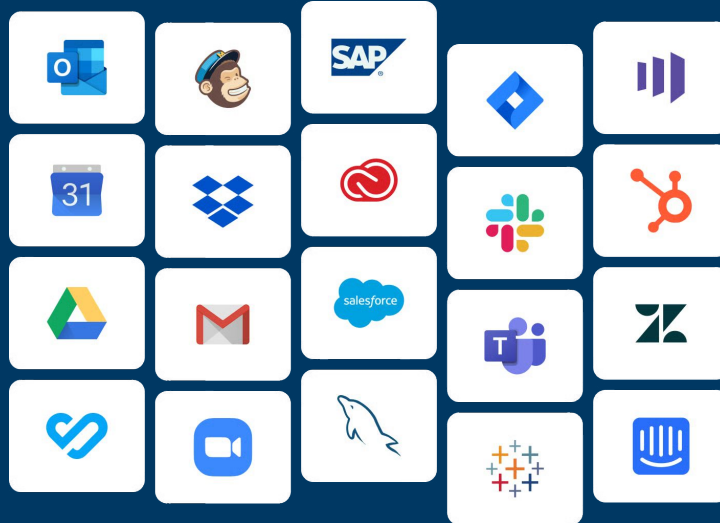
PROJECT MANAGEMENT TOOLS

WORK ORGANIZATION

Tasks, roles, deadlines

Agile vs traditional planning

Used in IT and business teams



ANALYTICS AND DASHBOARDS

DECISION SUPPORT



KPIs and metrics

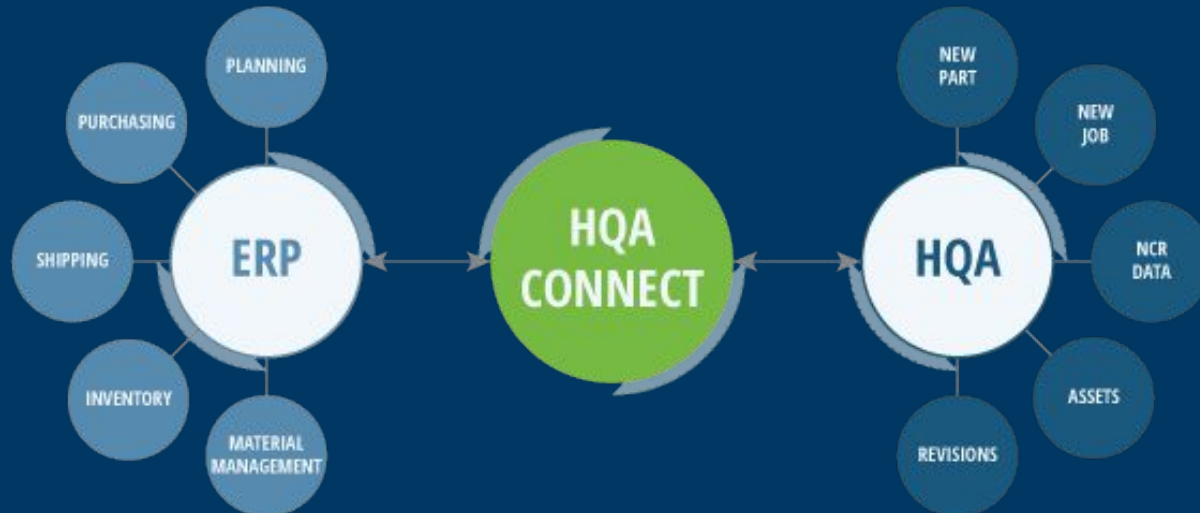
Data-driven decisions

Management dashboards

HOW SYSTEMS CONNECT

INTEGRATION CONCEPT

ERP feeds analytics
CRM feeds sales data
Accounting feeds reports
Integration is critical



A DAY IN A DIGITAL COMPANY

REALISTIC SCENARIO

Customer places order



Inventory updates



Invoice generated



Manager sees dashboard

FUTURE RESPONSIBILITY

YOUR ROLE AS AN IT SPECIALIST

CONFIGURE SYSTEMS

IT specialists customize and configure business software to align with organizational processes and technical requirements. This includes setting up system modules, defining user roles and access rights, configuring workflows, integrating third-party services, and adapting data structures to business needs. For example, in an ERP system such as Odoo or SAP, IT specialists configure accounting rules, inventory logic, approval flows, and system integrations to ensure that daily operations reflect real business processes rather than default system behavior

FUTURE RESPONSIBILITY

YOUR ROLE AS AN IT SPECIALIST

SUPPORT WORKFLOWS

You ensure that digital workflows operate efficiently across departments and systems. This involves monitoring system performance, resolving process bottlenecks, maintaining integrations between platforms (such as ERP and CRM), and ensuring data consistency. For example, when a sales order is created in a CRM system, IT specialists ensure that it correctly triggers inventory updates, invoicing, and reporting in connected ERP and accounting systems without manual intervention or data loss.

FUTURE RESPONSIBILITY

YOUR ROLE AS AN IT SPECIALIST

INTERPRET DATA

As IT professionals you will need to analyze and interpret system generated data to support business understanding and decision-making. This includes working with reports, dashboards, logs, and metrics produced by ERP, CRM, and analytics platforms. For instance, IT specialists may help management understand sales trends, operational inefficiencies, or system performance issues by explaining dashboard indicators in tools like Power BI and validating that the underlying data sources and calculations are technically correct.

FUTURE RESPONSIBILITY

YOUR ROLE AS AN IT SPECIALIST

COMMUNICATE WITH STAKEHOLDERS

IT specialists translate technical system behavior and data into clear, actionable information for managers and non-technical stakeholders. This requires explaining system limitations, data accuracy, integration dependencies, and the impact of technical changes on business operations. For example, when a system update affects reporting or workflows, IT specialists communicate the implications, risks, and expected outcomes to department heads in business-oriented language rather than technical terminology.

WHAT IF ?

ERP IS MISCONFIGURED

Imagine an ERP system is deployed to manage inventory, purchasing, and finance, but the system is configured incorrectly. Stock quantities are calculated using wrong rules, supplier lead times are inaccurate, and approval workflows do not match real operations. The company believes it has inventory available, but in reality warehouses are either overstocked or empty.

REAL WORLD CONSEQUENCE

ERP FAILURE

In the Target Canada expansion, ERP and supply chain system misconfiguration caused severe inventory errors. Stores received incorrect products, shelves were empty while warehouses were full, and financial data did not reflect reality. The system failure contributed to losses of billions of dollars and ultimately led to the shutdown of all Target operations in Canada for several days.

WHAT IF ?

DATA IN CRM IS WRONG

Imagine a CRM system where customer records are duplicated, outdated, or incomplete. Sales teams contact the same customer multiple times, marketing campaigns target incorrect segments, and customer history is unreliable. Management dashboards show strong customer growth, but the data behind it is flawed.

REAL WORLD CONSEQUENCE

CRM DATA FAILURE

Many large organizations using CRM platforms like Salesforce report that poor data quality leads to incorrect analytics and failed campaigns.

Duplicate records and inconsistent customer data result in wasted marketing budgets, inaccurate forecasts, and loss of customer trust. In practice, bad CRM data often leads to decisions that look correct on paper but fail in the real market.

WHAT IF ?

DASHBOARDS ARE WRONG

Imagine management relies on dashboards to make decisions, but the metrics are calculated incorrectly or based on incomplete data. KPIs look positive, trends appear stable, and risks are hidden. Decisions are made confidently, but they are based on misleading information.

REAL WORLD CONSEQUENCE

DASHBOARDS ARE WRONG

Organizations have repeatedly faced losses due to incorrect dashboards and misinterpreted analytics. Errors in data pipelines, wrong assumptions in calculations, or missing data sources have caused companies to underestimate risks, overestimate performance, and make costly strategic decisions. When dashboards are wrong, decisions fail quietly until the damage is already done.

QUESTIONS AND DISCUSSION

OPEN FLOOR



NEXT WEEK PREVIEW

WHAT'S COMING

Business processes

Digital workflows

Mapping software to operations