

MS4111: ENTERPRISE RESOURCE PLANNING

Effective Term

Semester B 2024/25

Part I Course Overview

Course Title

Enterprise Resource Planning

Subject Code

MS - Department of Decision Analytics and Operations

Course Number

4111

Academic Unit

Department of Decision Analytics and Operations (DAOS)

College/School

College of Business (CB)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

The course aims to

- provide students with an overview of the history, the concepts, the development, the implementation, and the application of enterprise resource planning in logistics and supply chain management
- develop students' computing and analytical skills in applying enterprise resource planning software to solve real business problems in logistics and supply chain management
- prepare students to take up positions in the logistics profession by educating them with contemporary logistics management knowledge, local practices of logistics and supply chain management, and cutting-edge enterprise resource planning technologies

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the concepts, drawbacks and advantages of applying enterprise resource management. Evaluate business processes in logistics and supply chain management.	10	x	x	
2	Explore critical success factors and major challenges faced in implementing logistics and supply chain management in a company.	10	x	x	
3	Apply knowledge in enterprise resource management to support and enhance the organizations in which they are employed and analyse business processes in logistics from both multi-disciplinary and inter-disciplinary perspectives. Apply enterprise resource management skills to solve real business problems in logistics and supply chain management.	50		x	x
4	Apply a prominent enterprise resource planning software package (SAP) to solve problems in logistics and supply chain management.	30		x	x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Concepts, knowledge and problem solving skills relevant to the application of e-logistics management, enterprise resource management, and supply chain management in the business sector are explained.	1, 2, 3, 4	
2	SAP Laboratories	Demonstrations of SAP software applications. Students apply SAP enterprise resource planning software to solve logistics and supply chain problems through computer exercises and assignments. For example, students will be asked to plan the production of a manufactured company product by using SAP software.	1, 3, 4	
3	Group Discussion	Students work in groups to research and discuss the latest issues and trends in applying enterprise resource planning software to solve problems in logistics and supply chain management. Students read academic research papers or business cases studies before class and discuss their findings during class before giving a brief presentation of their findings and recommendations.	1, 2, 3	

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Case studies	1, 2, 3	20	
2	Laboratory test	2, 3, 4	30	

Continuous Assessment (%)

Examination (%)

50

Examination Duration (Hours)

2

Assessment Rubrics (AR)

Assessment Task

Case Studies

Criterion

1.1 CAPACITY for SELF-DIRECTED LEARNING to understand the principles and methodology of enterprise resource planning

1.2 ABILITY to PROVIDE critical analysis in applying enterprise resource planning in a company

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

Laboratory Test

Criterion

2.1 ABILITY to APPLY enterprise resource planning software in performing business processes in logistics and manufacturing in a company

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

Written Examination

Criterion

3.1 ABILITY to EXPLAIN the methodology and procedure in enterprise resource planning

3.2 ABILITY to APPLY enterprise resource planning to SOLVE problems in logistics and manufacturing in a company

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

Introduction to Enterprise Resource Planning (ERP)

Identifying major business processes and their impacts on each functional area within an organisation. The current state-of-the-art ERP systems and their applications as an operations management problem-solving tool. Demonstration of enterprise resource planning systems, such as SAP and Oracle.

Basic concepts and the development of e-logistics

Concepts and issues in e-logistics. Integrated view of business processes. Functions and characteristics of enterprise systems. Evolution of enterprise systems. Market outlooks for the enterprise systems.

ERP Implementation Issues

Business process reengineering. ERP-driven business process change. Process modelling tool. Challenges of implementing enterprise systems. Evaluation and selection of enterprise systems. Managing the implementation projects.

Learning the SAP System

SAP AG and SAP R/3. Basic system features and navigations. IDES – the model company in SAP. Major Modules in SAP R/3. Advanced planner and optimizer –SAP APO.

Materials Management

Understanding the materials management processes. Materials management functionality in SAP R/3. Common materials management problems. Business process in purchasing. Functions and tools for managing inventory.

Sales and Distribution

Common sales and distribution problems. Understanding the sales and distribution processes. Sales and distribution functionality in SAP R/3. Sales order management processes.

Production Planning and Management

Sales and operations planning. Demand management. Master production scheduling and material requirement planning. Production order execution and control. Manufacturing execution systems.

Advanced planning and scheduling in supply chain Management

Understanding supply chain management problems. Overview on the SAP APO solutions on logistics and supply chain problems. Applications and implementation issues of SAP APO in an organization.

Reading List**Compulsory Readings**

Title	
1	Sales and distribution in SAP ERP: practical guide / Matt Chudy, Luis Castedo. Bonn; Boston: Galileo Press, c2011.
2	Customizing materials management processes in SAP ERP / Akash Agrawal. Bonn; Boston: Galileo Press, 2012.

Additional Readings

Title	
1	M Chudy, L Castedo, R Lopez (2015) Sales and Distribution in SAP ERP — Practical Guide, SAP Press
2	M Chudy, L Castedo (2014) Purchasing with SAP MM—Practical Guide, SAP Press
3	M Murray (2013) Material Management in SAP ERP, SAP Press
4	S Pradhan (2012) Demand and Supply Planning with SAP APO. SAP Press
5	G Kohers (2015). SAP and the introductory management information systems course, Academy of Educational Leadership Journal Volume 19, Number 1, pp. 65-70.
6	Tsan Ming Choi, PuiSze Chow, Shuk Ching Liu (2013). Implementation of fashion ERP systems in China: Case study of a fashion brand, review and future challenges, Int. J. Production Economics, Vol. 146, pp. 70-81.
7	Sona Kanungo (2012). Improved supply chain management using integrated ERP systems, Sona Global Management Review, Vol. 7, pp. 1-4.
8	Hooshang M. Beheshtia and Cyrus M. Beheshti (2010). Improving productivity and firm performance with enterprise resource Planning Enterprise Information Systems, Vol. 4, pp. 445-472.
9	A Momoh, R Roy, E Shehab (2010). Challenges in enterprise resource planning implementation: state-of-the-art, Business Process Management Journal, Vol. 16, pp. 537-565.
10	SAP Help Portal http://help.sap.com/
11	SAP AG http://www.sap.com/
12	SAP Online Documentation: SAP Library http://help.sap.com/saphelp_46c/helpdata/en/73/69f5c755bb11d189680000e829fbbd/frameset.htm