DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING
MECHANICAL ENGINEERING PROGRAM, BSC.

Course Syllabus

1. **Course number and name**
   IE 576 Enterprise Resource Planning

2. **Credits and contact hours**
   (3+0) 3 credit hours, 3 contact hours

3. **Course type**
   Face to Face Learning Course

4. **Instructor's or course coordinator's name**
   Dr. Hanan Saleet

5. **Textbook information**
Enterprise Resources Planning and Beyond: Integrating Your Entire Organization,) Gary A Langenwalter , IEEE Press Series, 2020

   a. **Other supplemental materials**
   - Enterprise Resources Planning and Beyond: Integrating Your Entire Organization, Gary A Langenwalter , IEEE Press Series, 2020
   - Manufacturing Resource Planning (MRP II) with Introduction to ERP; SCM; an CRM by Khalid Sheikh, Publisher: McGraw-Hill
   - The Impact of Enterprise Systems on Corporate Performance: A study of ERP, SCM, and CRM System Implementations [An article from: Journal of Operations Management] by K.B. Hendricks; V.R. Singhal; and J.K. Stratman, Publisher: Elsevier
   - ERP and Supply Chain Management by Christian N. Madu, Publisher: CHI
   - Implementing SAP ERP Sales & Distribution by Glynn C. Williams, Publisher McGraw-Hill

6. **Specific course information**
   a. **Catalog description**
Evolution of ERP; what is ERP? Reasons for the Growth of ERP; Scenario and Justification of ERP; Evaluation of ERP; Various Modules of ERP; Advantage of ERP.

   b. **Prerequisites or co-requisites**
      co-requisites: IE 471 Production Planning and Control

   c. **The course is:**

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Elective in the Industrial Engineering program.

7. **Specific goals for the course**
   a. **Course outcomes:**
      After completion of the course, students are expected to be able to:
   1. Study Business Process Mapping for ERP Module Design; and implementation.
   2. Analyze relation between ERP and E-Procurement and E-Logistics
   3. Define finance, plant maintenance, quality management, materials management

   b. **The following student outcomes are addressed by the course:**
      None

8. **Learning Outcomes and their Alignment with Program Educational Objective (PEO's), Methods of Delivery, and Assessment Methods:**

Learning Outcomes	Program PEOs	Method of Delivery	Assessment Method
Course Outcomes			
CO-(1): Study Business Process Mapping for ERP Module Design; and implementation.	-	Lectures (Example and Problems)	Exams
CO-(2): Analyze relation between ERP and E-Procurement and E-Logistics.	-	Lectures (Example and Problems)	Assignment
CO-(3): Define finance, plant maintenance, quality management, materials management; their Packages and Modules	-	Lectures (Example and Problems)	Project

9. **Weekly Teaching Plan**

Week	Lecture	Topic	Method of Delivery
1	Lec_1	Chapter 1: Introduction: Evolution of ERP; what is ERP? Reasons for the Growth of ERP	Lecture
	Lec_2	Chapter 1: Scenario and Justification of ERP	Lecture

	Lec_3	Chapter 1: Evaluation of ERP; Various Modules of ERP; Advantage of ERP	Lecture
2	Lec_4	Chapter 2: **An Overview of Enterprise: Introduction**	Lecture
	Lec_5	Chapter 2: Integrated Management Information; Business Modeling	Lecture
	Lec_6	Chapter 2: ERP for Small Business	Lecture
3	Lec_7	Chapter 2: ERP for Make to Order Companies	Lecture
	Lec_8	Chapter 2: Business Process Mapping for ERP Module Design	Lecture
	Lec_9	Chapter 2: Hardware Environment and its Selection for ERP Implementation	Lecture
4	Lec_10	Chapter 3: **ERP and Related Technologies Introduction**	Lecture
	Lec_11	Chapter 3: Business Process Reengineering (BPR);	Lecture
	Lec_12	Chapter 3: Management Information System (MIS)	Lecture
5	Lec_13	Chapter 3: Executive Information System (EIS)	Lecture
	Lec_14	Chapter 3: Decision support System (DSS)	Lecture
	Lec_15	Chapter 3: Supply Chain Management (SCM)	Lecture
6	Lec_16	Chapter 4: **ERP System Introduction**	Lecture
	Lec_17	Chapter 4: Finance, Plant Maintenance	Lecture
	Lec_18	Chapter 4: , Quality Management	Lecture
7	Lec_19	Chapter 5: **ERP Market Introduction**	Lecture
	Lec_20	Chapter 5: SAP AG, Baan Company, Oracle Corporation	Lecture
	Lec_21	Chapter 5: People Soft, JD Edwards World Solutions Company	Lecture
8	Lec_22	Chapter 5: System Software Associates, Inc. (SSA); QAD	Lecture
	Lec_23	Chapter 5: A Comparative Assessment and Selection of ERP Packages and Modules.	Lecture
	Lec_24	Chapter 6: **ERP Implementation Lifecycle Introduction**	Lecture
9	Lec_25	Chapter 6: Issues in Implementing ERP Packages	Lecture
	Lec_26	Chapter 6: Pre-evaluation Screening; Package Evaluation;	Lecture
	Lec_27	Chapter 6: Project Planning Phase; Gap Analysis	Lecture
10	Lec_28	Chapter 6: Reengineering; Configuration	Lecture
	Lec_29	Chapter 6: Implementation; Team Training;	Lecture
	Lec_30	Chapter 6: Testing; Going Live	Lecture
11	Lec_31	Chapter 6: End-User Training	Lecture
	Lec_32	Chapter 6: Post Implementation (Maintenance Mode).	Lecture

	Lec_33	Chapter 7: **Selection of ERP vendors Introduction**	Lecture
12	Lec_34	Chapter 7: Consultants and Users	Lecture
	Lec_35	Chapter 7: In-House Implementation - Pros and Cons	Lecture
	Lec_36	Chapter 7: Vendors; Consultants; End User	Lecture
13	Lec_37	Chapter 8: **Future Directions in ERP Introduction**	Lecture
	Lec_38	Chapter 8: New Markets, New Channels	Lecture
	Lec_39	Chapter 8: Faster Implementation Methodologies	Lecture
14	Lec_40	Chapter 8: Business Modules and (Business Application Programming Interface) BAPIs; Application Platform	Lecture
	Lec_41	Chapter 8: New Business Segments; More Features; Web Enabling; Market Snapshot	Lecture
	Lec_42	Chapter 9: **Other Related Technologies:** E-Procurement; E-Logistics; Internet Auctions; E-markets	Lecture
15	Lec_43	Chapter 9: Electronic Business Process Optimization	Lecture
	Lec_44	Chapter 9: Business Objects in SCM	Lecture
	Lec_45	Chapter 9: E commerce.	Lecture

10. Grade Distribution:

Assessment	Grade	Week No.
- First Exam	20%	
-Second Exam	15%	
-Assignments (Reports /Quizzes/ Seminar / Tutorials/ Home works ….)	15%	1-16th Week
- Final Examination	50%	16th Week

Note: Make-up exams will be offered for valid reasons. It may be different from regular exams in content and format.