

课程详述

COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程检讨之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	课程名称 Course Title	管理系统分析与设计 Management System Analysis and Design
2.	授课院系 Originating Department	商学院 College of Business
3.	课程编号 Course Code	EBA207
4.	课程学分 Credit Value	3
5.	课程类别 Course Type	专业基础课 Major Foundational Courses
6.	授课学期 Semester	春季 Spring
7.	授课语言 Teaching Language	英语 English
8.	授课教师、所属学系、联系方式 Instructor(s), Affiliation & Contact (For team teaching, please list all instructors)	雷扬, 信息系统与管理工程系, leiy@sustech.edu.cn Yang LEI, Division of Information Systems & Management Engineering, leiy@sustech.edu.cn
9.	实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact	待公布 To be announced
10.	选课人数限额(可不填) Maximum Enrolment (Optional)	

11. 授课方式 Delivery Method	讲授 Lectures	习题/辅导/讨论 Tutorials	实验/实习 Lab/Practical	其它(请具体注明) Other (Please specify)	总学时 Total
	学时数 Credit Hours	30	2 (mid-term examination)	24	8 (小组项目展示)
12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	EBA 203 管理信息系统 EBA 203 Management Information System				
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	MIS 207 高级管理系统分析与设计 MIS 207 Advanced Management System Analysis and Design				
14. 其它要求修读本课程的学系 Cross-listing Dept.	无 None				

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

本模块的目的是介绍信息系统的基本概念以及系统分析和设计的基本技术。帮助学生理解信息系统的相关概念，学习系统的概念（包括系统的概念、结构、性质、环境、边界、行为、功能、性能），介绍信息系统的概念和企业系统的环境，帮助学生加深对信息、管理的理解。

The goal of this module is to introduce the basic concepts of information systems and basic techniques for systems analysis & design. This class will help students understand the concept and nature of information system, the concept of learning system (including system concept, structure, nature, environment, boundary, behavior, function, performance), and introduces the concept of information system and the environment of enterprise system, in order to deepen their understanding of information and management

16. 预达学习成果 Learning Outcomes

On completion of this course a sound student will

- have a preliminary understanding of object oriented technology;
- know a process through which information systems are developed;
- be able to build requirements models for information systems using UML 2.

完成这门课程后，一个好的学生将

- 对面向对象技术有初步的了解；
- 了解开发信息系统的过程；
- 能够使用 UML 2 建立信息系统的需求模型。

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17. 课程内容及教学日历（如授课语言以英文为主，则课程内容介绍可以用英文；如团队教学或模块教学，教学日历须注明主讲人）

Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)

学时	星期 Week	节次	主题 Topic	简介 Brief Introduction
理论学时 4学时	1	第一节 First Course	课程简介 Class Introduction 信息系统分析与设计 Introduction of Information Systems	<p>本节课将回顾信息系统、理解信息社会中信息系统的作用，认知信息系统分析与设计的重要性，初步介绍信息系统分析与设计的基本途径，并介绍课程目标和安排、课件和参考书、过程设计技术和工具。</p> <p>This lesson mainly introduces to students about the concept and the role of information systems in the information society, make them recognize the importance of information system analysis and design. This class builds a preliminary understanding of its basic approach introduces the overall planning of the course and the final assessment criteria, the courseware and reference books, process design techniques and tools.</p>
		第二节 Second Course	信息系统分析设计概 观和面向对象的基本 概念 Overview of Information System Analysis and Design and Basic concepts of object orientation	<p>本节课进一步介绍了系统分析设计的环境，概观信息系统分析与设计，从概念、方法、工具的角度对课程建立起一个整体的轮廓。介绍了企业系统规划法及其作用，回顾并加深了学生对信息系统规划中 BSP 法的理解。涉及面向对象的内容包括：面向对象的概念、面向对象方法的三个核心概念，即对象、类、消息。面向对象技术的三块基石、面向对象的分析与设计（OOSD）。</p> <p>This class further introduces the environment of system analysis and design, gives an overview of information system analysis and design and establishes an overall outline of the course from the perspective of concepts, methods and tools. This class introduces enterprise system planning and its role, reviews system analysis and design and helps deepening the understanding of BSP method in information system planning. The content covered in this lesson includes: the concept of object oriented, three core concepts of object oriented method, namely Object, class and message. three cornerstone of object oriented technology, and object oriented Analysis and Design (OOSD).</p>
理论学时 4学时	2	第一节 First Course	信息系统的概念与性质 The concept and nature of information system	<p>本节课将从系统的概念与性质出发，帮助学生理解信息系统的相关概念，学习系统的概念（包括系统的概念、结构、性质、环境、边界、行为、功能、性能），介绍信息系统的概念和企业系统的环境，帮助学生加深对信息、管理的理解。</p> <p>This class will help students understand the concept and nature of information system, the concept of learning system (including system concept, structure, nature, environment, boundary, behavior, function, performance), and introduces the concept of information system and the environment of enterprise system, in order to deepen their understanding of</p>

		第二节 Second Course	软件的生存周期与过程模型 Software life cycle and process model	information and management. 本节课探讨软件的生存周期，介绍软件生存周期的过程，帮助学生理解软件过程的概念。让学生熟悉典型的软件过程模型（如 RUP 模型）及特点，让学生掌握选择和运用软件过程模型的能力。 This class explores the life cycle of software and the process of software life cycle, to help students understand the concept of software process and get familiar with typical software process models and their characteristics, such as RUP(Rational Unified Process). Students will master the ability to select and use software process models.
理论学时 4 学时	3	第一节 First Course	信息系统分析方法 Information systems Analysis methods	本节课将讲解信息系统分析的基础知识，对需求分析进行了概述，包括：需求分析的作用、需求分析的难点、需求分析的三个阶段。介绍完成分析任务所必需的一般性技术和方法、需求分析的任务（包括问题分析、需求描述、需求评审），初步需求获取技术并进行举例。 This class will cover the basics of information system analysis, gives an overview of requirements analysis. The content includes: the role of demand analysis, the difficulties of demand analysis, and can be divided into three stages. This lesson will introduce the general techniques and methods necessary to complete the tasks, the tasks of demand analysis (including problem analysis, demand description, demand review), preliminary requirement acquisition technology and give examples.
		第二节 Second Course	信息系统分析方法 Information systems Analysis methods	本节课将讲解信息系统分析的基础知识，介绍完成分析任务所必需的一般性技术和方法、需求分析的任务（包括问题分析、需求描述、需求评审），初步需求获取技术并进行举例、软件设计过程，软件设计的基本概念，包括抽象、逐步求精、模块化思想；介绍了过程设计技术和工具，介绍了信息隐藏、内聚度、耦合度的概念，并讲解了有关程序结构的术语。 This lesson will explain the basic knowledge of information system analysis, introduce the general techniques and methods necessary to complete the tasks, the tasks of demand analysis (including problem analysis, demand description, demand review), preliminary requirement acquisition technology and give examples, such as the software design process and the basic concepts of software design, including abstraction, step-by-step refinement and modularization thought. This class further introduces process design techniques and tools, introduces the concepts of information hiding, cohesion, coupling, and explains the terminology of program structure.
实验学时 4 学时	4	第一节 First Course	实验课：安装软件、分组、讲上机要求，熟悉信息系统分析与设计-1 Lab: Software installation, grouping, computer requirements, information system analysis and design	本周主要讲解信息系统分析相关软件的安装、基本操作方法，训练学生对软件的基础操作能力，熟悉软件。掌握开发者工具提供的主要醒目类型，建立一个控制台应用程序、一个 Windows 程序，熟悉并运用 visual studio 软件。 This week, this class will mainly explain the installation and basic operation methods of information system analysis related software, train students' basic operation ability of software and get familiar with software. Master the main eye-catching types provided by developer tools, build a console application, a Windows application, and be familiar with and use Visual Studio software. Familiar with and use Visual Studio software.
		第二节 Second	实验课：安装软件、分组、讲上机要求，	

		Course	熟悉信息系统分析与设计-2 Lab: Software installation, grouping, computer requirements, information system analysis and design	
实验学时 4学时	5	第一节 First Course	实验课: 信息系统分析与设计的基本操作-1 Lab: information system analysis and design	这两周的实验课主要训练学生对于信息系统分析与设计的各种操作, 以及训练学生信息系统知识的应用, 包括系统需求分析、数据流分析与设计等。介绍 UML 的构成部分: 模型元素(Model Element)、图(Diagram)、视图(View)和通用机制(General Mechanism)。了解和使用 Visual Studio 集成开发环境, 熟悉 Visual Studio 环境的基本命令和功能键。The two-week experimental class mainly trains students on various operations of various operations of information system analysis and design, as well as the application of information system knowledge, including system demand analysis, data flow analysis and design, etc.Introduces the components of UML: Model Element, Diagram, View, and General Mechanism.Understand and use Visual Studio integrated development environment, familiar with the basic commands and function keys of Visual Studio environment.
		第二节 Second Course	实验课: 信息系统分析与设计的基本操作-2 Lab: information system analysis and design	
实验学时 4学时	6	第一节 First Course	实验课: 信息系统分析与设计实战 Lab: training of information system analysis and design	
		第二节 Second Course	实验课: 信息系统分析与设计实战 Lab: training of information system analysis and design	
期中考试	7	第一节 First Course	期中考试 Mid-term exam	
理论 2学时		第二节 Second Course	期中考试讲解 Mid-term exam interpretation	
理论学时 4学时	8	第一节 First Course	结构化分析设计-1 Structural Analysis design-1	本节课内容主要包括: 结构化分析设计方法论(SSADM)、数据流图与数据字典、数据流图与底层逻辑说明、数据流图画法举例。 This lesson mainly includes: Structured Analysis and Design methodology (SSADM), data flow diagram and data dictionary, data flow diagram and underlying logic explanation, data flow drawing method example.
		第二节 Second Course	结构化分析设计-2 Structural Analysis design-2	本节课内容主要包括: 基于数据流的分析方法、从数据流图的角度看案例、设计一小型图书馆管理系统、实验课说明。 This lesson mainly includes: analysis method based on data flow, case study from the perspective of data flow diagram, design of a small library management system, and description of experimental lesson.
理论	9	第一节 First	数据库设计-1 Database design-1	本节课内容主要包括: 实体-关系图、数据库设计规范化—实战视角, 概念/逻辑/物理数据模型。

学时 4 学时		Course		This lesson mainly includes entity - relationship diagrams, database design normalization - a practical perspective, and conceptual/logical/physical data models.
		第二节 Second Course	数据库设计-2 Database design-2	本节课内容主要包括：数据库设计的思维要点、实体转换为关系模式的原则、数据库分析与设计的十四个技巧、数据库设计综合题。 This lesson mainly includes: the thinking point of database design, the principle of entity to relational mode, 14 techniques of database analysis and design, comprehensive problem of database design.
实验 学时 4 学时	10	第一节 First Course	实验课：信息系统分析与设计实战--数据结构分析--1 Lab: training of information system analysis and design--data structure analysis and design--1	这两周的实验课主要训练学生对于信息系统分析与设计的各种操作，以及训练学生信息系统知识的应用，主要包括数据结构分析与设计等。介绍 UML 系统开发中有三个主要的模型：1：功能模型：从用户的角度展示系统的功能，包括用例图。2：对象模型：采用对象，属性，操作，关联等概念展示系统的结构和基础，包括类别图、对象图。3：动态模型：展现系统的内部行为。包括序列图，活动图，状态图。了解面向对象程序设计方法的基本原理及主要特点--抽象、封装、继承和多态：学习完整的 C++ 程序开发过程。 The two-week experimental class mainly trains students on various operations of various operations of information system analysis and design, as well as the application of information system knowledge, including data structure analysis and design, etc. There are three main models in UML system development: 1: Functional model: Demonstrate the functionality of the system from the user's perspective, including use case diagrams. 2. Object model: It adopts the concepts of object, attribute, operation, association and so on to display the structure and foundation of the system, including category diagram and object diagram. 3: Dynamic model: To show the internal behavior of the system. Includes sequence diagrams, activity diagrams, and state diagrams. Understand the basic principles and main features of object-oriented programming methods -- abstraction, encapsulation, inheritance, and polymorphism: learn the complete C++ programming process.
		第二节 Second Course	实验课：信息系统分析与设计实战--数据结构分析--2 Lab: training of information system analysis and design--data structure analysis and design--2	
实验 学时 4 学时	11	第一节 First Course	实验课：信息系统分析与设计实战--数据结构分析--3 Lab: training of information system analysis and design--data structure analysis and design--3	这两周的实验课主要训练学生对于信息系统分析与设计的各种操作，以及训练学生信息系统知识的应用，主要包括系统概要设计等。了解逻辑体系结构组成、体系结构中的模式、代理模式、UML 中的建模模式、物理体系结构、组件图概念和画法、部署图的概念和画法、节点的含义以及如何将制品分配到节点针对具体案例如何使用 MyEclipse 软件来建立动态模型理解设计模式的概念，了解几种常用的设计模式。 The two-week experimental class mainly trains students on various operations of various operations of information system analysis and design, as well as the application of information system knowledge, including system outline design, etc. Understand the logic of system structure, system structure of the model, the proxy pattern, in the UML modeling concept and drawing, physical architecture and component diagram and deployment diagram and the concept of the meaning of the illustration, node, and how the products assigned to nodes in view of the specific case how to use MyEclipse software to establish a dynamic model to
		第二节 Second Course	实验课：信息系统分析与设计实战--系统概要设计--1 Lab: training of information system analysis and design--system outline design--1	
实验 学时 4 学时	12	第一节 First Course	实验课：信息系统分析与设计实战--系统概要设计--2 Lab: training of information system analysis and design--system outline design--2	
		第二节 Second	实验课：信息系统分析与设计实战--系统概	

		Course	要设计--3 Lab: training of information system analysis and design-- system outline design--3	understand the concept of design patterns, several common design patterns,
理论学时 4学时	13	第一节 First Course	UML 统一建模语言-整体概念 Concept of UML (Unified Modeling Language)	本节课主要介绍了 UML 统一建模语言、UML 基本构造块、事物（元素）、关系、UML 基本构造块（图）、UML 的图与软件开发过程、支持 UML 的工具 This lesson mainly explains UML Unified Modeling Language (UML), UML Basic Building blocks, things (elements), relationships, UML Basic building blocks (diagrams), UML diagrams and software development processes, UML-enabled tools
		第二节 Second Course	UML 统一建模语言-图 Diagrams of UML (Unified Modeling Language)	本节课主要介绍了 UML 基本构造块（即：图）、图之间的关系、UML 的图与软件开发过程、支持 UML 的工具。 This lesson mainly introduces UML basic building blocks: diagrams, relationships between diagrams, UML diagrams and software development processes, tools that support UML
理论学时 4学时	14	第一节 First Course	用例图 Use case diagram	本节课内容主要包括：需求分析与系统分析、用例图的构成、用例图绘制、常见问题。 The content of this lesson are: Requirements analysis and system analysis, use case diagram composition, use case diagram drawing, frequent questions.
		第二节 Second Course	信息系统开发方法论 Information systems development methodology	本节课介绍了各种模型、系统开发工具、各种技术，信息系统开发方法论的概念，以及信息系统开发的 3 种途径。 In this class various models, system development tools and technologies, as well as the information system development methodology and three ways to develop information system is introduced.
	15	第一节 First Course	小组项目展示 Group Project Presentation	
		第二节 Second Course	小组项目展示 Group Project Presentation	
	16	第一节 First Course	小组项目展示 Group Project Presentation	
		第二节 Second Course	小组项目展示 Group Project Presentation	

18. 教材及其它参考资料 Textbook and Supplementary Readings

系统分析与设计 主编：李爱萍 副主编：孟东霞、杨崇艳，出版社：中国工信出版集团 人民邮电出版社

系统分析与设计（原书第 10 版） 作者：[美]肯尼斯 E. 肯德尔（Kenneth E. Kendall）、【美】朱莉 E. 肯德尔（Julie E. Kendall），出版社：机械工业出版社

课程评估 ASSESSMENT

19. 评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
出勤 Attendance		10		
课堂表现 Class Performance		10		
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments		40		
期中考试 Mid-Term Test		15		
期末考试 Final Exam		25		
期末报告 Final Presentation				
其它（可根据需要 改写以上评估方 式） Others (The above may be modified as necessary)				

20. 记分方式 GRADING SYSTEM

<input checked="" type="checkbox"/> A. 十三级等级制 Letter Grading <input type="checkbox"/> B. 二级记分制（通过/不通过） Pass/Fail Grading

课程审批 REVIEW AND APPROVAL

21. 本课程设置已经过以下责任人/委员会审议通过
This Course has been approved by the following person or committee of authority

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