THOMPSON RIVERS UNIVERSITY

Course Outline

Management, Information and Supply Chain
School of Business & Economics MIST
4610 - **3.00** - Academic

Strategic Management Information Systems

Rationale

Update Curricunet to reflect standard course outlines established by the School.

Calendar Description

Students acquire the knowledge and skills to support decision-making and problem-solving processes in business and accounting. An emphasis is placed on managing the entire lifecycle of data, from collecting to interpreting, to modelling, to decision making, and finally to communicating the results. Topics include accounting information systems development; information technology auditing, including data and network security; developing enterprise reporting systems; managing data, principles of extensible markup language (XML), and extensible business reporting language (XBRL); and constructing, analyzing, and presenting a suite of spreadsheet-based, decision-making models.

Credits/Hours

Course Has Variable Hours: No
Credits: 3.00
Lecture Hours: 3.00
Seminar Hours: 0
Lab Hours: 0
Other Hours: 0
   Clarify:
Total Hours: 3.00
Delivery Methods: (Face to Face)
Impact on Courses/Programs/Departments: No change
Repeat Types: A - Once for credit (default)
Grading Methods: (S - Academic, Career Tech, UPrep)

Educational Objectives/Outcomes

1.   Identify the various systems development methodologies used to plan and develop Accounting Information andEnterprise Resource Planning (ERP) Systems.
2.   Describe the impact of computer crime, fraud, ethics and privacy on the business and techniques and strategiesreduce their frequency and mitigate their effect.

3.   Categorize the various data sources and data management techniques used in data auditing, warehousing andmining.

4.   Describe the range of cognitive, psychological and social pitfalls, which decision makers should avoid and tointroduce students to the science of fact-based, data-driven decision modeling and analysis.

5.   Demonstrate translating descriptions of decision problems into formal models, and investigate those models in anorganized and systematic fashion.

6.   Illustrate best practice modeling techniques such as the FAST financial modelling standard, strategies for reducingerrors, spreadsheet auditing techniques and other methods to ensure consistent and easy to understand models.

7. Select the best modeling technique and interpreting model results in the context of the business situation and addressing the inherent assumptions through sensitivity analysis.

8. Demonstrate effective modeling creation, solutions and analysis for forecasted financial statements, production scenarios, investment opportunities and business performance.

Prerequisites

FNCE 2120-Financial Management or
FNCE 3120-Finance
SCMN 3320-Supply Chain Management

Co-Requisites

Recommended Requisites

Exclusion Requisites

BBUS 4280

Texts/Materials

Other

1. **Required** The instructor will assign various chapters from a series of books related to information systems management, security, technology and various software applications.

Student Evaluation

The Course grade is based on the following course evaluations.

 Case studies/research projects/assignments 30-40% (0.00%) Tests/quizzes 30-40% (0.00%) Final exam 30-40% (0.00%)
Students must pass exam to pass the course.

Course Topics

1. Introduction

   - Introduction to course, resources, decision making bias, logic and their implications

2. Information Technology and Accounting Information Systems

- The importance of Information Technology to Accountants
- Internal control systems
- Business process fundamentals and engineering
- Tools: Business process maps and blueprints

3. Information Technology Auditing

- Computer crime, fraud, ethics and privacy
- Auditing Accounting Information Systems
- Data and network security
- Tools: IT Auditor's Toolkit

4. Developing Accounting Information Systems
- Systems Development Methodologies and Systems Development Life Cycle
- System Planning & Analysis
- Detailed System Design
- Tools: System flowcharts and project management tools

5. Enterprise Systems

- Enterprise Resource Planning (ERP) systems,
- Network infrastructures
- Measuring IT performance
- Tools: developing selection criteria models

6. Data Management

- The relational database model concepts and data models
- Organizing, manipulating and extracting the data
- Data sources, classification, reliability visualization and managing "Big Data"
- Data warehouses and mining.
- Tools: filtered lists, pivot tables, descriptive statistics , power view, power pivot

7. XML and XBRL

- Understanding XML concepts and creating a well-formed XML document
- Financial Reporting on the Internet with XBRL
- Tools: EXCEL XML imports and exports

8. Creating Excel decision models

- Overview of Decision Analysis and Critical Thinking: Situation and Stakeholder Analysis, Objectives Hierarchy, uncertainly assessment and the determining the value of information
- Tools: Mind Maps, business process mapping and Influence
- Spreadsheet Engineering, spreadsheet errors and the FAST modelling standard
- Tools: Spreadsheet auditing tools, scenario manager and Tornado Charts
- Modeling Financial Statements, processes, data considerations, probability distributions and model selection
- Tools: Monte Carlo Simulation and spreadsheet auditing
- Resource Allocation – Optimization Models: Allocation of resources, data considerations, conflicts and model selection, decision engineering and sensitivity analysis
- Tools: linear, nonlinear and goal programming models best case and worst case analysis
- Deterministic Models – Multi-Period: Multi-stage decision problem analysis, value of information and control, risk aversion
- Tools: payoff tables, decision trees
- Regression Modelling: Forecasting process, data considerations, probability distributions - their impact and estimation.

Tools: short-term forecasting models and regression analysis

9. Presenting Excel decision models

- Management Consulting: proposals, presentation and client management
- Tools: dashboards, charting and presentations

Methods for Prior Learning Assessment and Recognition

As per TRU Policy

Last Action Taken

Implement by Submission Preview Subcommittee Chair Peggy McKimmon