

Global Learning Semesters

Course Syllabus

Course: ACER-231 Information Analysis

Department: Accounting and Banking

Host Institution: Intercollege, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
ACER-231	Information Analysis	6
Semester Offered	Contact Hours	Prerequisites
Please contact us	42-45	ACER-101, ACER-102
Department	Level of Course	Language of Instruction
Accounting and Banking	Lower Division	English

Course Description

To ensure students appreciate the contribution of information systems to meeting the goals and needs of the business and understand the procedures for the development, introduction and use of computer-based systems. Different types of information systems, with particular reference to financial systems, and understanding the role of the decision-making process and its relationship to the organization.

Prerequisites

ACER-101, ACER-102

Topic Areas

1. Systems to handle and process information

a. Systems theory, classification of systems and the nature of feedback and control. The emphasis here will be on the use of these concepts in a business context and in relation to financial information systems:

- an outline of general systems theory
- definition of a system
- types of system
- basic elements of systems control
- positive and negative feedback
- delays in systems

a. The nature of systems needed for transaction processing

- data capture
- batch systems
- on line systems
- data storage.

2. Forms of financial and related information system

This section covers the different types of organizational structures and the different types of information systems

- a. Organizational structures - Structures of information systems and their appropriateness to different organizational structures: (i) development of different types of system (ii) independence of data structures from the organizational structure (iii) formal and informal information systems.
- b. Types and nature of information systems for operational, tactical and strategic planning and control
 - management information system
 - internal reporting systems
 - decision support systems
 - executive information systems
 - strategic information systems
 - expert systems.

3. Systems analysis and design

This section covers the design and use of human computer interfaces and the legal requirements of data protection legislation

a. Basics of human computer interface design

- means of interacting with a computer
- prototyping
- implications of poor design
- preferences for type of interface from novice and experienced users
- validation and verification of data
- security measures depending on the type of systems

b. The requirements of data protection legislation

- principles of the Data Protection Act 1984
- privacy of information
- accuracy of information
- accessibility of information
- purpose for which the data is to be used
- ability of individuals to correct data held about them
- organizations distributing information should ensure the reliability of the information
- effect of EC legislation.

c. Use of feasibility studies

- assessment of the feasibility/desirability of potential computer projects from the viewpoints of technical, social, operational and economic feasibility including the use of cost-benefit analysis
- the production of a feasibility report and project plan

d. Requirement analysis - Use of appropriate fact-finding techniques in order to establish client's system requirements in terms of

- processes to be carried out
- outputs to be produced
- Functional areas to be covered.

e. Determination of systems design criteria to consider aspects such as:

- client requirements
- need for internal controls
- client competence
- cost, budget and timescale constraints

- compatibility.
- f. Systems analysis and design tools - Identification and application of appropriate systems analysis and design tools and techniques such as:
- data analysis
 - database management systems
 - structured methodology
 - prototyping
- g. CASE tools to enable production of program specifications, database structures, network specifications, document/screen layouts, dialogue design etc.

4. Systems evaluation

This section provides the criteria for evaluating potential and actual systems against performance criteria.

a. Identifying, agreeing and documenting criteria for evaluating potential suitable systems

- systems proposal
- software design and documentation tools
- benchmarking
- conversion plans

b. Evaluating potential suitable systems and packages against agreed criteria

- needs analysis
- systems development life cycle
- upgrade paths for hardware and software
- switching costs and costs of locking into
- into manufacturers

c. Designing and implementing procedures for systems operation and control

- the application of administrative controls
- to the acquisition, development, use and maintenance of data processing resources
- the application of operational controls built into individual computer applications
- the issues raised by the concepts of privacy, data protection and computer misuse
- the use by internal or external auditors of computer based audit techniques

d. Drawing conclusions from the evaluation and proposing an optimal system

- the possibility of creating an optimal system
- judging whether an optimum system has been achieved
- costing of different systems options
- prioritising needs
- political considerations
- trade-off between strategic needs and impact on IT strategy
- cost of information and cost of lack of information

e. Explaining, negotiating, agreeing and documenting systems modifications

5. Implementation of systems

This section covers the life cycle of a system and the backup systems needed for a system and also considers the role of the system developer in giving and seeking advice

- a. Negotiating and agreeing procedures and plans for the implementation, monitoring and maintenance of a new system
- need for project management
 - the tools of project management
 - project team concepts
 - monitoring criteria
 - organisational control
 - systems changeover.
- b. Informing and advising on relevant aspects of the nature/purpose/functions/operation of the system to appropriate personnel
- software upgrades
 - role of database administrator
 - system/network manager
 - external impacts on IT system
 - advice on the appropriateness and completeness of user, administrator, software and hardware documentation.
- c. Minimising the possibility of system failures
- backup systems
 - log file systems
- d. Obtaining and analysing information on the operation of the system
- the need for measures of performance
 - error detection and correction
 - meeting new user requirements
 - flexibility and adaptability
 - integrity
 - effect of increasing volumes of transactions and users
- e. Systems modifications
- create criteria for the changing and upgrading of systems
 - effort expended in relation to the upgrading and improvement of systems
 - fault rectification
 - system records
 - alignment with manufacturers' upgrades
 - training and retraining
 - help lines
 - user groups
 - advantages and disadvantages of experts/contractors.

Readings and Resources

Required Textbook

- Information Analysis, AT Foulks Lynch.

Recommended Reading

- G. Anderson, Data Processing: Vol 1-Information Systems and Technology, Pitman.
- G. Anderson, Data Processing: Vol II-Principles and Practice, Pitman.

- Avgerou, T. Comford Developing Information Systems, MacMillan.
- Beech, J. Burn Applications in Business Data Processing, Alfred Waller.
- Clare, P. Loucopoulos Business Information Systems, Alfred Waller.
- S. Skidmore, Business Computing, Arnold.