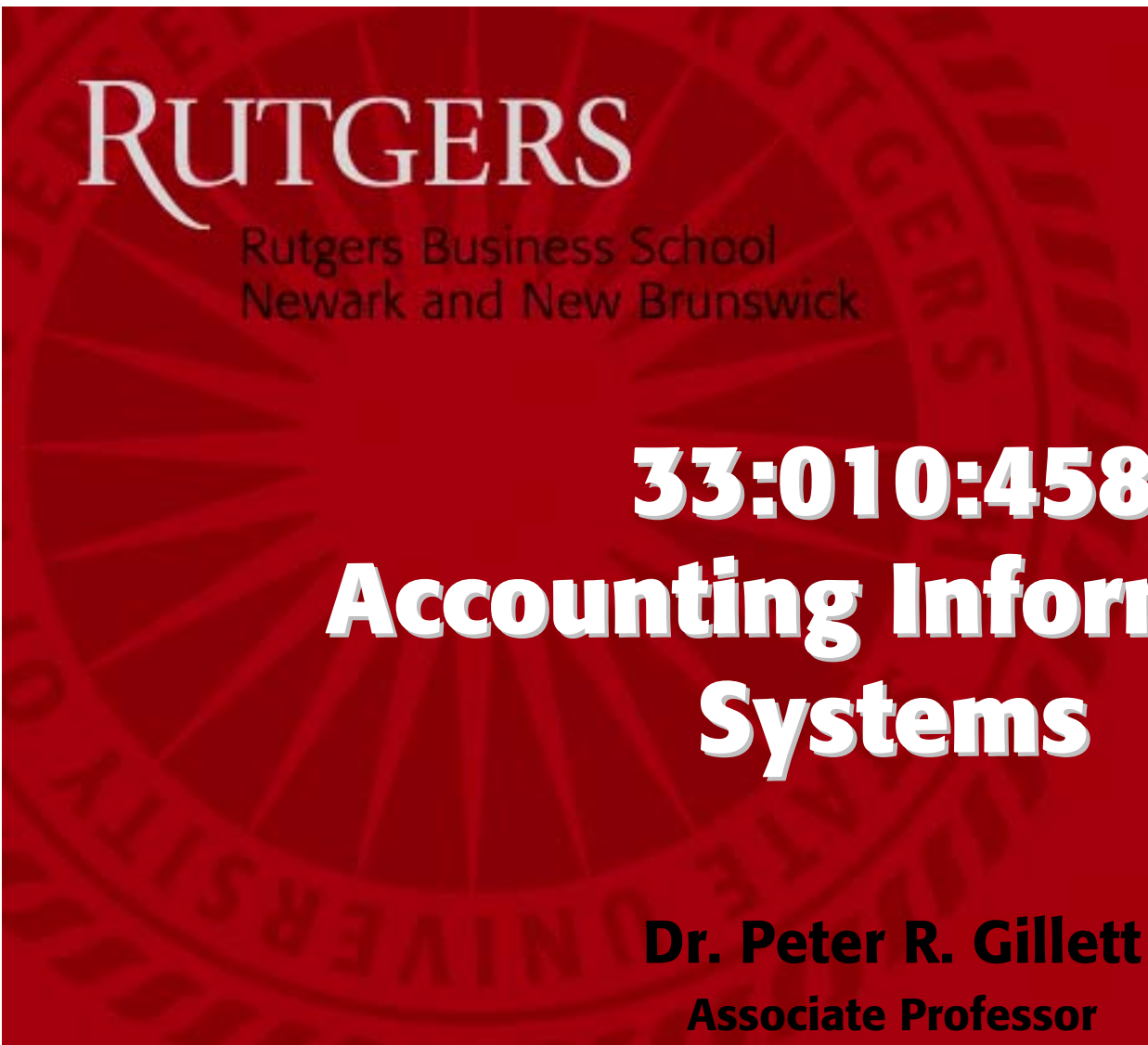


The background of the slide features a large, faint, circular seal of Rutgers University. The seal contains the text "RUTGERS UNIVERSITY" around the perimeter and "1823" at the bottom. The seal is centered behind the main text.

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Newark and New Brunswick

33:010:458

Accounting Information Systems

Dr. Peter R. Gillett

Associate Professor

**Department of Accounting, Business Ethics and Information Systems
Rutgers Business School–Newark and New Brunswick**

A.I.S. Class 26: Outline

- Final Examination
- Ash Accounting
- Learning Objectives for Chapter 5
- Advanced Information Systems
- Group Work for Chapter 5

Final Examination

- Common Examination
- 4:00 – 7:00 on December 17, 2009
- Beck Auditorium
- The examination will be designed to last 167 minutes
- You will have 13 minutes extra to finish, to fill in Scantron forms, and to turn work in at the front desk
After this there will be a 6 points per minute penalty
- Be sure to write your name & ID where required
- BE SURE TO TURN YOUR PAPERS IN ON THE CORRECT PILES FOR YOUR EXAMINATION!!!

Final Examination

- The Final Examination will have the following sections (points estimated):
 - * A: Multiple Choice Questions – 50 x 3 points
 - * B: System Flowcharting – 10 x 2 points
 - * C: REA Modeling – 120 points
 - * D: Abbreviations and Terminology – 10 x 2 points
 - * E: Short Questions / Problems – 70 points
 - * F: Relational Databases and ACCESS:
6–8 questions, 120 points altogether

Ash Accounting

- Stage 6
 - * Grading proceeds apace, and I hope to have it completed by the end of Friday
 - * Detailed instructions for Stage 7 will be posted on Blackboard at that time
- Stage 7 – Due December 9
 - * Produce Final Report on the project as described in the original assignment note
 - * Remove Stage 6 printed materials only – leaving Stages 1–4, 7
 - * For Stage 7, print & file Final Report as above, together with revised/corrected versions of final reports (but NOT the ACCESS documentation)
 - Human Resource Management
 - WIP
 - Payroll Register
 - Checks
 - Purchases
 - Payment Checks
 - Analysis of Expenses by type – showing dollar value and percentage of total
 - Fixed Assets
 - Checks
 - Fixed Assets Note
 - All
 - Financial statement numbers! . . .
 - * Ensure payroll, depreciation etc. calculations work!
 - * Submit two databases via Digital Dropbox using previous naming conventions

Learning Objectives for Chapter 5

- After studying this chapter you should be able to:
 - * describe and discuss the hierarchy of decision making that occur in transaction processing systems, decision support systems and executive information systems
 - * describe the input, processing and output characteristics of a decision support system
 - * describe the various components of decision support systems
 - * describe the benefits and drawbacks of a decision support system
 - * discuss concepts of the data warehouse, data mart, and data mining, which are methods of garnering intelligence from the volumes of data in transaction processing systems
 - * explain the characteristics of expert systems

Learning Objectives for Chapter 5

- After studying this chapter you should be able to:
 - * differentiate between transaction processing systems, decision support systems, and expert systems
 - * explain the various components of expert systems
 - * describe the knowledge representation methods used in developing expert systems
 - * discuss the process of developing expert systems with specific reference to the knowledge acquisition and system validation steps
 - * explain the benefits and drawbacks of expert systems
 - * discuss the criteria for identifying applications that might benefit from expert systems technology
 - * discuss the accountant's role in expert systems

Advanced Information Systems

- Transaction Processing Systems (TPS)
- Decision Support Systems (DSS)
- Executive Information Systems (EIS)
- Data warehousing, marts and mining
- Expert Systems (ES)

Transaction Processing Systems

- Highly structured decisions
- Routine, fully programmable, repetitive
- Little judgment
- Easy to develop
- Low level employees
- Internal data
- Simple processing rules

Decision Support Systems

- Semi-structured decisions
- Non-routine, partially programmable
- Middle management
- Internal and external data
- Complex rules and models

Executive Information Systems

- Variant of DSS
- User-friendly, GUI-based
- Designed for top executives
- Information rich
- Drill down facilities

Data warehousing, marts and mining

- **Data warehouse**
 - * repository of historical business transaction data organized to facilitate efficient querying for decision support
- **Data mart**
 - * repository of data from operational and other sources designed to meet needs of specific users
- **Data mining**
 - * analysis of data for previously undiscovered relationships

Expert Systems

- Unstructured decisions
- Non-routine, heuristic reasoning
- Top level or middle management
- Internal and external data
- Expert rules

Expert Systems

- User Interface
- Domain Database
- Knowledge Base
- Inference Engine
 - * Forward chaining
 - * Backward chaining
- Explanation facility

Expert Systems

- Knowledge-based systems
- Rule-based expert systems
 - * Expert system shells
 - * AI programming languages
 - LISP
 - PROLOG
- Frames, Semantic Nets, Objects
- Case-based reasoning

Expert Systems

- Knowledge engineering
 - * Knowledge acquisition
 - Books, Manuals etc
 - Knowledge elicitation
 - Interviews
 - Verbal Protocol Analysis
 - * Knowledge representation
- Verification and validation

Expert Systems

■ Benefits

- * Scarce human expertise
- * Releases human experts for more difficult cases
- * Improved accuracy of judgments
- * Greater consistency and consensus
- * Training of novices
- * Preserves expertise within a firm

Expert Systems

■ Disadvantages

- * Suitable human experts hard to find
- * Experts disagree
- * Knowledge elicitation difficult and time-consuming
- * Expensive to maintain and modify
- * Potential for deskilling jobs
- * Hard to validate fully
- * User acceptance

Expert Systems – Accounting

- Risk Assessment
- Internal Control Evaluation
- Audit Program Generation
- Financial Disclosures
- Loan Evaluation
- Tax Accrual and Planning
- Financial Planning

Group Work for Chapter 5

- Discussion Questions
- Problems 1 & 3