CCS 4406: Decision Support Systems

Contact Hours: 45 hours

Prerequisites: CCS 4302 Principles of Artificial Intelligence

Purpose: To provide students with fundamental knowledge on decision support systems.

Expected Learning Outcomes

At the end of this course the student should be able to:

i. Understand conceptual foundations of decision support systems;
ii. Identify the informational needs of an organization and propose appropriate managerial models to help analyzing different business scenarios, develop feasible solutions, interpret results, and suggest possible decisions;
iii. Use computerized analysis aids to enhance the management decision making processes for major functional areas in an organization;
iv. Emphasize organization environment, technology, decision models, and performance evaluation as the major determinants of decision support systems success;
v. Highlight the use of major methodologies of developing decision support systems to suit the organizational needs and capabilities.

Course Content

Introduction and Basics of DSS. Management Support Systems overview. Decision Making, Systems, Modeling and Support. DSS an Overview. Modeling and Analysis. BI: Data Warehousing, Data Acquisition, Data Mining, Business Analytics, Visualization. DSS Development. Group Support Systems. EIS. Knowledge Management. Knowledge based Systems AI & Expert Systems. Knowledge Acquisition, Validation & Representation. Implementing MSS in eBusiness era. Integrating, Impacts and future of MSS.

Mode of Delivery

Lectures, tutorials.

Instructional Materials /Equipment

A computer laboratory, lecture notes, illustration charts, journals, overhead presentation

equipment.

Assessment

Type	Weighting (%)
Examination	70%
Continuous Assessment	30%
Total	100%

Core Text Books

i. Turban, E., Sharda, R., Delen, D., Aronson, J. E., Lian, T.-P., & King, D. (2015). *Business Intelligence and Analytics: Systems for Decision Support, Global Edition* (10th ed.). Harlow, UK: Pearson Education. ISBN: 1292009209.

ii. Salles, M. (2015). *Decision-Making and the Information System*. Hoboken, NJ: John Wiley & Sons, Inc. ISBN: 1848217536.

iii. Albright, S. C. (2016). *VBA for Modelers: Developing Decision Support Systems with Microsoft Office Excel* (5th ed.). Boston, MA: Cengage Learning. ISBN: 1285869613.

Core Journals

i. *Knowledge-Based Systems. ISSN: 0950-7051.*

ii. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems. ISSN: 0218-4885.*

iii. *International Journal of Data Warehousing and Mining. ISSN: 1548-3924.*

Recommended Textbooks

i. Sharda, R., Delen, D., & Turban, E. (2018). *Business Intelligence, Analytics, and Data Science: A Managerial Perspective* (4th ed.). Boston, MA: Pearson Education Ltd. ISBN: 0134633288.

ii. Power, D. J., & Heavin, C. (2017). *Decision Support, Analytics, and Business Intelligence* (3rd ed.). New York, NY: Business Expert Press. ISBN: 1631573918.

iii. Sherman, R. (2015). *Business Intelligence Guidebook: From Data Integration to Analytics* (1st ed.). Waltham, MA: Morgan Kaufmann. ISBN: 012411461X.

Recommended Journals

i. *IEEE Transactions on Learning Technologies. ISSN: 1939-1382.*

ii. *International Journal of Intelligent Information Technologies. ISSN: 1548-3657.*

iii. *Journal of Strategic Information Systems. ISSN: 0963-8687.*