FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: IDC 4251C

COURSE TITLE: Data Mining for FinTech

PREREQUISITE(S): FIN 3450 and IDC 3021C

COREQUISITE(S): None

CONDITION(S): None

CREDIT HOURS: 3

CONTACT HOURS/WEEK: 4

CONTACT HOUR BREAKDOWN:

Lecture/Discussion:

Laboratory:

Other: Lecture/Lab Combined 4

FACULTY WORKLOAD POINTS: 4

STANDARDIZED CLASS SIZE

ALLOCATION: 24

CATALOG COURSE DESCRIPTION:

This course introduces students to concepts, tools, and techniques used for mining financial data. Hands-on projects with Microsoft PowerBI are emphasized.

SUGGESTED TEXT(S): None

IMPLEMENTATION DATE: Fall Term 2022 (2228) – Proposal 2021-24

REVIEW OR MODIFICATION DATE:

COURSE TOPICS CONTACT HOURS

PER TOPIC

1. Introduction to Data Mining 4
2. Characteristics of Financial Data Mining Tasks 4
3. Data Mining Tools and Techniques 32
   1. Collecting, Cleaning, and Transforming (4)
   2. Modeling (8)
   3. Detecting Trends and Patterns (8)
   4. Forecasting (8)
   5. Communicating Results (4)
4. Data Mining / Tools Hands-On Exercises 20

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| **Florida State College at Jacksonville** | | | | | | | | | | | | | **Course Learning Outcomes and Assessment** | | | | | | | | | | | |
| **SECTION 1** | | | | | | | | | | | | | | | | | | | | | | | | |
| Course Prefix and Number: | | | | | IDC 4251C | | | | | | | | | | | Semester Credit Hours (Credit): | | | | | | | | 3 |
| Contact Hours (Workforce): | | | | | | | |  |
| Course Title: | | | | | Data Mining for FinTech | | | | | | | | | | | | | | | | | | | |
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| **SECTION 2a *(To be completed for General Education courses only.)*** | | | | | | | | | | | | | | | | | | | | | | | | |
| ***TYPE OF COURSE (Place an “X” in the box next to those that are applicable.)*** | | | | | | | | | | | | | | | | | | | | | | | | |
|  | General Education Core (If selected, core discipline area will be identified in Section 4.) | | | | | | | | | | | | | | | | | | | | | | | |
|  | General Education (If selected, you must also complete Section 4, Section 5, and Section 8) | | | | | | | | | | | | | | | | | | | | | | | |
| **SECTION 2b** | | | | | | | | | | | | | | | | | | | | | | | | |
| ***TYPE OF COURSE (Place an “X” in the box next to those that are applicable.)*** | | | | | | | | | | | | | | | | | | | | | | | | |
|  | A.A. Elective | | | | | | |  | | A.S. Required Course | | | | | | | | | |  | A.S. Professional Elective | | | |
|  | A.A.S. Required Course | | | | | | |  | | A.A.S. Professional Elective | | | | | | | | | |  | Technical Certificate | | | |
|  | PSAV/Clock Hour/Workforce | | | | | | |  | | Development Education | | | | | | | | | |  | Apprenticeship | | | |
| X | Upper Division/Bachelors | | | | | | | X | | Other: | | Advanced Technical Certificate | | | | | | | | | | | | |
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| **SECTION 3** | | | | | | | | | | | | | | | | | | | | | | | | |
| ***INTELLECTUAL COMPETENCIES (Place an “X” in the box next to those that are applicable.)*** | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Reading |  | Speaking | | |  | | Critical Analysis | | | | | |  | | | Qualitative Skills | | | |  | Scientific Method of Inquiry | |
|  | | Writing |  | Listening | | |  | | Information Literacy | | | | | |  | | | Ethical Judgement | | | |  | Working Collaboratively | |
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| **SECTION 4 *(To be completed for General Education courses only.)*** | | | | | | | | | | | | | | | | | | | | | | | | |
| ***GENERAL EDUCATION DISCIPLINE AREA (Place an “X” in the box next to those that are applicable.)*** | | | | | | | | | | | | | | | | | | | | | | | | |
|  | Communications | | | | |  | | | | Humanities | | | |  | | | Mathematics | | | | | | | |
|  | Social and Behavioral Sciences | | | | | | | | | | | | |  | | | Natural Sciences | | | | | | | |
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| **SECTION 5 *(To be completed for General Education courses only.)*** | | | | | | | | | | | | | | | | | | | | | | | | |
| ***GENERAL EDUCATION LEARNING OUTCOME AREA (Place an “X” in the box next to those that are applicable.)*** | | | | | | | | | | | | | | | | | | | | | | | | |
|  | Communication | | | | |  | | | | Critical Thinking | | | |  | | | Information Literacy | | | | | | | |
|  | Scientific and Quantitative Reasoning | | | | | | | | | | | | |  | | | Global Sociocultural Responsibility | | | | | | | |
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| **SECTION 6** | | | | | | | | | | | | | | | | | | | | | | | | |
| ***LEARNING OUTCOMES*** | | | | | | | | | | | ***TYPE OF OUTCOME***  ***(General Education, Course or Program)*** | | | | | | | | ***METHOD OF ASSESSMENT*** | | | | | |
| Demonstrate proficiency in collecting, cleaning, and using mining techniques to analyze financial data | | | | | | | | | | | Program/Course | | | | | | | | Projects and/or Exams | | | | | |
| Use visualization tools to analyze data and produce reports | | | | | | | | | | | Course | | | | | | | | Projects and/or Exams | | | | | |
| Design and implement dashboards to communicate findings | | | | | | | | | | | Program/Course | | | | | | | | Project and/or Exams | | | | | |

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| **SECTION 7** | | | |
| Faculty name(s): | David Singletary | Date: | 8/5/21 |