



STARK STATE COLLEGE

GENERAL SYLLABUS

Course Information

Course Name: Advanced Topics in Data Analysis
Course Number: CIS226

Required Materials

Textbook(s): None
Required Readings: None
Additional Materials: None

Course Outline/Calendar

The date of coverage and order of coverage may be modified based on the faculty member and events beyond the control of faculty members that interfere with class times and teaching.

Weeks	Assignments
Weeks 1-2	<p>Phase 1 – Data Foundations and Cleaning <i>Key Topics: Introduction, Data preparation, exploration, and quality control</i></p> <p><i>Homework: Explore 3 datasets, clean data, and document findings</i></p>
Weeks 3-4	<p>Phase 2 – Cloud Computing & Data Collaboration <i>Key Topics: Cloud analytics and online data sharing</i></p> <p><i>Homework: Publish cleaned report to the cloud and submit reflection on benefits of cloud BI.</i></p>
Weeks 5-6	<p>Phase 3 – Data Warehousing Concepts <i>Key Topics: Data integration and storage architecture</i></p> <p><i>Homework: Power BI model showing relationships + 1-page schema explanation</i></p>
Weeks 7-9	<p>Phase 4 – Data Mining and Predictive Insights <i>Key Topics: Analytical methods and pattern recognition</i></p> <p><i>Homework: Visual presentation identifying patterns + summary of insights.</i></p>
Weeks 10-12	<p>Phase 5 – Big Data Concepts & Ethics <i>Key Topics: Understanding large-scale data and responsible analytics</i></p> <p><i>Homework: Reflection linking course learning to Big Data and ethical practices.</i></p>

Weeks	Assignments
Weeks 13-16	Phase 6 – Capstone / Integration Project <i>Key Topics: Integration and application</i> <i>Homework: Final Power BI project and short report linking all course phases.</i>

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