

CJUS Data Analysis Course Schedule # 7

Sept 03, 2024 - Nov 10, 2024

All Classes will meet at 9.00 pm IST on Zoom

Module 1 Weeks 1: Criminological Perspectives Sept 3-7

Readings Week 1: Path to Reform and Problem Oriented Policing

Class Meetings: Tuesday: Introduction- Path to Reform
Thursday: POP/ COP/ Situational Prevention
Friday: **Guest lecture Suhail Conquering Everest**

Assignment: Application of POP in district policing

Module 2 Week 2: Qualitative Analysis and Historiographic Sept 9-14

Readings Week 2: Notes from Police station

Class Meetings: Tuesday: Geography of Crime
Thursday: Content Analysis and Survey Design
Friday: **Guest lecture**

Assignment: Content Analysis of NPC Report 1

Module 3 Week 3: Model building through Regression Sept 16-21

Readings Week 3: Reading of Regression article

Class Meetings: Tuesday: Introduction to Statistics
Thursday: Regression Analysis
Friday: **Guest lecture**

Assignment: Reading results of Regression- Winfree article using OLS

Module 4: Week 4: Machine Learning & Agent Based Modeling Sept 23-28

Readings Week 4: ML Articles/ HART project

Class Meetings: Tuesday: Introduction to ML
Thursday Precautions in applying ML

Friday: **Guest lecture**

Assignment on Machine Learning

Module 5 Week 5: Network Analysis

Readings Week 5: Network articles

Class Meetings: Tuesday: Introduction to Networks
Wednesday Gephi application

Assignment on Network

NO CLASS Oct 3-13

Module 6 Week 6: Data Visualization Oct 14-19

Readings Week 6: Tufte readings

Class Meetings: Tuesday: Introduction to Visualization
Thursday Principles of Good and Bad colors
Friday: **Guest lecture**

Assignment on Visualization

Mod 7 Weeks 7: Conceptualization of research project Oct 21-26
Students work on developing research question and design

Class Meetings: Tuesday: Developing Research Questions
Thursday Data collection and analysis
Friday **Guest Lecture**

Mod 8 Week 8 Project Presentations by students Oct 28-Nov 8

Course Outcomes

- Theories of crime that suggest why people commit crime
- Building Criminal Justice Data Sources
- Criminal Justice Data Visualization

- Model Building, Big data analytics, simulation, machine learning, network analysis, survey design in criminal justice issues, Data Security
- Formulating crime control questions that can be tested using various methods.
- Using CJ data to test policy outcome
- Structuring a draft publishable research article