COURSE NUMBER: IAF 606

COURSE TITLE: Solving Problems with Data Analytics

CREDITS: 3

PREREQUISITES / COREQUISITES: IAF 601 and 602, or permission of instructor. Students are expected to be familiar with basic elements of informatics and analytics, including data cleaning and management, basic statistical analysis and presentation of results. Familiarity with software (e.g., R, Python, SAS, etc) capable of data management, analysis and visualization is expected.

FOR WHOM PLANNED: IAF 606

INSTRUCTOR INFORMATION:
Instructor: Dr. Scott Richter
Office: Petty 107
email: sjricht2@uncg.edu
Office hours: TTh noon-1:30; W 5:00-5:45

BULLETIN DESCRIPTION: This course addresses how data analytics is used to solve applied problems in varied contexts. Students will learn how to choose appropriate methodologies, manage data, conduct analyses and report results.

STUDENT LEARNING OUTCOMES:
Upon successful completion of this course students will be able to
- SLO-1: Formulate a plan for solving problems in different contexts
  SLO-2: Design and implement a data management plan appropriate to the problem
- SLO-3: Develop and implement an appropriate analysis plan
- SLO-4: Construct effective presentations for communicating results
- SLO-5: Draw conclusions and support problem solving decisions

TEACHING METHODS AND ASSIGNMENTS FOR ACHIEVING LEARNING OUTCOMES:
1) Notes, readings from the text and supplementary reading will be posted on Canvas prior to each class meeting. Students are expected to become familiar with these materials before each class.
2) Students will complete several midterm projects. The midterm projects will require students to complete specific tasks related to the problem-solving process, and may involve parts of several studies.
3) Students will complete a final project. The final project will require students to complete all parts of the problem-solving process

EVALUATION AND GRADING:

Determination of course grade

Weekly presentations   10%
Midterm projects: 60%

Final project: 30%

    Proposal and data management plan: 7.5%
    Analysis plan: 7.5%
    Results and Discussion: 7.5%
    Oral presentation: 7.5%

__Failure to submit assigned work by the due date and time will receive a score of zero unless prior arrangements have been made.__

Grading scale:

Overall average	Grade
90 or above	A
80-89	B
70-79	C
Below 70	F

REQUIRED TEXTS/READINGS/REFERENCES: Think Like a Data Scientist: Tackle the data science process step-by-step 1st Edition (2017), Brian Godsey. Publisher: Manning Publications; ISBN-13: 978-1633430273.
Textbook companion site: http://www.manning.com/

ACADEMIC INTEGRITY POLICY: Each student is required to abide by the Academic Integrity Policy on all work submitted for the course. Refer to the following URL: https://osrr.uncg.edu/academic-integrity/