

DAT 620 Data Analytics in Business Intelligence**4 Credits**

Semester/ Term: Fall 2023 Term-1

Course Dates: August 28, 2023 – October 20, 2023

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Availability: When needed, upon request

Course Description:

This course will examine the role of data analysis through the lens of multiple business disciplines, such as business, health care, and marketing. Students will have the opportunity to explore key areas in the analytical process, including how data are created, stored, and accessed. The course covers how businesses and organizations work with data to create environments in which analytics can drive effective and efficient decision-making. PREREQUISITE(S): DAT 510 Introduction to Data Analytics

Learning Outcomes:

1. Categorize risk measurement, value, and segmentation of the population within the context of a chosen industry.
2. Use data analytics to construct and interpret data models, predictive modeling, and prototypes needed to gain stakeholder support or achieve business objectives.
3. Identify the limitations and challenges of reusing data within a data model.
4. Examine the internal and external business factors, such as economics and marketing, that impact organizational operations and objectives.

5. Discuss the different elements of data governance and their applications.

Course Resources:

The following resources are available via the [CPS online bookstore](#).

Title	Author	Edition	Year	ISBN #	Required or Recommended
Collect, Combine, and Transform Data Using Power Query in Excel and Power BI Log in with UNH email www.learning.oreilly.com Book link	Gil Raviv	1st	2018	9781509307982	Required
Data Science for Business Log in with UNH email www.learning.oreilly.com Book Link	Foster Provost & Tim Fawcett	None	2013	None	Required

Course Policies:

This course is intended to be interactive, as more participation will enhance student learning. Each week you will view lecture materials, read more about the lecture topic in your course text and then you will participate in the Discussion Forum and complete assignments where you will have a chance to apply what you've learned.

Each week you are expected to:

1. Review each week's learning objectives.
2. Complete all assigned readings and lecture material.
3. Participate in Discussion Boards
 - a. Initial discussion posts are due by Thursday by 11:59 p.m.,

b. Responses to two classmates are due by Sunday at 11:59 p.m.

4. Complete and submit all assignments by the due dates Sunday by 11:59 pm

Unexcused late submissions will receive a 10% deduction; no submissions will be accepted more than seven days after the original due date. No extensions to the DB beyond Day 7 @ 11:59 pm EST will be granted unless prior arrangements have been made with the instructor.

Note: Changes are at the instructor's discretion.

Description of Course Activities and Requirements:

Note: All Assignment Descriptions and Rubrics will be in CANVAS for each assignment.

Grading Percentages:

Category	Individual Point Value	Number of Occurrences	Total Point Value	Grade %
Discussion Board	100	1	100	5%
Journal Assignments	100	5	500	25%
Excel Exercises	100	5	500	25%
Quiz	150	2	300	15%
Final Project	600	1	600	30%
Total	1050	14	2000	100%

Course Schedule & Topics:

Week	Module Topics	Readings & Resources	Activities & Assignments
1	Welcome and Introduction	<ul style="list-style-type: none">• Syllabus• Data Science for Business-1	<ul style="list-style-type: none">• DB Introductions• Journal – Chapter-1 Overview
2	Introduction to Power Query	<ul style="list-style-type: none">• Raviv-1	<ul style="list-style-type: none">• Raviv Chapter Exercises• Journal – What is Meta Data?

Week	Module Topics	Readings & Resources	Activities & Assignments
3	Basic Data Prep Challenges	<ul style="list-style-type: none"> • Raviv – 2 • Data Science for Business - 2 	<ul style="list-style-type: none"> • Raviv Chapter Exercises • Journal – Chapter Overview
4	Predictive Modeling	<ul style="list-style-type: none"> • Data Science for Business – 3 • Raviv – 3 and 4 	<ul style="list-style-type: none"> • Prepare for Final • Raviv Chapter Exercises
5	Preserving Data Context	<ul style="list-style-type: none"> • Raviv – 5 • Data Science for Business - 4 	<ul style="list-style-type: none"> • Raviv Chapter Exercises • Quiz – 1 Weeks 1-4
6	Unpivoting Tables	<ul style="list-style-type: none"> • Raviv – 6 and 7 • Data Science for Business -8 	<ul style="list-style-type: none"> • Prepare for Final (Submit in Week 8) • Raviv Chapter Exercises
7	Intro. to Power Query "M"	<ul style="list-style-type: none"> • Raviv – 9 • Data Science for Business - 7 	<ul style="list-style-type: none"> • Final Project Work (Submit in Week 8) • Journal - Decision Making
8	Final Project	<ul style="list-style-type: none"> • Data Science for Business 13 • Raviv - 14 	<ul style="list-style-type: none"> • Journal - Data for Business • Final Project • Quiz Weeks 5-7

College of Professional Studies Grading Scale:

Percent	Grade	Grade Points	Level of Achievement
94-100	A	4.0	Excellent
90-93	A-	3.67	
87-89	B+	3.33	
84-86	B	3.0	Superior
80-83	B-	2.67	
77-79	C+	2.33	

74-76	C	2.0	Satisfactory, Competent
70-73	C-	1.67	
67-69	D+	1.33	
64-66	D	1.0	Marginal
60-63	D-	0.67	
59-Below	F	0.0	Failure

Other Grades

Students who discontinue engagement in a course may be awarded a grade of AF:

Administrative Failure. Further details on an Administrative Failure can be found in the [UNH Catalog](#).

Students who complete a major portion of the entire work of the course, but are then unable to complete the course, may request an incomplete from their instructor. An instructor must approve the student's request for a grade of IC (incomplete) and additional time to complete the coursework. More details regarding incompletes can be found in the [UNH Catalog](#).

Institutional Policies:

Outcomes Assessment Note

This course may be part of an initiative to assess learning outcomes and associated competencies. Divisional learning outcomes are those areas of learning that we expect all online students to demonstrate by the time they graduate. Competencies refer to the knowledge, skills, and abilities related to these broader outcomes and professional skills. For some undergraduate courses, results of this competency assessment may appear alongside the criteria in your grading rubric for specific assignments that are part of this initiative, along with descriptions of the competencies assessed by your instructor. For graduate students, professional competencies are aligned with divisional competencies and are assessed in your e-portfolio. The college uses these data to refine course content and teaching practice. Confidentiality of any data that identify participants is maintained.

If you have questions about outcomes assessment, please contact your instructor.

Library Services

The UNH Manchester Library supports the UNH College of Professional Studies. Students have access to electronic books, journal articles, and more online. Librarians are available to help plan research strategies and cite sources. Contact the UNH Manchester Library via e-mail (unhm.library@unh.edu) or by phone (603-641-4173) or visit the [UNH Manchester Library](#).

Academic Support Services

Online, 24-hour-a-day tutorial support, as well as individual face-to-face tutoring options, are available to students. Specific resources include: basic skills preparation in reading, writing, and math support, study and research skills, time management tips, and assistance in identifying online resources. Campus team members work closely with faculty and the academic administration to foster academic success. Please contact the Academic Support Coordinator at 603.513.1140 for additional details or request a tutor at Academics Support Services.

Technical Assistance

For assistance with issues related to accounts, UNH email, WebCAT, Canvas Learning Management System (LMS), or other associated academic technologies, please visit the [IT Help Desk Portal](#) (help.unh.edu) for answers to the most frequently asked questions. The IT Help Desk page can be used to submit an online help request form or call 1-888-372-4270.

Documented Disabilities/ Americans with Disabilities Act

The UNH College of Professional Studies Student Disability Services is committed to helping students become engaged, self-advocating, independent learners. We seek to promote accessible learning environments where students with disabilities experience equal access and full participation.

The UNH College of Professional Studies, in accordance with the American Disabilities Act of 1990, the Americans with Disabilities Amendments Act of 2008, and Section 504 of the Rehabilitation Act of 1973, will provide eligible students with a documented disability reasonable accommodation(s) to ensure equal access to college programs and activities.

To apply for accommodations, please contact the College of Professional Studies Student Disability Services Coordinator at (603) 862-2607, by email at sas.office@unh.edu, or download the application directly from [Accommodate](#).

Academic Honesty

Honesty is a core value at the University of New Hampshire. The members of its academic community both require and expect one another to conduct themselves with integrity. This means that each member will adhere to the principles and rules of the University and pursue academic work in a straightforward and truthful manner, free from deception or fraud.

Any attempts to deviate from these principles will be construed as acts of academic dishonesty and will be dealt with according to the rules of due process outlined below.

The value of honesty and the expectation of conduct that goes with it are intended to reinforce a learning environment where students and faculty can pursue independent work without unnecessary restraints. At the same time, the University recognizes its responsibility to encourage and inculcate values and standards of conduct that will guide its students throughout their careers.

The academic honesty policy provides standards of conduct for individuals only. Policies relating to recognized student organizations are described elsewhere. Such organizations, however, are expected to conform to the values and standards that govern their members as individuals within the UNH community. It is expected that students attending the University will conduct themselves in accordance with the rules and regulations of the University. Students must acknowledge the University's right to take disciplinary action, including suspension or dismissal, for failure to comply with the expectations delineated by this policy.

This policy establishes the expectations of the University of New Hampshire for academic honesty and defines situations that constitute academic misconduct related to undergraduate and graduate coursework and undergraduate thesis and research projects. Finally, it presents the due process that follows should misconduct occur.

The full Academic Honesty policy, including definitions and procedures, can be found [in the UNH Catalog](#).

Turnitin Use Policy

The UNH College of Professional Studies makes use of Turnitin.com, an online service that checks students' work for improper citation or potential plagiarism by comparing it against the works of others in the Turnitin database as well as online sources. Students taking this course agree that all required work may be submitted to Turnitin and agree to their terms of use. Works submitted to Turnitin will become source documents in their reference database solely for the purpose of detecting plagiarism of other students' work. Students retain copyright of their own work. Turnitin takes extreme measures to protect users' privacy, which can be reviewed in their [Privacy Center](#).

Academic Credit Hour

The UNH College of Professional Studies adheres to the federal definition of credit hour. For each credit hour, the College requires, at a minimum, 45 hours of total instructional engagement. In general, about one-third of this work will be direct faculty instruction, and two-thirds will be comprised of other academic activities. Direct faculty instruction may include, but is not limited to, classroom instruction, e-learning, laboratory work, studio work, field work, clinicals, performance, internships, and practica. Other academic activities may include, but are not limited to, readings, reflections, essays, reports, inquiry, problem solving, rehearsal, collaborations, theses, and electronic interactions. Regardless of instructional delivery method and length of term, students are required to meet the course's learning outcomes and the minimum amount of total instructional engagement for each credit hour.

Responsible, Professional, and Effective Interpersonal Behavior and Communication

Enabling students to develop responsible, professional, and effective skills and habits of interpersonal behavior and communication is a primary goal of this course and degree program at UNH College of Professional Studies Online. Throughout this course, students will be expected to interact with all fellow students, faculty, and staff within the UNH College of Professional Studies Online community with respect and in accord with applicable policies and laws. Performance in this course will be assessed in part on success in practicing these skills and habits and meeting these expectations. If there are any questions about these goals and expectations or their application in a specific circumstance, please ask the course instructor for guidance.

Freedom of Speech

Freedom of speech, expression, and assembly are fundamental rights of all persons and are central to the mission and purposes of UNH College of Professional Studies Online. Our educational mission is founded on the bedrock principles of supporting a robust exchange of ideas and protecting academic freedom. The College recognizes that free inquiry and free expression are indispensable components in the examination of ideas. Students, faculty, and staff are free to express their views, individually or in organized groups, orally or in writing, on any topic, subject only to rules necessary to preserve the equal rights of others and the functions of normal College operations. The College will not discriminate on the basis of the political, religious, philosophical, ideological, or academic viewpoint expressed by any person.

Code of Conduct

Membership in society implies minimal norms for civil behavior towards one another. It is expected that all members of the college community treat faculty, staff, and fellow students with respect. Students need to be knowledgeable of and comply with college policies. Students are accountable for their actions and the consequences of any behavior that is inconsistent with these values and expectations.

For a complete description of the UNH College of Professional Studies Code of Conduct Policy and Process, please refer to [Student Affairs and Wellness](#). Students with conduct questions or those who would like to report an incident may contact the Director of Student Affairs/Title IX Coordinator at 603-513-1328.

Title IX (20 U.S.C. § 1681) Statement

Title IX of the Educational Amendments of 1972, 20 U.S.C. section 1681 is a federal civil rights law prohibiting discrimination on the basis of sex in education programs and activities. This includes all forms of gender- and sex-based discrimination, sexual harassment, sexual violence, domestic violence, dating violence, and stalking. The College maintains a zero-tolerance policy for sexual misconduct. For more information on Title IX or the UNH College of Professional Studies' Sexual Misconduct Policy, or to report an incident, please contact affirmaction.equity@unh.edu or call (603) 862-2930.

Confidentiality and Mandatory Reporting

To ensure a safe and productive educational environment for all students, the College requires faculty members to report incidents of sexual violence and harassment shared by students to the College's [Title IX Coordinator](#). If a student wishes to speak to a confidential service provider who does not have this reporting responsibility, please visit [Student Affairs and Wellness](#) for a complete listing of resources.

Weather & Emergency Cancellation Policy & Alerts

The UNH College of Professional Studies participates in the University of New Hampshire's emergency notification system, UNH Alert, which allows students, faculty, and staff to receive a message in the event of an emergency. These brief messages can be sent directly to students' e-mail or cell phone, and will notify members of the college community about:

- Weather-related cancellations at our regional and academic campuses.
- Emergency situations that may affect students, faculty, and staff.
- Curtailed operations at the College resulting from an urgent circumstance.

Learn more at [Safety & Security](#).

Class Recording

Lectures or other class meetings for this course may be recorded by the College using media platforms. Such recordings may be available for educational use by other students enrolled in the class (including both for instruction and as a review tool), the course instructor(s), and other College officials who support course instruction. Students' voices or images may be captured on the recordings, and by enrolling in this course you are consenting to such recording for these purposes.