Business Administration (BS): Business Analytics Concentration

Introducing the newest concentration at Poole College of Management: Business Analytics. In this dynamic field, students explore cutting-edge techniques to harness data for business success. From traditional statistics to advanced artificial intelligence (AI) methods, you will learn to collect, analyze and present data effectively to inform business decisions. Choosing the business analytics concentration will help you tap into the surging demand for career-ready graduates in corporate environments.

Why Business Analytics at NC State?

Poole College of Management stands out for its business analytics education and research excellence, consistently earning top rankings from U.S. News & World Report most recently as No. 1 in NC and No. 9 among public universities nationwide for undergraduate business analytics program. Developed by industry experts for maximum industry impact, our curriculum equips students with the skills, background and practical knowledge required to add value to the workforce from day one. Building upon this foundation of excellence, we’ve launched the Business Analytics Initiative, propelling the college even further as a hub for data analysis in business through education, research and thought leadership.

Management, Innovation, and Entrepreneurship

Poole College of Management
1300 Nelson Hall
Raleigh, NC 27695
Phone: 919.515.5565
Website (https://poole.ncsu.edu/mie/)

Jonathan Bohlmann (https://poole.ncsu.edu/people/jdbohlma/)
Department Head
Professor of Marketing and Innovation

Plan Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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<tr>
<td></td>
<td><strong>Humanities and Social Sciences</strong></td>
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<td>Acad Writing Research (p. 2) (^1)</td>
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<td>COM 110 Public Speaking</td>
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<td>COM 112 Interpersonal Communication</td>
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<td>COM 211 Argumentation and Advocacy</td>
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<td>PSY 200 Introduction to Psychology</td>
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<td>ARE 201 Introduction to Agricultural &amp; Resource Economics</td>
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<td>EC 201 Principles of Microeconomics</td>
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<td>ENG 333 Communication for Science and Research</td>
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<td>PHI 214 Issues in Business Ethics</td>
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<td>PHI 221 Contemporary Moral Issues</td>
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<td>PHI 313 Ethical Problems in the Law</td>
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<td>World Language Proficiency (<a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/world-language-proficiency/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/world-language-proficiency/</a>)</td>
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<tr>
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<td>MA 121 Elements of Calculus</td>
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<td></td>
<td>MA 131 Calculus for Life and Management Sciences A</td>
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<td>MA 141 Calculus I</td>
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<td>Code</td>
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<td>MA 114</td>
<td>Introduction to Finite Mathematics with Applications or MA 242 Calculus III</td>
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<td>BUS 350</td>
<td>Economics and Business Statistics</td>
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<td>ST 350</td>
<td>Economics and Business Statistics</td>
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<td>ST 312</td>
<td>Introduction to Statistics II</td>
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<td>ST 370</td>
<td>Probability and Statistics for Engineers</td>
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<td>ST 372</td>
<td>Introduction to Statistical Inference and Regression</td>
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<tr>
<td>BUS 351</td>
<td>Introduction to Business Analytics</td>
<td>3</td>
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<tr>
<td>ST 307</td>
<td>Introduction to Statistical Programming-SAS</td>
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<tr>
<td>or ST 308</td>
<td>Introduction to Statistical Programming - R</td>
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### Concentration (p. 2)

**Required credit hours (p. 2)**

- BUS 440 Database Management 3

**Elective credit hours (p. 3)**

- BUS 440 Database Management 3

**Free Electives**

Free Electives (12 Hr S/U Lmt) 19

**Total Hours**

- 120

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### Acad Writing Research

<table>
<thead>
<tr>
<th>Code</th>
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<td>ENG 101</td>
<td>Academic Writing and Research</td>
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<td>WLEN 101</td>
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### Transfer Sequence

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### Concentration Courses

- Required Courses: 6 Credits (either Regular or Honors sections)

<table>
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<th>Code</th>
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<tr>
<td>BUS 440</td>
<td>Database Management</td>
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1. C- or better
2. See Concentration Requirements below.
3. Students should consult their academic advisors to determine which courses fill this requirement.
BUS 458 Analytics: From Data to Decisions 3

Electives: Choose 9 credit hours from the list below, including up to 6 credits of DSC classes (see note)

<table>
<thead>
<tr>
<th>Code</th>
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<th>Counts towards</th>
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<td>BUS 428</td>
<td>Financial Analytics</td>
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<td>BUS 429</td>
<td>Financial Modeling</td>
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<td>BUS 459</td>
<td>Business Analytics Practicum</td>
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<td>BUS 462</td>
<td>Marketing Research</td>
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<td>BUS 469</td>
<td>Digital Marketing Practicum 1</td>
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<td>BUS 470</td>
<td>Operations Modeling and Analysis</td>
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<td>BUS 476</td>
<td>Decision Modeling and Analysis</td>
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<td>MIE 437</td>
<td>Human Resources Analytics 1</td>
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<td>ACC 440</td>
<td>Enterprise Resource Planning Systems: Implementation, Risk, and Analytics</td>
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<td>ACC 411</td>
<td>Business Valuation</td>
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<tr>
<td>ACC 459</td>
<td>Analytics in Accounting and Finance</td>
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<td>DSC 205</td>
<td>Data Communication</td>
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<td>DSC 225</td>
<td>Data Science for Social Good</td>
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<td>DSC 295</td>
<td>Introductory Special Topics in Data Science 2</td>
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<td>DSC 405</td>
<td>Data Wrangling and Web Scraping</td>
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<td>DSC 412</td>
<td>Exploring Machine Learning</td>
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<td>DSC 495</td>
<td>Special Topics in Data Science 2</td>
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<td>DSC 406</td>
<td>Exploratory Data Analysis for Big Data</td>
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<td>DSC 410</td>
<td>Data Internship Preparation for Social Impact</td>
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1 Course project must be approved by concentration contact for the course to count.
2 DSC 295 and 495 classes require permission from the concentration contact to fulfill this requirement.

First Year
Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>M 100</td>
<td>Personal and Professional Identity Development</td>
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<tr>
<td>MA 121</td>
<td>Elements of Calculus</td>
<td>3</td>
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<tr>
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<tr>
<td>MA 141</td>
<td>Calculus I</td>
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<tr>
<td>MIE 201</td>
<td>Introduction to Business Processes</td>
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<td>ACC 210</td>
<td>Concepts of Financial Reporting 1</td>
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Spring Semester

<table>
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<th>Course</th>
<th>Title</th>
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<td>MA 114</td>
<td>Introduction to Finite Mathematics with Applications or Calculus III</td>
<td>3</td>
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<tr>
<td>COM 110</td>
<td>Public Speaking</td>
<td>3</td>
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<tr>
<td>COM 112</td>
<td>Interpersonal Communication</td>
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<tr>
<td>COM 211</td>
<td>Argumentation and Advocacy</td>
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<td>GEP Humanities [<a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/</a>]</td>
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<tr>
<td>ENG 101</td>
<td>Academic Writing and Research (or GEP Natural Sciences [<a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-natural-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-natural-sciences/</a>] with Lab) 1</td>
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<td>EC 201</td>
<td>Principles of Microeconomics 1 or Introduction to Agricultural &amp; Resource Economics</td>
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Second Year
Fall Semester

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<td>Introduction to Managerial Accounting 1</td>
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<td>BUS 340</td>
<td>Information Systems Management</td>
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<tr>
<td>BUS/ST 350</td>
<td>Economics and Business Statistics 1</td>
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<tr>
<td>EC 202</td>
<td>Principles of Macroeconomics</td>
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GEP Health and Exercise Studies (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/) 1

Hours 16

Spring Semester
BUS 351 Introduction to Business Analytics 3
Select two of the following: 1 6
BUS 320 Financial Management
BUS 360 Marketing Methods
BUS 370 Operations and Supply Chain Management
MIE 305 Legal and Regulatory Environment
MIE 310 Introduction to Entrepreneurship
MIE 330 Human Resource Management
PSY 200 Introduction to Psychology 3
GEP US Diversity, Equity, and Inclusion (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-usdei/) 3
ST 307 or ST 308 Introduction to Statistical Programming - SAS 1
or Introduction to Statistical Programming - R

Hours 16

Third Year
Fall Semester
Select two of the following: 1 6
BUS 320 Financial Management
BUS 360 Marketing Methods
BUS 370 Operations and Supply Chain Management
MIE 305 Legal and Regulatory Environment
MIE 310 Introduction to Entrepreneurship
MIE 330 Human Resource Management
Select one of the following: 3
ENG 331 Communication for Engineering and Technology
ENG 332 Communication for Business and Management
ENG 333 Communication for Science and Research
Select one of the following:
COM 110 Public Speaking
COM 112 Interpersonal Communication
COM 211 Argumentation and Advocacy
GEP Humanities (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/) 3
BUS 440 Database Management 3

Hours 15

Spring Semester
Select two of the following: 1 6
BUS 320 Financial Management
BUS 360 Marketing Methods
BUS 370 Operations and Supply Chain Management
MIE 305 Legal and Regulatory Environment
MIE 310 Introduction to Entrepreneurship
MIE 330 Human Resource Management
Free Elective 6

BUS 458 Analytics: From Data to Decisions 3

Hours 15

Fourth Year
Fall Semester
Concentration Electives (p. 3) 6
GEP Interdisciplinary Perspectives (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-interdisciplinary-perspectives/) 2
GEP Humanities (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/) 3
Free Elective 4

Hours 15

Spring Semester
MIE 480 Business Policy and Strategy 3
Concentration Electives (p. 3) 3
Free Electives 6

Hours 12

Total Hours 120

1 Must be completed with “C-” or better.

Students must also complete as a part of their degree requirements one course from the GEP U.S. Diversity list (no credit hour requirement) and one course from the GEP Global Knowledge list (no credit hour requirement).

GPA Graduation Requirements
• Overall GPA for all courses attempted at NC State must be 2.0 or higher; and
• Overall GPA for all BUS, MIE, and M courses attempted at NC State must be 2.0 or higher.

Career Opportunities
Graduates in business administration are prepared for a variety of careers in business or industry including new product development, marketing, manufacturing, human resources, IT management, business analysis, banking and finance, consulting, and business development. They have the knowledge and tools to launch new business ideas and succeed in management positions.

Career Titles
• Accounting Clerk
• Actuary
• Administrative Service Manager
• Advertising Account Manager
• Advertising Agency Coordinator
• Advertising Sales Agent
• Airline Flight Control Administrator
• Airline Flight Operations Administrator
• Airline Flight Reservations Administrator
• Airport Administrator
• Artists Agent (Manager)
• Athletes Business Manager
• Bank and Branch Managers
• Benefits Manager
• Biofuels Production Managers
• Boat Charter Administrator
• Budget Accountant
• Budget Analyst
• Business Intelligence Analysts
• Business Professor
• Camp Director
• Catering Administrator
• Certified Public Accountant (CPA)
• Chief Executives
• Chief Financial Officer
• Child Care Center Administrator
• Compensation Administrator
• Compensation Specialist
• Compliance Managers
• Construction Manager
• Contract Administrator
• Controller
• Cost Accountant
• County or City Auditor
• Credit Analyst
• Curriculum and Assessment Director
• Customer Service Supervisor
• Document Management Specialists
• Elementary School Administrator
• Employee Benefits Analyst
• Employment Administrator
• Employment and Placement Specialist
• Estimator
• Event / Convention Planner
• Farm Management Advisor
• Financial Aid Counselor
• Financial Aid Director
• Financial Analyst
• Financial Examiner
• Financial Manager
• Financial Planner
• Financial Services Sales Agent
• Fish Hatchery Manager
• Foreign Exchange Trader
• Fund Raiser
• Fundraising Manager
• Funeral Home Managers
• Gaming Manager
• General and Operations Managers
• Geothermal Production Manager
• Golf Course Manager
• Government Budget Analyst
• Greenhouse and Nursery Manager
• High School Administrator
• Historic Site Administrator
• Hotel Manager
• Human Resources Management Advisor
• Human Resources Management Consultant
• Import/Export Customs Broker
• Industrial Relations Specialist
• Industrial-Organizational Psychologist
• Instructional Coordinators
• Insurance Adjuster
• Insurance Agent
• Insurance Claim Examiner
• Internal Auditor
• Job Analyst
• Job Development Specialist
• Labor Relations Specialist
• Legislator
• Loan Counselor
• Loan Officer
• Lobbyist
• Management Analyst
• Market Research Analyst
• Marketing Managers
• Medical and Health Services Managers
• Medical Records Administrator
• Middle School Administrator
• Non-Retail Sales Supervisor
• Occupational Analyst
• Office Supervisor
• Operations Research Analyst
• Patent Agent
• Personnel Administrator
• Personnel Coordinator
• Personnel Recruiter
• Preschool Administrator
• Production Planner
• Project Management Specialists
• Property Accountant
• Property Managers
• Psychometrist
• Public Relations Manager
• Public Relations Specialist
• Purchasing Agent
• Purchasing Manager
• Radio & TV Station Administrator
• Range Manager
• Recruiter
• Registrar Administrator
• Restaurant Manager
• Retail Buyer
• Retail Sales Department Supervisor
• Retail Store Manager
• Sales Managers
• Sales Representative (Chemicals & Drugs)
- Sales Representative (Hotel Furnishings)
- Sales Representative (Instruments)
- Sales Representative (Psychological Tests)
- Securities Broker
- Social and Community Service Managers
- Social Welfare Administrator
- Spa Managers
- Special Education Administrator
- Sports Events Planner
- Storage and Distribution Manager
- Student Admissions Administrator
- Student Affairs Administrator
- Supply Chain Managers
- Systems Accountant
- Talent Agent
- Tax Accountant
- Tax Auditor
- Tax Examiner
- Tax Lawyer
- Tax Preparer
- Title Examiner
- Traffic Administrator (Freight & Passenger)
- Transportation Supervisor
- Treasurer
- Urban and Regional Planner
- Wind Energy Project Managers

**Learn More About Careers**

NCcareers.org (https://nccareers.org/)
Explore North Carolina's central online resource for students, parents, educators, job seekers and career counselors looking for high quality job and career information.

Occupational Outlook Handbook (https://www.bls.gov/ooh/)
Browse the Occupational Outlook Handbook published by the Bureau of Labor Statistics to view state and area employment and wage statistics. You can also identify and compare similar occupations based on your interests.

Career One Stop Videos (https://www.careeronestop.org/)
View videos that provide career details and information on wages, employment trends, skills needed, and more for any occupation. Sponsored by the U.S. Department of Labor.

Focus 2 Career Assessment (https://careers.dasa.ncsu.edu/explore-careers/career-assessments/) (NC State student email address required)
This career, major and education planning system is available to current NC State students to learn about how your values, interests, competencies, and personality fit into the NC State majors and your future career. An NC State email address is required to create an account. Make an appointment with your career counselor (https://careers.dasa.ncsu.edu/about/hours-appointments/) to discuss the results.