

# BUSINESS ANALYTICS, BS

The Business Analytics joint concentration between the OID and STAT departments is designed to build deep competency in the skills needed to implement and oversee data-driven business decisions, including (i) collecting, managing, and describing datasets, (ii) forming inferences and predictions from data, and (iii) making optimal and robust decisions. Business analytics makes extensive use of statistical analysis, and the applications of business analytics span all functional areas.

Students choosing the Business Analytics concentration are ideally suited for the growing set of careers broadly defined under the header of "data science" with responsibilities for managing and analyzing data. In addition, the concentration provides an excellent complement to students who choose to focus on one of the functional areas of business (e.g., accounting, finance, marketing, operations).

**For more information:** <https://oid.wharton.upenn.edu/programs/undergraduate/business-analytics-joint-concentration/>

## Business Analytics Concentration

Code	Title	Course Units
Complete one course unit of Advanced Data Analysis competency		1
ACCT 2700	Forensic Analytics	
BEPP 2800	Applied Data Analysis	
CIS 4190/5190	Applied Machine Learning <sup>1</sup>	
CIS 5200	Machine Learning <sup>1</sup>	
CIS 5450	Big Data Analytics	
ESE 3050	Foundations of Data Science	
MKTG 2120	Data and Analysis for Marketing Decisions	
MKTG 2710	Models for Marketing Strategy	
MKTG 3090	Special Topics: Experiments for Business Decision Making	
MKTG 3520	Special Topics - Marketing Analytics	
MKTG 4760	Applied Probability Models in Marketing	
OIDD 2150	Intro to Analytics and the Digital Economy	
OIDD 2450	Analytics and the Digital Economy	
OIDD 3140	Enabling Technologies	
OIDD 4100	Decision Support Systems	
STAT 4050	Statistical Computing with R	
STAT 4220	Predictive Analytics for Business	
STAT 4350	Forecasting Methods for Management	
STAT 4700	Data Analytics and Statistical Computing	
STAT 4710	Modern Data Mining	
STAT 4740	Modern Regression for the Social, Behavioral and Biological Sciences	
STAT 4750	Sample Survey Design	
STAT 5200	Applied Econometrics I	
Complete one course unit of Data Collection competency		1
ACCT 2700	Forensic Analytics	
CIS 4500	Database and Information Systems	
CIS 5450	Big Data Analytics	

MKTG 3090	Special Topics: Experiments for Business Decision Making	
MKTG 3520	Special Topics - Marketing Analytics	
OIDD 1050	Analytics in Excel VBA	
OIDD 2150	Intro to Analytics and the Digital Economy	
OIDD 2450	Analytics and the Digital Economy	
OIDD 3110	Business Computer Languages	
OIDD 3140	Enabling Technologies	
STAT 4050	Statistical Computing with R	
STAT 4220	Predictive Analytics for Business	
STAT 4700	Data Analytics and Statistical Computing	
STAT 4710	Modern Data Mining	
STAT 4750	Sample Survey Design	
Complete one course unit of Optimization competency		1
ESE 5040	Intro to Linear, Nonlinear and Integer Optimization	
OIDD 2010	Technology Management, Information and the Digital Economy	
OIDD 2240	Analytics for Service Operations	
OIDD 2360	Scaling Operations in Technology Ventures: Linking Strategy and Execution	
OIDD 2450	Analytics and the Digital Economy	
OIDD 3210	Introduction to Management Science	
OIDD 3250	Computer Simulation Models	
OIDD 3530	Mathematical Modeling and its Application in Finance	
STAT 4350	Forecasting Methods for Management	
Complete one additional course unit from above BUAN electives or the equivalent from the following:		1
LGST 2420	Big Data, Big Responsibilities: The Law and Ethics of Business Analytics	
OIDD 3190	Advanced Decision Systems: Evolutionary Computation	
OIDD 3800	Operations Strategy Practicum	
Other Wharton Requirements		33
<b>Total Course Units</b>		<b>37</b>

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Students can count only one of the two courses (CIS 4190/5190 or CIS 5200) towards the Business Analytics concentration.

## Other Wharton Requirements

Code	Title	Course Units
<b>First-Year Foundations</b>		
ECON 0110	Introduction to Economics for Business <sup>1</sup>	1
MATH 1400	Calculus, Part I	1
	or MATH 1100 Calculus for Wharton Students	
<i>Writing</i>		
	Critical Writing Seminar	1
<b>Business</b>		
	<i>Business Breadth (non-concentration courses)</i>	3
<i>Leadership Journey</i>		
WH 1010	Business and You	0.5

WH 2010	Business Communication for Impact	0.5
MGMT 3010	Teamwork and Interpersonal Influence	0.5
Capstone Course/Project		0.5
<i>Fundamentals</i>		
ACCT 1010	Accounting and Financial Reporting	1
ACCT 1020	Strategic Cost Analysis	1
BEPP 2500	Managerial Economics	1
FNCE 1000	Corporate Finance	1
FNCE 1010	Monetary Economics and the Global Economy	1
LGST 1000	Ethics and Social Responsibility	1
or LGST 1010	Law and Social Values	
MKTG 1010	Introduction to Marketing	1
OIDD 1010	An Introduction to Operations, Information and Decisions	1
STAT 1010	Introductory Business Statistics	1
STAT 1020	Introductory Business Statistics	1
<i>Global Economy, Business &amp; Society</i>		
One course unit required		1
<i>Technology, Innovation &amp; Analytics</i>		
One course unit required		1
<b>Liberal Arts &amp; Sciences</b>		
Second semester-level foreign language		1
<i>General Education Distribution</i>		
Select 6 courses with at least 1 course unit in each of the following categories:		6
Humanities		
Natural Science, Math & Engineering		
Social Science		
<i>Cross-Cultural Perspectives</i>		
Select 3 courses <sup>2</sup>		3
<b>Unrestricted Electives</b>		
Select five courses		5
<b>Total Course Units</b>		<b>33</b>

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For students who take ECON 0100 Introduction to Micro Economics and ECON 0200 Introductory Economics: Macro in place of ECON 0110 Introduction to Economics for Business of these courses can be slotted for ECON 0110 on the worksheet. The second course may be used to fulfill a General Education Distribution or Unrestricted Elective requirement.

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Two can double-count as General Education Distribution courses.

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The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2022 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.

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