

# 4+1 PSYCHOLOGY BS/ DATA ANALYTICS MS

## 4+1 PSYCHOLOGY BA/DATA ANALYTICS MS CURRICULUM Curriculum

### Undergraduate Requirements - Psychology (BS)

Code	Title	Credits
<b>Required Courses</b>		
PSY 101	Introduction to Psychology I	3
PSY 102	Introduction to Psychology II	3
PSY 201	Basic Statistics for Behavioral Sciences	3
PSY 202	Research Methods in Psychology <sup>1</sup>	3
PSY 401	Advanced Statistics Seminar <sup>2</sup>	3
PSY 402	Applying Research Methods in Psychology <sup>3</sup>	3
<b>Application of Psychology</b>		
Choose one of the following		3
PSY 495	Guided Research in Psychology <sup>4</sup>	
PSY 498	Psychology Practicum	
PSY 497	Advanced Research Methods in Psychology <sup>5</sup>	
<b>Area I: Neuroscience &amp; Cognition</b>		
Select one of the following:		3
PSY 324	Cognitive Psychology	
PSY 391	Biopsychology of Stress	
PSY 397	Neurobiology of Mental Disorders	
PSY 398	Neurobiology of Childhood Mental Disorders <sup>6</sup>	
PSY 399	Social Neuroscience	
PSY 410	Fundamentals of Human Neuropsychology <sup>7</sup>	
<b>Area II: Developmental &amp; Psychosocial</b>		
Select one of the following:		3
PSY 203	Lifespan Developmental Psychology	
PSY 302	Personality Psychology	
PSY 303	Psychopathology	
PSY 318	Social Psychology	
PSY 323	Motivation and Emotion	
PSY 384	Child & Adolescent Psychopathology	
<b>Area III: Outcomes &amp; Applications</b>		
Select one of the following:		3
PSY 229	Industrial/Organizational Psychology	
PSY 329	Leadership and Motivation	
PSY 334	Child, Family and Community Psychology	
PSY 373	Behavior Modification	
PSY 395	Assessment in the Behavioral Sciences	
PSY 452	Techniques of Counseling	
PSY 453	Theories of Counseling	
<b>Psychology Electives</b>		

Students may take any three psychology courses listed in the catalog. Substitutions of other courses may be possible but require approval by the department chairperson <sup>8</sup>

**Total Credits** 39

Note: All students must complete a "Senior Assessment Exam" during the second semester of their senior year to complete the degree requirements

- <sup>1</sup> Please note that PSY 201 is a prerequisite course for PSY 202
- <sup>2</sup> Please note that PSY 401 requires a minimum grade of B- in PSY 201
- <sup>3</sup> Please note that PSY 202 is a prerequisite course for PSY 402
- <sup>4</sup> Please note that junior or senior status, permission of the instructor and completion of PSY 101, PSY 102, PSY 201 and PSY 202 are prerequisites for PSY 495
- <sup>5</sup> Please note that junior or senior status, permission of the instructor, and completion of PSY 101, PSY 102, PSY 201, PSY 202 and PSY 401 are prerequisites for PSY 497
- <sup>6</sup> Please note that PSY 398 requires a minimum grade of C in PSY 397 or BIO 114 or permission of the instructor
- <sup>7</sup> Please note that a PSY 410 requires a minimum grade of C in PSY 101 or PSY 102, BIO 111 or BIO 114 or BIO 345 or permission from the instructor
- <sup>8</sup> Students enrolled in the Psychology (BS)/Data Analytics (MS) 4+1 program substitute MAT 111 for one psychology elective.

### Graduate Requirements - Data Analytics (MS)

Code	Title	Credits
<b>Foundation Courses (can be waived at the program director's discretion)</b>		
BAN 609	Business Analytics & Forecasting	3
CSC 511	Introduction to Programming & 511L	3
CSC 512	Data Structures and Algorithms & 512L	3
<b>Summer</b>		
MAT 500	Topics in Applied Mathematics <sup>1</sup>	4
DAT 500	Interactive Graphical Case Studies in Big Data	1
Elective (Domain specific) <sup>1</sup>		3
<b>Fall</b>		
DAT 511	Data Stewardship: Preparation, Exploration and Handling of Big Data	3
CSC 610	Database Management & 610L	3
	or ISB 340 Database Management Systems	
	or ISB 610 Database Management Systems	
DAT 521	Applied Integrative Projects in Data Analytics I	3
Elective (Domain Specific) <sup>1</sup>		3
<b>Spring</b>		
DAT 512	Statistical Approaches to Big Data	3
DAT 514	Data Mining and Machine Learning	3
DAT 515	Visualization and Presentation of Advanced Analytics	3
DAT 522	Applied Integrative Projects in Data Analytics II	3
<b>Total Credits</b>		<b>41</b>

<sup>1</sup> Up to 10 credits of coursework (from those noted) may be waived by the program director based on a student's preparation and experience.

## Domain Courses

Students will take at least two domain courses drawn from the courses below. Students may apply to the program director to take graduate level courses drawn from other domain areas, or more advanced courses for which they have adequate preparation.

Code	Title	Credits
<b>Business and Finance Domain</b>		
ACC 505	Financial Accounting	
ECO 503	Statistics for Managers with Excel	
FIN 608	Corporate Finance	
FIN 617	Portfolio Analysis	
FIN 619	Financial Modeling	
FIN 620	Investment Management	
FIN 623	Fixed Income Securities	
FIN 628	Derivative Securities	

## Roadmap

### Recommended Undergraduate Semester Schedule for Major Course

#### Freshman

<b>Fall</b>	<b>Spring</b>
PSY 101	PSY 102

#### Sophomore

<b>Fall</b>	<b>Spring</b>
PSY 201	PSY 202
Psychology Area Course (I, II or III)	Psychology Area Course (I, II or III)

#### Junior

<b>Fall</b>	<b>Spring</b>
Psychology Area Course (I, II or III)	PSY 402
PSY 401 (BS students only)	MAT 111

#### Senior

<b>Fall</b>	<b>Spring</b>
Psychology elective	Psychology elective
Psychology Practical Experience (BS students only) <sup>1</sup>	Choose one of the following:
CSC 511	CSC 512
& 511L	& 512L
	MAT 500

<sup>1</sup> This requirement may be completed with 3 or more credits of PSY 495, PSY 497, or PSY 498.