**Quantitative Studies and Natural Science Electives** (Rev. 11/09/2023)

The courses listed below have been selected because they cover topics directly applicable to psychology. This is not true for all courses listed as NS on the course. Students may petition for a course not listed here, as long as the course in question addresses psychological concepts and/or research analysis related to the field. To petition, students must submit a copy of the course syllabus to [psychologyDUS@duke.edu](mailto:psychologyDUS@duke.edu) with the rationale for their request.

This list is updated periodically. Not every course is offered each semester; check the course schedule for current listings. Because additional NS courses in Psychology may count toward elective credits, courses cross-listed with Psychology are not listed here.

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| **African and African American Studies (AAAS)** | | | |
| **Course #** | **Course Title** |  |  |
| 261D | Race, Genomics, and Society |  |  |
| **Biology (BIOLOGY)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 154 | AIDS & Other Emerging Diseases | 255 | Introduction to the Philosophy of Biology |
| 180FS | Global Diseases | 261D | Race, Genomics, and Society |
| 201L | Gateway to Biology: Molecular Biology | 267D | Behavioral Ecology and the Evolution of Animal |
| 202L | Gateway to Biology: Genetics and Evolution |  | Behavior |
| 203L | Gateway to Biology: Molecular Biology, Genetics | 311 | Systems Biology: An Introduction for the |
|  | & Evolution |  | Quantitative Sciences |
| 207 | Organismal Evolution | 322 | From Neurons to Brain |
| 209-1 | The Ecology of Human Health | 329D/L | Principles of Animal Physiology |
| 209-2 | Ecology for a Crowded Planet | 330L | Comparative and Functional Anatomy of the Vertebrates |
| 209D-2 | Ecology for a Changing Planet |  |  |
| 212/L | General Microbiology | 412S | Sensory Signal Transduction |
| 215L  218 | Introduction to Modeling in Mathematical Biology  Biological Clocks: How Organisms Keep Time | 431S | Human Embryology: Reproductive Biology in the 21st Century |
| 223 | Cellular and Molecular Neurobiology | 438 | Chemical Dialogs in Biology |
| 250/460 | Population Genetics | 650 | Molecular Population Genetics |
| INCH\_252 | Fund. Of Human Anatomy & Physiology |  |  |
| **Biochemistry (BIOCHEM)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 301  302 | Introductory Biochemistry I: Intermediary  Metabolism  Introductory Biochemistry II | 658  659 | Structural Biochemistry I  Structural Biochemistry II |
| **Bioethics and Science Policy (BIOETHICS)** | | | |
| **Course #** | **Course Title** |  |  |
| 603 | Clinical Bioethics and Health Policy |  |  |
| **Biomedical Engineering (BME)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 244L | Quantitative Physiology with Biostatistical | 504 | Fundamentals of Electrical Stimulation of the |
|  | Applications |  | Nervous System |
| 260L | Modeling Cellular and Molecular Systems | 511L | Intermediate Bioelectricity |
| 271 | Signals and Systems | 513 | Nonlinear Dynamics in Electrophysiology |
| 307 | Transport Phenomena in Biological Systems | 515 | Neural Prosthetic Systems |
| 354L | Introduction to Medical Instrumentation | 527 | Cell Mechanics and Mechanotransduction |
| 502 | Neural Signal Acquisition | 560 | Molecular Basis of Membrane Transport |
| 503 | Computational Neuroengineering | 566 | Transport Phenomena in Cells and Organs |
| **Cell Biology (CELLBIO)** | | | |
| **Course #** | **Course Title** |  |  |
| 451 | Introductory to Human Physiology |  |  |

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| **Computer Science (COMPSCI)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 101L  201  216  230  260  316/D  370D  516 | Introduction to Computer Science  Data Structures and Algorithms Everything Data  Discrete Math for Computer Science Introduction to Computational Genomics Introduction to Database Systems Introduction to Artificial Intelligence Data-Intensive Computing Systems | 520  527  528  532  570  571D  662  663 | Numerical Analysis  Introduction to Computer Vision Introduction to Computational Science Design and Analysis of Algorithms Artificial Intelligence  Machine Learning Computational Systems Biology  Algorithms in Structural Biology and Biophysics |
| **Cultural Anthropology (CULANTH)** | | | |
| **Course #**  261D | **Course Title**  Race, Genomics, and Society |  |  |
| **Economics (ECON)** | | | |
| **Course #**  104D | **Course Title**  Statistical Foundations of Econometrics and Data Science | **Course #**  204D | **Course Title**  Econometrics and Data Science |

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| **Engineering (EGR)** | | |
| 103 | Computational Methods in Engineering |

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| **Evolutionary Anthropology (EVANTH)** | | | |
| **Course #** | **Course Title** | **Course#** | **Course Title** |
| 101/D  212FS  230  246  253  285D | Introduction to Evolutionary Anthropology  Social Structures in an Evolutionary Framework Bodies of Evidence: Introduction to Forensic Anthropology  Sociobiology Primate Ecology  Human Health in Evolutionary Perspective | 330/L  333L  341/D  363S  546S  560S | Human Anatomy and Physiology  The Human Body Primate Sexuality  Evolution of Primate Social Cognition Primate Social Evolution  Primate Cognition |
| **Global Health (GLHLTH)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 154  258D  362 | AIDS & Other Emerging Diseases  Race, Genomics, and Society  Introduction to Epidemiology Focus on Global Health | 641 | Non-Communicable Diseases in Low- & Middle-  Income Countries: Trends, Causes & Prevention |
| **Linguistics (LINGUIST)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 115FS  123FS | Games and the Brain  When the Head’s in Trouble: Language, Lesions, and Loss | 216S/FS  473S/AS  501 | Neuroscience and Human Language  Neuroscience and Multilingualism Cognitive and Neurolinguistics |
| **Mathematics (MATH)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 112  122  183  216/D  218/1/2/D  221  228L | Lab. Calculus II taken at Duke, no AP  Intro. Calculus II taken at Duke, no AP  Biological Clocks: How Organisms Keep Time  Linear Algebra and Differential Equations Matrices and Vector Spaces  Linear Algebra and Applications  Probability for Statistics | 230  242D  340  353  403  573S | Probability  Statistics  Intro to Applied Math  Ordinary and Partial Differential Equations Advanced Linear Algebra  Modeling of Biological Systems |
| **Molecular Genetics and Microbiology (MGM)** | | | |
| **Course #** | **Course Title** |  |  |
| 222FS | Genetics and Epigenetics: The Codes that Control Our Genomes | |  |
| **Neurobiology (NEUROBIO)** | | | |
| **Course #** | **Course Title** |  |  |
| 559 | The Biological Basis of Music |  |  |

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| **Neuroscience (NEUROSCI)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 116S/FS  123FS  157FS  202  223  242A  245A | Neuroscience and Human Language  When the Head’s in Trouble: Language, Lesions and Loss  Games and the Brain Medical Neuroscience  Cell and Molecular Neurobiology  The Creative Brain: Literature, Arts, and Cognition  Cultured Brain: Neuroscience of Perception and Action | 322  350  381LA  385L  438AS  439S  501S  595 | From Neurons to Brain  Pharmacology: Drug Actions and Reactions  Sensory Physiology and Behavior of Marine Animals Integrative Neuroscience Laboratory  Neuroscience & Multilingualism Neuroscience & Multilingualism Cognitive and Neurolinguistics  Language, Music and Dementia: Neuroscience Approaches |
| **Pharmacology (PHARM)** | | | |
| **Course #** | **Course Title** | **Course#** | **Course Title** |
| 350 | Pharmacology: Drug Actions and Reactions | 370 | Pharmacogenomics and Personalized Medicine |
| **Physical Education (PHYSEDU)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 203 | Diet and Nutrition | 206 | Exercise Physiology |
| **Psychology (PSY)** | | | |
| **Course #**  309 | ---Any NS course in Psychology not used for the AB portion of the major---  **Course Title**  Research Methods in Global Health | | |
| **Public Policy (PUBPOL)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 241 | Multi-Method Approaches to Social and Policy | 242S | Child Policy Research |
|  | Research | 348 | Science and Policy of Obesity |
| **Romance Studies (ROMST)** | | | |
| **Course #** | **Course Title** |  |  |
| 242A | The Creative Brain: Literature, Arts & Cognition |  |  |
| **Science & Society (SCISOC)** | | | |
| 258D | Race, Genomics, and Society |  |  |
| **Sociology (SOCIOL)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 332 | Methods of Social Research | 333 | Quantitative Analysis of Sociological Data |
| **Statistical Science (STA)** | | | |
| **Course #** | **Course Title** | **Course #** | **Course Title** |
| 101/L | Data Analysis and Statistical Inference | 313L | Advanced Data Visualization |
| 102/L | Introductory Biostatistics | 322 | Design of Surveys and Causal Studies |
| 111/L | Probability and Statistical Inference | 323D | Statistical Computing |
| 130L | Probability and Statistics in Engineering | 340 | Introduction to Statistical Decision Analysis |
| 198L/1/2 | Introduction to Health Data Science | 360/L | Bayesian Inference and Modern Statistical |
| 199L | Introduction to Data Science and Statistical |  | Methods |
|  | Thinking | 432 | Theory and Methods of Statistical Learning and |
| 210L | Regression Analysis |  | Inference |
| 230 | Probability | 611 | Introduction to Mathematical Statistics |
| 240L | Probability for Statistical Inference, Modeling, | 622 | Statistical Data Mining |
|  | and Data Analysis | 623 | Statistical Decision Theory |
| 250D | Statistics |  |  |
| **Visual Media Studies (VMS)** | | | |
| **Course #** | **Course Title** |  |  |
| 274D | Race, Genomics, and Society |  |  |