

# WH UG NSME: NATURAL SCIENCE, MATH, ENGINEERING (WUNM)

| Code      | Title  | Course Units |
|-----------|--|--------------|
| ANTH 0030 | Human Origins, Evolution and Diversity   | 1            |
| ANTH 1430 | Explorations in Human Biology  | 1            |
| ANTH 1610 | Humans and the Earth System: How it Works, How We Got Here, and How to Save Our Planet | 1            |
| ASTR 0001 | A Survey of the Universe   | 1            |
| ASTR 0006 | The Solar System, Exoplanets, and Life   | 1            |
| ASTR 0007 | The Big Bang and Beyond  | 1            |
| ASTR 1211 | Introduction to Astrophysics I   | 1            |
| ASTR 1250 | Astronomical Techniques  | 1            |
| BCHE 2280 | Physical Models of Biological Systems  | 1            |
| BIOL 0004 | Killer Viruses: What threat do they pose in contemporary society?                      | 1            |
| BIOL 0014 | Descent with Modification: An introduction to the science of evolution                 | 1            |
| BIOL 1101 | Introduction to Biology A  | 1.5          |
| BIOL 1102 | Introduction to Biology B  | 1.5          |
| BIOL 1110 | Introduction to Brain and Behavior   | 1            |
| BIOL 1121 | Introduction to Biology - The Molecular Biology of Life                                | 1            |
| BIOL 1123 | Introductory Molecular Biology Laboratory  | .5           |
| BIOL 1124 | Introductory Organismal Biology Lab  | .5           |
| BIOL 1604 | Humans and the Environment   | 1            |
| BIOL 2010 | Cell Biology   | 1            |
| BIOL 5110 | Neural Systems and Behavior  | 1            |
| BIOL 5310 | Molecular Physiology   | 1            |
| CHEM 0250 | Structural Biology   | 0.5          |
| CHEM 1000 | Academic Based Community Service-Chemistry Outreach                                    | 1            |
| CHEM 1011 | Introduction to General Chemistry I  | 1            |
| CHEM 1101 | General Chemistry Laboratory I   | .5           |
| CHEM 1102 | General Chemistry Laboratory II  | .5           |
| CHEM 2410 | Principles of Organic Chemistry I  | 1            |
| CHEM 2510 | Principles of Biological Chemistry   | 1            |
| CIS 1050  | Computational Data Exploration   | 1            |
| CIS 1070  | Visual Culture through the Computer's Eye  | 1            |
| CIS 1100  | Introduction to Computer Programming   | 1            |
| CIS 1200  | Programming Languages and Techniques I   | 1            |
| CIS 1210  | Programming Languages and Techniques II  | 1            |
| CIS 1250  | Technology and Policy  | 1            |
| CIS 1400  | Introduction to Cognitive Science  | 1            |
| CIS 1600  | Mathematical Foundations of Computer Science   | 1            |
| CIS 1810  | The Quantum and the Computer   | 1            |
| COGS 1001 | Introduction to Cognitive Science  | 1            |
| EAS 2420  | Energy Education in Philadelphia Schools   | 1            |
| EAS 2610  | Emerging Technologies and the Future of the World                                      | 1            |
| EESC 1000 | Earth Systems Science  | 1            |
| EESC 1002 | Geology Laboratory   | 1            |
| EESC 1030 | Oceanography   | 1            |
| EESC 1050 | Earth and Life Through Time  | 1            |
| EESC 1060 | Natural Disturbances and Disasters   | 1            |
| EESC 1500 | Paleontology   | 1            |
| EESC 3003 | Penn in the Alps   | 1            |
| ENGR 1050 | Introduction to Scientific Computing   | 1            |
| ENGR 2120 | Concepts in Micro- and Nanotechnology  | 1            |
| ENVS 1000 | Introduction to Environmental Science  | 1            |
| ENVS 1020 | Humans and the Earth System: How it Works, How We Got Here, and How to Save Our Planet | 1            |
| ENVS 1615 | Urban Environments: Speaking About Lead in West Philadelphia                           | 1            |
| ENVS 1625 | Community Based Environmental Health   | 1            |
| ENVS 1635 | Urban Environments: Prevention of Tobacco Smoking in Adolescents                       | 1            |
| ENVS 1645 | Urban Environments: The Urban Asthma Epidemic  | 1            |
| ENVS 1650 | The Role of Water in Urban Sustainability and Resiliency                               | 1            |
| ENVS 1665 | Air Pollution: Sources & Effects in Urban Environments                                 | 1            |
| ENVS 3103 | Penn Global Seminar: Case Studies in Environmental Sustainability                      | 1            |
| ENVS 4200 | The anthropocene: Human-dominated Earth  | 1            |
| INTG 2610 | Emerging Technologies and the Future of the World                                      | 1            |
| LING 0001 | Introduction to Linguistics  | 1            |
| LING 0750 | Language and Thought   | 1            |
| LING 1005 | Introduction to Cognitive Science  | 1            |
| MATH 1080 | Mathematics of change, Part II   | 1            |
| MATH 1248 | Community Math Teaching Project  | 1            |
| MATH 1410 | Calculus, Part II  | 1            |
| MATH 1510 | Calculus, Part II with Probability and Matrices  | 1            |
| MATH 1610 | Honors Calculus  | 1            |
| MATH 2020 | Proving Things: Analysis   | 1            |
| MATH 2030 | Proving things: Algebra  | 1            |
| MATH 2100 | Mathematics in the Age of Information  | 1            |
| MATH 2400 | Calculus, Part III   | 1            |
| MATH 2410 | Calculus, Part IV  | 1            |
| MATH 2600 | Honors Calculus, Part II   | 1            |
| MATH 2800 | Entropy Math Evolution   | 1            |
| MEAM 1010 | Introduction to Mechanical Design  | 1            |
| NETS 1120 | Networked Life   | 1            |
| NRSC 0050 | Forensic Neuroscience  | 1            |
| NRSC 0060 | Music and the Brain  | 1            |
| NRSC 1110 | Introduction to Brain and Behavior   | 1            |

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| NRSC 1160 | ABCS of Everyday Neuroscience   | 1     |
| NRSC 2249 | Cognitive Neuroscience  | 1     |
| NURS 0061 | Biologically-Based Chemistry  | .5    |
| NURS 1120 | Nutrition: Science & Applications   | 1     |
| NURS 3120 | Nutritional Aspects of Disease  | 1     |
| NURS 3430 | Global Engagement Seminar   | 1     |
| NURS 3550 | Case Study: Self-Care of Chronic Illness                                      | 1     |
| NURS 3750 | Nutrition Throughout The Life Cycle   | 1     |
| NURS 3760 | Issues in Nutrition, Exercise, and Fitness                                    | 1     |
| NURS 3800 | Nursing in the Community  | 2     |
| NURS 3820 | Public Health Nursing Care in Communities                                     | 0-1.5 |
| NURS 7350 | Pediatric Acute Care NP: Professional Role and Intermediate Clinical Practice | 1     |
| PHIL 1831 | Evolution's Laboratory  | 1     |
| PHIL 1840 | Introduction to Cognitive Science   | 1     |
| PHYS 0016 | Energy, Oil, and Global Warming   | 1     |
| PHYS 0080 | Physics and Consciousness   | 1     |
| PHYS 0137 | Community Physics Initiative  | 1     |
| PHYS 0140 | Principles of Physics I (without laboratory)                                  | 1     |
| PHYS 0141 | Principles of Physics II (without laboratory)                                 | 1     |
| PHYS 0150 | Principles of Physics I: Mechanics and Wave Motion                            | 1.5   |
| PHYS 0151 | Principles of Physics II: Electromagnetism and Radiation                      | 1.5   |
| PHYS 0170 | Honors Physics I: Mechanics and Wave Motion                                   | 1.5   |
| PHYS 0171 | Honors Physics II: Electromagnetism and Radiation                             | 1.5   |
| PHYS 2280 | Physical Models of Biological Systems   | 1     |
| PSCI 2401 | Emerging Technologies and the Future of the World                             | 1     |
| PSYC 0001 | Introduction to Experimental Psychology                                       | 1     |
| PSYC 1210 | Introduction to Brain and Behavior  | 1     |
| PSYC 1230 | Cognitive Neuroscience  | 1     |
| PSYC 1310 | Language and Thought  | 1     |
| PSYC 1333 | Introduction to Cognitive Science   | 1     |
| PSYC 1340 | Perception  | 1     |
| PSYC 1440 | Social Psychology   | 1     |
| PSYC 1450 | Personality and Individual Differences  | 1     |
| PSYC 1462 | Abnormal Psychology   | 1     |
| PSYC 1777 | Introduction to Developmental Psychology                                      | 1     |
| PSYC 2737 | Judgment and Decisions  | 1     |
| VIPR 1200 | Vagelos Integrated Program in Energy Research (VIPER) Seminar, Part I         | 0.5   |
| VIPR 1210 | Vagelos Integrated Program in Energy Research (VIPER) Seminar, Part II        | 0.5   |
| VLST 2090 | Visual Culture through the Computer's Eye                                     | 1     |
| VLST 2110 | Perception  | 1     |