Department of Biological Sciences
Purdue University Northwest (Hammond Campus)
B.S. Biology & B.S. Medical Technology Graduation Requirement (Students begin in Fall 2016)

B.S. Biology	General Biology Conc.	Biotechnology Conc.	Ecology Conc.	Microbiology & Immunology Conc.	Health Science Conc.	B.S. Medical Technology (Medical Laboratory Science)
Biology Common Core 18 Credits	***18 Credits Biology Common Core Courses*** • BIOL 10100 & 10200 Intro. Biology I & II (8) C- or Better • BIOL 10700 Freshman Experience (1) • BIOL 24300 Intro. Cell Biology (4)		• BIOL 24400 Genetics(4) • BIOL 42600 Senior Capstone (1) or BIOL 48900 Research (2 semesters with formal report and presentation) *(1 credit counts toward senior capstone, 1 counts toward biology elective)*			**Biology Common Core 18 Credits**
Conc. Required Courses **7~12 Credits**	**10~11 Credits Required** 1) BIOL 58000 Evolution (3) 2) Choose 2 from different category (7~8) • BIOL 31600 Basic Micro (4) • BIOL 33300 Ecology (4) • Physiology (3~4) BIOL 21400 or 30700 or 35700	**10 Credits Required** 1) BIOL 3xxxx Intro. Biotech. (3) 2) BIOL 31600 Basic Micro. (4) 3) BIOL 50800 Recombinant DNA (3)	**10~11 Credits Required** 1) BIOL 33300 Ecology (4) 2) BIOL 58000 Evolution (3) 3) *Choose one (3 or 4)* • BIOL 31600 Basic Micro. (4) or • Physiology (3~4): *BIOL 21400, 35700 or 30700*	**7 Credits Required** 1) BIOL 31600 Basic Micro. (4) 2) BIOL 32020 Biology of Immune System (3)	**12 Credits Required** 1) BIOL 21300A&P I (4) 2) BIOL 21400 A&P II (4) *(*BIOL 35700 may replace BIOL 21300/21400 for some students. Additional 4 credits Health Sciences electives will be required.)* 3) BIOL 31600 Basic Micro. (4)	**7 Credits Required Biology Courses** 1) BIOL 31600 Basic Micro. (4) 2) BIOL 32020 Biology of Immune System (3)
Conc. Electives 12~15 Credits • ≥ 30000 level • BIOL 33000, 33900, 34200 cannot be used ≤ 3 credits from independent studies, research, or internship courses	**Min. 12 Credits Biology Electives** • ≥ 30000 level • BIOL 33000, 33900, 34200 cannot be used • ≤ 3 credits from independent studies, research, or internship courses	**Min. 12 Credits Biotech. Elec.** • *Min. 6 credits from Group A,* • *The rest from Group A or B* **Group A** BIOL 33300 Ecology (4) BIOL 35700 Animal Physiol. (4) BIOL 32020 Immunology (3) BIOL 50700 Molecular Biology (3 BIOL 59500 Cell & Tissue Culture (3) **Group B** BIOL 30700 Plant Phys. (3) BIOL 41800 Drugs & Dis. (3) BIOL 48800 Internship (1) BIOL 48900 Research (1~3) BIOL 51601 Food Micro. (5) BIOL 51605 Environ. Micro. (4) BIOL 53300 Med. Micro. (3) BIOL 54401 Epigenetics (3) BIOL 56100 Immunology (3) BIOL 49500 Exp. Design (3) BIOL 49500 or 59500 Adv. Cell Biology Biology of Cancer Bioinformatics Virology Biotech. Independent Studies	**Min. 12 Credits Ecology Elec.** • *Min. 9 credits from Group A,* • *Min. 3 from Group B* **Group A** BIOL 40500 Conservation (3) BIOL 41200 Climate Changes (3) BIOL 41300 Aquatic Ecology (3) BIOL 41400 Invasive Spp. (3) BIOL 48800 Internship (1) BIOL 48900 Research (1~3) BIOL 49500 Ecology Ind. Studies BIOL 51605 Environ. Micro. (4) BIOL 58700 Biogeography (3) BIOL 58800 Plant Ecology (3) BIOL 59100 Field Ecology (3) BIOL 59500 Animal Behavior (3) Ornithology (3) Wetland Ecology (3) Ecology Independent Studies **Group B** BIOL 30700 Plant Physiology BIOL 31600 Basic Micro. BIOL 35700 Animal Physiology BIOL 50700 Mol. Biology BIOL 50800 Rec. DNA BIOL 51801Ethic Frontier BIOL 54400 Epigenetics	**Min. 12 Credits Micro/Immun.** • *Min. 6 credits from Group A,* • *The rest from Group A or B* **Group A** BIOL 51601 Food Micro (5) BIOL 51605 Environ. Micro (4) BIOL 53300 Med. Micro.(3) BIOL 59500 Microbiota in Health & Dis. (3) Virology (3) Immune Disorders (3) Adv. Immunology (3) **Group B** BIOL 3xxxx Intro. Biotech. (3) BIOL 48800 Internship (1) BIOL 48900 Research (1~3) BIOL 4xxxx Exp. Design (3) BIOL 50700 Molecular Biology (3) BIOL 50800 Rec. DNA (3) BIOL 49500 or 59500 Bioinformatics (3) Cell & Tissue Culture (3) Micro or Immune. Related Independent Studies (1~3) **Free Biology Elective (Min. 3 Credits)**	**Min. 12 Credits Health Science Electives** BIOL 32020 Biol. of Immune Sys. (3) BIOL 41800 Drugs & Dis. (3) BIOL 48800 Internship (1~3) BIOL 48900 Research (1~3) BIOL 50700 Mol. Biology (3) BIOL 50800 Rec. DNA (3) BIOL 51601 Food Micro (5) BIOL 51605 Environ. Micro (4) BIOL 52500 Neurobiology (4) BIOL 53300 Med. Micro.(3) BIOL 54400 Epigenetics (3) BIOL 56600 Develop. Biol. (4) BIOL 59500 Adv. Cell Biology(3) Biology of Cancer (3) Bioinformatics (3) Cell & Tissue Culture (3) Medical Genetics (3) Immune Disorders (3) Virology (3) Health Sci. Related Independent Studies (1~3)	**Min. 6 Credits Restrictive Biology Electives** ***Highly Recommended*** BIOL 35700 Animal Physiology (3) or BIOL 21400 A& P II BIOL 50700 Mol. Biology (3) BIOL 50800 Rec. DNA (3) BIOL 53300 Med. Micro. (3) ***Other Biology Elec. Choices:*** *See Health Science Conc.* **Clinical Training (32 Credits)** Successful completion of 12 month clinical program at an affiliated hospital: a) St. Margaret Mercy, Hammond. IN. b) OSF Saint Francis Medical Center, Peoria, IL c) Hines VA Hospital, Hines, IL
Chemistry (19 Credits): CHEM 11500, 11600, 25500/25501, 25600/25601, 33300*(*CHEM 33300 or 32400 for Ecology conc.)*; **Physics** (8 Credits): PHYS 22000, 22100				**Humanities & Social Sciences**: BS in Biology degree (15 Credits); BS in Med. Tech Degree (9 Credits)		
Math, Statistics, Computer (12 Credits) : MA 16031, 16032, STAT 33001, CIS 20400				**Free Elective**: BS in Biology Degree (12~14 Credits); BS in Med. Tech (0 Credits)		
English Composition & Communication (9 Credits) ENGL 10400, 10500, COM 11400				**Total Graduation Requirement: 120 credits**		