

## Post Graduate Leadership Program (PGLP) Course offerings

**ACADEMICS:** The academic program at St. John's Northwestern Military Academy Post Graduate Leadership Program (PGLP) is a dynamic curriculum that focuses on preparing the individual cadet for admission by tailoring the instruction to meet his needs. The academic program is geared to build on the academic skills the individual possesses and to build the skills that he will need to successfully apply and gain acceptance to a service academy or a university of their choice. The academic program focuses on Mathematics and English. These two broad areas provide for the basic requirements for a successful application at all service academies. Post Graduate cadets also develop critical reading and critical thinking skills as well as work on honing test taking skills so key for the SAT and ACT. In addition, leadership, character development, and service academy specific college level work (Chemistry, Physics, foreign language, and History) will be taken as well. Please note that the language immersion option in one of the select languages (Japanese, Chinese, Arabic, or Farsi) may be substituted for a course or if the student can handle the load added to his course load.

Each cadet will be tracked to keep abreast of cadet success and cadet needs. This is done to ensure that additional help, work, and guidance can be provided when needed and not after the fact. As cadets are placed in individual tracks based on development and need the evaluation and counseling will aid in moving a cadet along on his track so as to give him the absolute best chance of mastering what he needs to succeed. (Note: Some PG cadets will enter at the high school level in some course work and move up to the intermediate level and to the advance level throughout the year as progress is made. Everything is based on the individual's strengths and weaknesses – no hit or miss approach or a blind assignment to a particular course.)

All PG cadets will be required to take a two-week non-credit seminar prior to beginning the academic year in preparation for success at the college level. The seminar entitled "College 101" will include: Expectations of college; clearly defined grading policies, homework assignments, etc...; study skills; grammar skills; career exploration and how to select courses for career choice; speed and efficiency in reading; and University of Wisconsin-Waukesha policies.

Typical academic workload based on a standard academic day:

1. Mathematic Course based on placement: Remediation to College level.
2. English Course based on placement: Remediation to College level.
3. History/Political Science College Level (USMA and USAFA).
4. Chemistry/Physics College Level (USNA, USCGA, and USMMA).
5. Foreign Language Immersion in specific languages.
6. SAT/ACT Prep and Study Skills.
7. Leadership Course (management, ethics, law, etiquette, and leadership skills).

Courses of study for the two tracks of instruction:

Track One – Fall Semester:

ENG 101: College Writing and Critical Reading

A composition course focusing on academic writing, the writing process, and critical reading. Emphasis will be on essays that incorporate readings. **3 Credits**

MATH 105: Introduction to College Algebra

Emphasizes algebraic techniques with polynomials, fractional expressions, exponents and radicals, linear and quadratic equations, and inequalities. Introduction to functions, their graphs and analytic geometry. **3 - 4 Credits**

HST 101: History of the United States: Columbian Exchange to the Era of the Civil War

A survey of American political, economic, social, and intellectual history from the Age of European Exploration and the period of colonization to the era of the American Civil War. As an Ethnic Studies course, this course thoroughly integrates the experiences of African Americans, Native Americans, Hispanics, and/or Asian Americans into US history in a manner that fosters understanding and appreciation of the perspectives and experiences of at least two of these groups as well as their contributions to, and interactions within, American society. **3 Credits**

BIO 101: Concepts of Biology

An introduction to the fundamental principles of living organisms. Includes cell and tissue structure, growth, basic physiological processes, reproduction and inheritance, classification, evolution and ecology. Lecture, lab, and may also include demonstrations, discussion and field trips. **5 Credits**

Track One – Spring Semester:

ENG 102: Critical Writing, Reading and Research

A composition course focusing on researched academic writing that presents information, ideas, and arguments. Emphasis will be on the writing process, critical thinking, and critical reading. **3 Credits**

MAT 110: College Algebra

Definition of function and sequence; linear and nonlinear functions and graphs including logarithmic and exponential functions; systems of linear equations and Gauss-Jordan method; theory of polynomial equations; conic sections and optional topics such as mathematical induction, matrix solution of linear systems and Cramer's rule. **3 Credits**

HIS 102: History of the United States: From the Era of the Civil War to the Present

A survey of American political, economic, social, and intellectual history from the era of the Civil War to the Present. As an Ethnic Studies course, this course thoroughly integrates the experiences of African Americans, Native Americans, Hispanics, and/or Asian Americans into US history in a manner that fosters understanding and appreciation of the perspectives and experiences of at least two of these groups as well as their contributions to, and interactions within, American society. **3 Credits**

BIO 285: Anatomy and Physiology

An examination of the structure and function of the human body at the molecular, cellular, tissue, organ, and system levels of organization. The integration of these levels of organization within the human organism is emphasized. **4 Credits**

Track Two – Fall Semester:

ENG 102: Critical Writing, Reading and Research

A composition course focusing on researched academic writing that presents information, ideas, and arguments. Emphasis will be on the writing process, critical thinking, and critical reading. **3 Credits**

MAT 110: College Algebra

Definition of function and sequence; linear and nonlinear functions and graphs including logarithmic and exponential functions; systems of linear equations and Gauss-Jordan method; theory of polynomial equations; conic sections and optional topics such as mathematical induction, matrix solution of linear systems and Cramer's rule. **3 Credits**

PHY 107: Foundations of Physics

An introductory course for non-science majors, with particular emphasis on the development of modern theoretical concepts. Central topics: classical mechanics, electromagnetism, quantum theory, relativity theory; and some discussion of historical and philosophical aspects. May be offered without laboratory work for three credits or with laboratory for four credits. **3 – 4 Credits**

BIO and/or HIS

Track Two -- Spring Semester:

MAT 113: Trigonometry

Trigonometric functions, their basic properties and graphs, identities, inverse trigonometric functions, solving trigonometric equations, solutions of triangles. **2 Credits**

ENG 272: American Literature

A study of the nature of American literature through a survey of significant poetry, drama, fiction, and/or nonfiction by major American authors. **3 Credits**

PHY 115: Energy and the Environment

Intended for non-science majors, this course will give students the necessary physics background to form opinions on energy questions. The physical laws of thermodynamics, electricity, magnetism, and nuclear physics will be discussed in connection with energy related topics such as thermal pollution, fossil fuels, nuclear power, solar power and other alternative energy sources. Some elementary calculations (at the level of high school algebra) are included in the material, but the emphasis will be on a conceptual understanding of the energy-related issues affecting society today. **3 Credits**

BIO and/or HIS

*The following are optional classes offered in conjunction with high school program.*

MAT 117: Elementary Statistics

The primary aim of the course is a basic understanding and use of statistical concepts and methods to facilitate study and research in other disciplines. Includes measures of central tendency, measures of variability, grouped data, the normal distribution, central limit theorem, hypothesis testing, estimation, T-distribution and chi square test. **3 Credits**

MAT 221: Calculus and Analytical Geometry I

Analytic geometry, functions, limits and continuity, the derivative, integrals, techniques and applications of differentiation, applications of integration, logarithmic and exponential functions, and trigonometric functions. **5 Credits**

MAT 240: Statistical Analysis

Elements of probability theory; collection and presentation of sample data; basic problems of statistical inference; applications, including quality control; regression; and hypothesis testing. **3 Credits**

MAT 222: Calculus & Analytical Geometry II

Continuation of 221. Techniques of integration, polar coordinates, conic sections, infinite series, and vectors of two and three dimensions. Note: the order of topics covered in MAT 221 and MAT 222 may depend on the text used and the instructor. **5 Credits**