



Northwood School Program 2022-2023

The Northwood School academic philosophy builds on the school’s mission and serves as the foundation for all aspects of the curriculum.

Northwood School prepares students to shape the future. We engage students in the active pursuit of knowledge and believe that students learn best through exploration and inquiry. Students gain resilience, become independent thinkers, and challenge perspectives by forming relationships with their teachers and peers. The Northwood experience is rooted in the Adirondacks and creates confident, globally minded students, ready to innovate and adapt to our ever-changing world.

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NORTHWOOD SCHOOL'S APPROACH TO EDUCATION

A Northwood School education, while maintaining a challenging college-preparatory curriculum at its core, is undergoing a process of re-design in response to the changing world and college landscape. This year's offerings are designed to meet New York State requirements and college expectations, while allowing students flexibility and choice to pursue their interests. We include a variety of Honors, AP, Advanced Research, Independent Initiative, traditional and non-traditional options to suit each student's abilities. Pathways of study are designed to strengthen intellectual abilities, promote character development, advance interests in specific subject areas and prepare students for life beyond Northwood's campus.

Above all, **we aim to teach students how to learn.** We encourage them to be in the driver's seat of their own educational career. It is our hope that all students will build the skills necessary to participate in one of our Independent Initiatives (p.6) or Advanced Research Studies (p.16 and p.25) should they have a desire to do so.

With that in mind, our **rigorous curriculum** aims to recognize **both the academic and experiential modes of learning** that students engage in both during the traditional academic day and during their co-curricular pursuits. As you will find in the following course descriptions, many courses also are organized differently, **outside of the traditional confines of how school "seat time" is measured.** Courses may meet only once a week for an extended period of time, such as our Friday course options, once a semester for an intensive 48-hour weekend such as our Outing Club electives, or asynchronously such as our arts Studio Hours option.

In this course program, you will find each of our offerings for the 2022-23 school year with descriptions of course content and how the course is executed. Please read carefully to understand the commitment of each course as well as any prerequisites or necessary teacher approvals. Placement in a course is subject to space availability, the daily schedule and a student's overall course load. Some changes may occur. All students will be contacted by the Academic Dean over the summer to confirm their registration.

GRADUATION REQUIREMENTS

The graduation requirements outlined here must be met in order to earn a Northwood diploma. Six courses per semester are the standard load for Northwood students. This includes a co-curricular engagement as detailed below. Students are urged to challenge themselves academically which, for many, means taking courses well beyond those required for a diploma. Northwood strongly recommends that students take a rigorous academic program for personal growth as well as for the practical purpose of increasing college options.

Credits

Northwood is making the shift from a trimester system to a semester system this academic year. For the Class of 2026 onwards, the minimum number of credits required for graduation is 24. This translates to six full-year courses. (A year-long course earns 1 credit; a semester course earns 0.5 credit.) For returning Northwood students, previously taken full-year courses now equal one credit. Previously taken trimester courses (worth 1 or 2 credits) equal .5 credit. For students transferring into Northwood, equivalencies for graduation requirements will be accepted.

For all graduating classes prior to 2026, adaptations will be made per the below:

For students in the Class of 2025, the total number of credits will be 15 each for 2022-23, 2021-22, and 2020-21 plus 6 for the final year. Total = 51.

For students in the Class of 2024, the total number of credits will be 15 each for 2022-23 and 2021-22 plus 6 per year for the following years. Total = 42.

For students in the Class of 2023, the total number of credits will be 15 for 2022-23 plus 6 per year for the following years. Total = 33.

Subject	Credits	Required Courses
Humanities		
<i>English</i>	4	<i>Humanities I, Humanities II, Short courses or AP options</i>
<i>Social Science</i>	3	<i>Humanities I, Humanities II, US History (including Civics)</i>
<i>World Languages</i>	2	<i>2 years of the same language minimum, 3 preferred</i>
<i>Visual and/or performing art</i>	1	<i>Can include fine art, music or dance. Can be met through any combination of elective offerings, Friday course offerings and credited studio hours.</i>
STEM		
<i>Science (lab)</i>	3	<i>Must include both life science and physical science</i>
<i>Math</i>	3	<i>Algebra 1, Geometry, Algebra 2</i>
Electives	8	<i>Can be any courses offered, labeled as elective or otherwise.</i>
L.E.A.P.	Varies*	<i>Students will complete a LEAP program each year of enrollment excluding senior year.</i>
Northwood Seminar	Varies*	<i>Students will complete a seminar program each year of enrollment excluding senior year.</i>
Health	Varies*	<i>Met through Northwood Seminar</i>
Physical Education	Varies*	<i>Can be met through athletics, dance or NOC options.</i>
Co-curricular Education	Varies*	<i>Met through co-curricular choice. May simultaneously provide credit for Arts or P.E.</i>
Total:	24*	

*Students are required to engage in LEAP, Northwood Seminar and Co-curricular education while enrolled at Northwood. For transfer students, the final number of credits to meet requirements will therefore vary in direct proportion to the number of semesters spent at Northwood.

L.E.A.P. (Learn, Engage, Apply, Perform)

At Northwood, students learn by doing – that is the guiding principle for the school's L.E.A.P. Program, an experiential learning curriculum launched in 2017. Northwood faculty leverage individual expertise to craft week-long courses which immerse students in unique subjects. Students choose their L.E.A.P. courses at the beginning of the year and then meet periodically throughout the year in preparation for L.E.A.P. week in May.

L.E.A.P. courses take students and faculty out of the classroom for collaborative, first-hand experiences. Students work with experts in the field and are provided opportunities to explore compelling environments and complete ambitious projects resulting in skill development and confidence for future real-world challenges. The L.E.A.P. Showcase allows students to share their adventures in learning with the school and local community.

Northwood Seminar

All students in all grades participate in weekly seminars each Monday throughout the school year. These seminars include a rotating focus on student physical and mental wellness, academic mindsets and study skills, interpersonal and self-management skills. Depending on the grade and time of year, the seminars may also include college and career-facing preparations. The seminar is led by Northwood faculty as well as external professionals as appropriate. The seminar is designed to prepare students to engage fully with the Northwood curriculum and to have agency over their academic and personal lives.

Health

Health education is a NYS requirement for graduation. All Northwood students meet this requirement through participation in the Northwood Seminar. Students transferring into Northwood in 11th grade or later who have no previous health credit may be required to cover additional material in order to meet the requirement.

Physical Education

Participation in Physical Education each year of high school is a NYS requirement for graduation. All Northwood students must meet this requirement either through our co-curricular athletics program, dance offerings or NOC offerings.

Co-curricular Education

A Northwood education is both academic and experiential. Crediting co-curricular engagement allows us to acknowledge the learning experiences students have outside of the traditional academic day. Students are credited with .5 credit per semester for regular co-curricular engagement.

INDEPENDENT INITIATIVES

It is our goal that all Northwood students develop the skills to pursue their own passions and interests and engage proactively in their course of study. These skills are honed explicitly through the content of the Northwood Seminar and embedded into the pedagogy of all Northwood classes.

Honors Independent Study Projects (ISP)

Honors-level. Approval by the Independent Study Committee is required. Northwood School's Independent Study Program recognizes and celebrates the unique perspectives and approaches to learning that shape our student body. Partnerships between students, alumni, and members of the larger community facilitate the exploration of a particular topic of interest. The pursuit of an individualized course of study fosters a deeper understanding of the knowledge and skillset required to achieve personal success. Each independent study is designed to uphold the values of academic rigor, integrity, and creativity. Independent studies provide students an opportunity to work dynamically as a team, develop relevant solutions to contemporary issues, and better determine how to reach their fullest potential. Independent studies can run for one trimester through a full year, depending on the student's objectives and desired experience. To apply for an independent study, please reach out to Ms. Heather Odell, Director of Independent Studies, to submit an application.

odellh@northwoodschoo.org

Apprenticeship Opportunities

Northwood Academics is excited to announce apprenticeship opportunities for the 2022-2023 school year. Interested candidates should contact Ms. Carmichael, Dean of Academics, via Teams chat to begin the application process. Apprenticeships fill a need in our community while providing the chosen student with the opportunity to grow their skills by working on real projects with a public audience.

Dance Instruction/Pedagogy

This apprenticeship would be applicable for any student who has an interest in teaching dance as either a pastime or profession. It would involve learning the fundamentals of dance instruction that would then be applied to a real live classroom experience. This opportunity would be in conjunction with Northwood's partnership with The Dance Sanctuary dance studio to provide weekly instruction to children at both the preschool and elementary levels in the Adirondack Tri-lakes Region. *The time commitment of this position is 3 hr./week. This is either a semester-long or a year-long commitment open to domestic students only due to F1 visa stipulations. (.5 or 1 credit)*

Editor of *The Northwood Mirror* (<https://northwoodmirror.com>)

The editor of *The Mirror* shapes the coverage of Northwood's student-led paper. They work closely with the paper's advisor, Mr. Spear, to choose the stories the paper will cover and assign the stories to staff writers. They suggest approaches to writing stories, and they edit their peer's work before publication. They also regularly contribute articles of their own. Editors must be excellent writers and careful editors of their own and their peers' work. They should have high standards for the published material in the paper and be able to meet deadlines. *The time commitment of this position is 6 hr./week. There is the possibility of more than one editor. This is a year-long, honors level commitment. (1 credit)*

Yearbook Designer & Editor

The Yearbook Designer & Editor works with yearbook company, school staff, and peers to design and implement the 2022-2023 yearbook! The yearbook is a professional publication that captures the history of our school. It is an important documentation that needs quality attention and time. The ideal candidate would have good computer skills, time management (must meet strict deadlines), communication skills and be self-motivated. The role would include creative work: organizing pages, develop theme and color schemes as well as management skills: employing and managing others to take responsibility for pages and to help in the process. The person would attend sports events, cocurricular and school activities to take photos as well as collecting and choosing photos provided by others in the community. Possessing or being willing to learn photography skills is important to this role. *The time commitment of this position is 6 hr./week. There is the possibility of more than one designer/editor. This is a year-long, honors level commitment. (1 credit)*

Maker-in-Residence

The Maker-in-Residence would apprentice at the Innovation Hub, with Ms. Prime. The Maker-in-Residence would need to be self-directed and have a specialty in design, design thinking, 3D fabrication, engineering design, or entrepreneurship (with a business that has a product). The Maker-in-Residence would have additional open periods at the Innovation Hub to work on their “making,” and would also serve as a tour guide and facilitator when external groups visit the Innovation Hub. They should feel comfortable (or willing to get better at) talking about their work, giving demonstrations of the equipment, and facilitating workshops in their area of expertise. *The time commitment of this position is 3 hr./week. Some weekends and/or evenings required. This is either a semester-long or a year-long commitment open to domestic students only due to F1 visa stipulations. (.5 or 1 credit)*

Additional Independent Studies

If a student has a desire to study a subject that Northwood does not currently offer in house, they may do so by applying with the Dean of Academics for an independent study. All independent study opportunities must be pre-approved to ensure the course will be counted for the appropriate credit. Credit will not be applied until courses are completed, and, where applicable, transcripts received.

HUMANITIES DEPARTMENT

(Core Subjects: English, Social Science, World Languages)

Integrated Humanities (9th and 10th Grade Students)

All 9th and 10th grade students will be enrolled in an integrated humanities course which counts towards both English and Social Science credits. In combining traditional English and History courses, Integrated Humanities offers a more comprehensive understanding of both literary works and historical events. Students will become familiar with the systems of thought and human organization that have shaped both larger decisions of society and the details of everyday life. Students will examine important historical events and turning points while also exploring artwork and literature vis-à-vis historical points of view. Emphasis will be on analytical skills as well as personal connection to texts. Exploring the ideological context of the ancient and modern world will serve to not only facilitate deeper content knowledge, but a better understanding of the connection between culture and current events. The course will be inquiry-driven and include project-based and collaborative work, emphasizing the mastery of core communication, research and writing skills to prepare students to be independent learners.

Welcome to the 2022-2023 Short Course English offerings!

Northwood allows for student choice in the upper-level English offerings. This is designed to allow you to pursue areas of interest once basic subject skills have been mastered. As you will see from the varied and exciting options below, this approach also allows for teachers to dive deeply into their passions and areas of expertise, ultimately benefiting you!

Important Points:

- A combination of any two short courses fulfills a full year of English requirement.
- All of the below classes may also be taken as electives (beyond the English requirement).
- All short course offerings meet equal standards of rigor.
- Please read the offerings carefully as many of them mention specific projects or studies that may pique your interest!

Process of Selecting Courses:

1. After perusing the offerings below, you will choose the top four options you like.
2. Keep in mind that you are selecting now for the entire year.
3. You will be placed in a course depending on space availability and schedule constraints.
4. More than one section of a popular course may be offered.
5. Priority in classes that fill up will be offered first to PG students and 12th graders, then to 11th graders.
6. Priority will also be given to those enrolling to meet their English requirement over those enrolling in the class as an elective.

English Course Short Offerings Descriptions

1. The Black Experience in Literature

The Black Experience in Literature course provides insight into the Black experience through readings from King, DuBois, Wright, Brooks, Lorde, Baldwin, Hansberry, Sanchez, and Baraka. Students will discuss issues ranging from the relationship between literature of the African American experience and mainstream literature to key concepts of ethnic diversity and cultural inclusion. We will also evaluate literary works through multiple critical methodologies and write thesis-driven essays using the literature as a primary source.

2. Voices of Environmental Justice in Literature

This course explores the values and relationships between human and non-human nature by engaging students in systems, power and knowledge of nature. Students will gain a critical perspective of the role of research, analyze academic research, and scrutinize through lenses of power and privilege, to become critical consumers of environmental messages. Students will investigate the how and why. We'll also evaluate environmental literature within the canon, research the role of natural history in the development of American literary form, and nature writing which inextricably is interconnected with philosophy, ethics, environmental literacy, natural sciences, natural history, and various environmental movements. The course will survey American works such as Whitman, Burroughs, Emerson, Thoreau, and environmental classics (Muir, Austin, Leopold, and Abbey). Then using ecocriticism, students will engage with diverse voices and periods, poetry, conservation-oriented writing and field guides, case studies, and contemporary nonfiction and fiction. Within the semester, students will construct an interdisciplinary research paper that links environmental questions to an area of their interest, craft their own nature writing, and correspond with or visit a contemporary nature writer.

3. The Content of Our Character

This is a reading-based course that will include five classic books, each exploring one of Northwood's core values: Respect, Responsibility, Courage, Compassion and Integrity. One of the culminating projects of this course will be a service project for the community.

4. Facing Adversity

This course will explore the literary, psychological, philosophical, and emotional components of the way people face difficulty in their lives. Readings will include well-known stories like "Endurance" (Shackleton's Antarctica voyage), literary masterpieces like *One Day in the Life of Ivan Denisovich*, contemporary autobiography like *When Breath Becomes Air*, with lessons by Martin Luther King, Maya Angelou, Victor Frankl, and Rollo May. We'll also do two projects. One is an outdoor experience to help students reflect on the nature of adversity from personal experience. The second is an interview and write-up of a person who has faced or is facing significant adversity.

5. From Word to Essay

This course will look at the English language as a tool for exploring our place in the world. From word choice, through sentence design, paragraph building and, finally, essay writing, students will get to better understand how deliberate and concise language use helps us both form understandings and communicate with others. On one end, the class will cover structural grammar and at the other end will read and evaluate great non-fiction writing. Students will build and maintain a website for writing hints, good samples, and the publication of their work.

6. Literary Themes and Analytical Writing

This course will focus on core reading and writing skills needed for upper-level high school and college English courses. Designed as a survey course, students will engage with both fiction and nonfiction works, from short stories and essays to full-length works. Emphasis will be on comprehension and interpretation as well as reinforcing the skills of clear written and spoken communication. Students will be expected to write descriptive, expository, analytical and persuasive essays throughout the term. Students may elect to take this course or may be recommended for it.

7. Philosophy and Literature 1 (Truth & Beauty)

The first trimester of Philosophy and Literature will focus on the nature of truth. We will, in the trimester's first half, study short passages from three of the world's greatest philosophers (Plato, Descartes, and William James) and read poetry and fiction that deals with the questions they raise about the nature of truth. One element of the course will be actual formal debates. In the second half of the term, we will focus on beauty and art, applying the thoughts of Dewey, Tolstoy, and Santayana to everything from literature to paintings and sculpture to rap music.

8. Gender and Representation in Literature

What is the meaning of sex, gender, and sexuality in the twenty-first century? How are sex, gender and sexuality questioned, constituted, and reified in the literature that we read? This course offers students literary works and questions how it employs sex, gender, and sexuality to contest and at times inadvertently reinforce dominant societal power structures. This course offers students an overview of lenses focused on gender, sexuality, and representation. Students will deepen their skills in literary analysis, as well as gain a stronger understanding of how literary form influences meaning. Students will also critically examine theoretical research, case studies, and literary works to explore major policy issues related to gender inequality currently, including welfare policy, labor politics, reproductive rights, sexual violence, and domestic violence, and consider the relationship between state power and gender relation. Students probe historical and contemporary issues concerning self-representation and the representation of others.

9. Twentieth Century Poetry

Twentieth Century Poetry covers controversies, form and technique of the century through the study of its literary movements, major poets, and communities. We will read selections from the early twentieth century, Imagists, Modernists, Objectivists, Formalist, midwestern, mid and late

century American, Native American, and African American and more. Students will also develop their creative writing skills with original composition and further develop their written skills in literary criticism, conventions, and terminology appropriate for the genre.

10. Understanding Shakespeare: The Nature of Performance

This course will explore Shakespeare's plays with a focus on his tragedies. Possible readings include *Hamlet*, *Julius Caesar* and *Macbeth* as well as selections from Shakespeare's sonnets. We will watch performances in class and stage moments of the plays ourselves to gain greater insight into the way that plays make meaning. Additionally, we'll study Shakespeare's drama through both primary and secondary texts. The course is suitable for students with little or no prior knowledge of Shakespeare and also for those wishing to become more familiar with the playwright's work.

11. The Voice of Toni Morrison

Winner of the Pulitzer Prize for Fiction and the Nobel Prize for Literature, Toni Morrison, who passed away in August of last year, ranks as one of America's greatest novelists. As Mason Stokes, a scholar of Toni Morrison, says, "Her work explores contradictions that lie at the heart of American identity: the love of freedom in a country founded on slavery; the fact of racial bigotry in a country allegedly dedicated to equality; and the role of community in a country that worships the individual." In this course, we will focus on understanding Morrison's complex American experience through a selection of her novels, most likely including *The Bluest Eye*, *Sula*, and *Beloved*. We'll also read excerpts from her nonfiction work, *Playing in the Dark*, as well as a selection of scholarly criticism.

12. Chronicles of Imperial Delusion: A Novel, a War Memoir, and a Hollywood Blockbuster

The material of this course will be three great studies of imperialism's human cost: Joseph Conrad's *Heart of Darkness*, set against Belgium's nineteenth- and early-twentieth-century abuse of the territory that today makes up the two republics of the Congo; the late American journalist Michael Herr's Vietnam-war journalism, collected in his book *Dispatches*; and Francis Ford Coppola's film *Apocalypse Now*, which is based on *Heart of Darkness* and for which the same Michael Herr wrote the main character's narrating monologues.

13. Novelist, Essayist: The Fiction and Nonfiction of Joan Didion.

Joan Didion—who died only in 2021—wrote some of the most powerful American nonfiction of the past hundred years, as well as several acclaimed novels. A writer's writer, she has been admired for many decades as one of the most astute and articulate trackers of, and commenters upon, this country's societal and political moods. We'll read and analyze several of her most famous essays, and one of her novels.

English elective: Journalism (offered each semester or as a full-year elective)

Journalism will explore the history and tenets of American journalism and provide students with an opportunity to research and write articles and editorials for publication. The focus of the class will be to produce a student-run school newspaper, *The Mirror*. Writing-intensive, the course aims to help students develop the full spectrum of skills used for feature articles, interviews, news articles, photojournalism pieces, and editorials. Students learn how to generate ideas, gather facts and information, write effective leads, and use the most incisive language to convey ideas in a concise and engaging manner. It is open to all students. Students may take the course for one or two semesters.

Note: Journalism does not meet in a regular 45-minute class period, but rather is structured as a professional newspaper team. To receive credit for the course, students must:

- Attend weekly staff meetings
- Submit a minimum of 1 article per week
- Meet editing and publishing deadlines
- There is an opportunity for 1 or 2 students to assume the role of Editor-in-Chief of the paper thereby earning Honors-level credit for their work. This is a year-long commitment. (See Apprenticeships p.7)

Advanced Placement English Offerings

A.P. English Language and Composition

11th Grade - PG Students

Prerequisites: honors grades in previous courses and teacher recommendation. All students taking AP courses must take the National AP exam for that course. If a student fails to take an AP exam, he/she may not have the AP name placed on his/her transcript at the end of the year and will lose the course weighting.

A.P. English Language and Composition fosters the reading and writing skills needed for success in college and for intellectually responsible civic engagement. The course helps students become critical, responsive readers of diverse texts and flexible, thoughtful writers of texts addressed to diverse audiences for diverse purposes. The readings come mostly from American and British nonfiction in many genres: essay, memoir, journalism, satire, arts criticism, sports writing, travel writing, food and cookbook writing, political argument, and advertising. Students will undertake writing projects of their own in some of those genres.

English A.P. English Literature and Composition

11th Grade - PG Students

Prerequisites: honors grades in previous courses and teacher recommendation. All students taking AP courses must take the National AP exam for that course. If a student fails to take an AP exam, he/she may not have the AP name placed on his/her transcript at the end of the year and will lose the course weighting.

Offered in alternate years, the AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. The course culminates in the A.P. exam in May.

Social Science

9th and 10th Grade Students

See Integrated Humanities p.9.

11th Grade - PG Students

U.S. History is a required course for graduation. All 11th grade - PG students will take U.S. History or A.P. U.S. History if they have not already done so.

United States History

United States History introduces students to the study of American History. Examination of Colonial British North America, the American Revolution and framing of the Constitution shape our early study. Important themes from this material will then be examined throughout the remainder of the course. Students will develop an understanding of American history and improve their essential communicative and critical thinking skills through emphasis on writing, the formation of historical arguments, and development of analytical reading skills through a variety of media. Film, online databases, books, online journals, and academic web resources expose students to a wide spectrum of opinions and views on American history. From this, students will form their own opinions and produce original work.

A.P. United States History

Prerequisites: honors grades in previous course and teacher recommendation. All students taking AP courses must take the National AP exam for that course. If a student fails to take an AP exam, he/she may not have the AP name placed on his/her transcript at the end of the year and will lose the course weighting.

This AP course is the equivalent of an introductory level college survey course. It will emphasize the skills, themes, and time periods of American history as laid out by the College Board in their recent curriculum redesign. Students will learn a significant volume of material through classroom instruction as well as independent learning. Through the year, students will familiarize themselves with the issues surrounding the settlement of, development of, and rise of America. Topics include the evolution of Colonial British North America, the American Revolution and Constitution, the growth and expansion of the nation during the 19th century, the rise of industry in the late 19th century, Secession, Civil War, and Reconstruction, the evolution of equality, and major historical issues of the 20th century.

Advanced Humanities Research Program

The program. The Advanced Humanities Research Program offers Northwood students the opportunity to engage in the highest level of academic inquiry by designing and executing a year-long research project in the humanities or social sciences. The program typifies student-led academic engagement by putting the student's interest at the center of course design. Capitalizing on the intrinsic motivation that comes from being authentically interested and/or invested in a topic, the course prompts students to ask questions that can be answered by studying history, literature, language, culture, systems, or society. No two courses of study will look the same.

The course. The course begins with an introduction to the principles of scholarly research. During the first term, students will learn about the basic components of a research project—the problem, research questions, literature review, conceptual frameworks, data collection and analysis, and methods—while writing a research proposal and refining a research question. In this first step, students learn how to search scholarly databases, approach scholarly journal articles, and build a bibliography for research. While building college-ready skills, students learn how to “read the field” in order to enter into an academic conversation about their topic of interest. After examining the range of possible approaches to their question, students design a study using field-appropriate methods (for example, documentary methods for a historical inquiry or case study for a sociocultural question). Over the winter term, students will work more independently to collect and analyze artifacts, interviews, documents, or qualitative data. This could mean conducting interviews, scanning historical archives, delving into literature, analyzing news articles, or observing social patterns in the field. During the spring term, students generate assertions and arguments in order to produce a research report (major course paper) and share their findings with the public (presentation at the Hub, local newspaper, Northwood social media, etc.).

The purpose of the course is to give students complete curricular freedom, on the one hand, and the tools and structure to do something remarkable, on the other. Combining the student's investment in the topic with ownership over design will give students pre-college confidence while fostering genuine mastery in the humanities. Engaging in research represents the highest level of thinking in academia; this course offers students a unique opportunity to generate *new* information and ideas as practicing high-school researchers.

Prerequisites: Honors grades in history courses required. Interested students must fill out an application to be considered for the course. A recommendation from a teacher and from a peer or coach will be required. Enrolment is limited.

Social Science elective: Psychology of Performance

This honors-level course is designed to develop an understanding of human behavior and mental processes in achieving peak performance in a variety of endeavors, including sport, academics, art, business, and finance. Topics examined include psychosocial aspects (e.g., motivation, psychological responses to setbacks, aggression) involved in performance, psychological skills training for performance (e.g., relaxation, self-talk), social influences (e.g., leadership, cohesion), major performance psychology concepts and issues (e.g., habits, self-awareness, happiness, and psychological well-being). During the class, students will demonstrate understanding of the elements of performance studied in the class, apply strategies and tactics studied in class to aspects of their personal performance, reflect on the efficacy of the strategies and tactics they applied to their performance, and publish conclusions of their applications, sharing what they found as their preferred and the most efficacious strategies and tactics to improve performance.

Social Science elective: ADK History (1 semester, .5 credit)

Adirondack History will examine the historical fabric of the local region. The course will span from pre-European settlement to the creation of the Adirondack Park Agency and other contemporary issues. The Adirondack region is a complex and dynamic environment that is unique to the world. The goal of the course is to foster a greater academic awareness and appreciation of the area students call home for an extended time. A connection to relevant matters of the Adirondacks will create an individual more informed to look deeper into issues and intelligently voice their viewpoints.

Social Science elective: Economics (1 semester, .5 credit)

Economics is the study of how people aim to satisfy their wants and needs by making choices amongst scarce resources. The class will explore the influences of consumer choice, business, and government on a society's economic environment. During the first half of the semester the focus will be on microeconomics: the study of how smaller units such as individuals and businesses make economic decisions. Then we will look at some principles of macroeconomics, the study of the economic behavior and decision making of entire economies, i.e.: at the national, and international level. This is a practical course that will provide the students with knowledge and tools that they will be able to use throughout their life.

Social Science elective: Introduction to Financial Markets (1 semester, .5 credit)

This course aims to develop students' understanding of the basic principles of financial markets, and how the various assets within them are valued and traded. Topics covered include banking, real estate, stocks and bonds. Other areas of study within the financial markets ecosystem include commodities, foreign exchange, insider trading, corporate fraud, and the influence of economic indicators, interest rates, and the FOMC on financial markets. Students will have the opportunity for real world application of the concepts and financial instruments learned in class by researching, building, and tracking their own mock diversified investment portfolios. Books and films include the following and others: *Liar's Poker* by Michael Lewis (Lou Ranieri and the Mortgage Bond), *Den of Thieves* by James Stewart (Milken Milken & Junk Bonds), *Reminiscences of a Stock Operator* by Edwin Lefevre (Stock Trading Psychology).

World Languages

Spanish I

Spanish I provides a foundation for the development of skills in listening, speaking, reading and writing. Students are encouraged to communicate in Spanish for practice in speaking and listening. The course covers basic vocabulary that allows students to communicate effectively by asking and answering question, describing situations, and expressing needs. Students learn a variety of grammatical concepts so they can communicate in the present and future tenses. As the year progresses, we build on a foundation in vocabulary and grammar to develop reading and writing skills. Students gain appreciation of the cultural diversity within Spanish-speaking countries as they reflect on their own perspectives and experiences. Students also engage in a variety of authentic celebrations that foster appreciation of other cultures.

Spanish II

Prerequisites: Spanish I. In addition to reinforcing and broadening listening comprehension, speaking, reading and writing skills, this course integrates cultural and historical information about the Spanish-speaking world through short stories, news articles, and poems. In this course, students explore the subtleties of language with an emphasis on the differences between the imperfect and preterite tenses and between the prepositions *por* and *para*. Students are expected to communicate in Spanish through sustained speech and are required to write short essays using compound and complex sentences in the imperfect, progressive, present, and preterite tenses.

Spanish III

Prerequisites: Spanish II. Spanish III continues the building of competence in the language by adding to the students' command of verbs with progressive and perfect constructions, the conditional mood, and imperatives. Sub-units of study look at subtleties in the management of interrogatives and their related adverbial forms; conjunctions; prepositions; and reflexive and object pronouns. Short poems committed to memory—one poem per trimester—give students a lasting acquaintance with the work of some revered writers and serve as a platform for focused refinement of pronunciation skills. Short stories and news items provide authentic reading experience and material for discussion. Films of various lengths, both narrative and documentary, provide listening practice and further material for discussion. Podcast-style audio projects, undertaken in small groups, provide practice in the composing and editing of narrative and descriptive text and in presentational speaking.

French II

Prerequisites: French I. This course is a continuation of first year French. It strives to cultivate a true interest in French language and culture. Through building on the basics of French I skills, French II enables students to communicate in simple sentences in spoken or written French. It also widens students' worldviews by introducing them to French speaking cultures.

French III

Prerequisites: French I, II. This course is a continuation of French II. It is designed to broaden the student's outlook on life and the world around him/her. It opens doors to future career choices: it helps students learn about themselves as they become more aware of others, and it aids in communication skills. All basic verb tenses are studied, vocabulary acquisition is emphasized, and daily speaking and listening are an essential part of the course. Students write short compositions in French.

American Studies: Language and Culture

Based on teacher or admissions recommendation. For one semester or year long, depending on the recommendation.

This course supports students who are English Learners with speaking, reading, and writing English, within the context of a study of contemporary American culture. The course is delivered through a unique partnership with Nao Now online tutoring services. Nao Now's Language and Culture Course is designed to teach you English through contemporary pop culture and STEM topics like Lady Gaga, Times Square, and the physics behind Steph Curry's basketball shot. Nao Now's curriculum taps into different ways of learning-- auditory, visual, verbal, and sensory. Along the way, we will help you hone pronunciation skills, improve your reading comprehension, and learn the relevant vocabulary you can use in everyday life. You will develop the key skills of language learning: communication, understanding, and critical thinking. Our course will not only prepare you for the classroom and standardized tests but will also improve your cultural and social connectivity. By the end of the course, you will be able to give speeches, research complex topics, write essays analyzing novels, create PowerPoint presentations, and sing songs in English. All Nao Now tutors are native speakers and from top American universities. All students enrolled receive online 1-to-1 lessons three times per week tailored to their level and needs.

Continuing/ Additional World Languages

Should a student wish to continue their study of French or Spanish with **AP French Language and Culture** or **AP Spanish Language and Culture**, this option is available to students through an online platform, and they will be able to sit these exams at Northwood. Students may also wish to pursue a **language other than French or Spanish** and should speak to the Dean of Academic Affairs to pursue this option

Fine and Performing Arts

Fundamentals of Art

Open to all levels. This introductory project-based art class will give students a chance to explore several different art mediums, techniques, and applications. Students will explore drawing, painting, printmaking, mixed media, and sculpture. This course is broadly designed to develop the students' creative process, try new materials, and be introduced to art history through each project.

Adirondack Art Exploration

Open to all levels.

Exploration will introduce students to the artists who find the Adirondack Park to be a place of artistic inspiration. Integrating art history and art making, students will learn and discover more about artists such as Harold Weston, Rockwell Kent and Georgia O'Keeffe. Visual documentaries, readings, and field trips to museums to see the artists' work in real life will reinforce the history, while painting, drawing and printmaking will give students hands on knowledge of the way each artist made their work. Students develop an artistic journal which compliments and enhances each artist that is studied.

Drawing and Painting 1

Open to all levels. This class will explore the basic elements of art and design. Line, shape, space, texture, and value will be the basis of all projects. At first, using primarily black and white colors, students will experiment with charcoal and pencil to create drawings from real life, photographs, and their own imagination. Then the class will focus on creating works of art within the boundaries of color theory. Acrylic paint will be the dominant material on various surfaces. Art history will also be an important part of this class.

Drawing and Painting 2

Prerequisites: Drawing and/or Painting 1 or permission from the instructor. Students in this class will venture into perspective, composition, realism, and abstraction using black and white and color. Students will discuss and explore concepts of composition and value. Working from real life and photos, students will be encouraged to take more risks, devote more time to their work, and think outside the box. Materials used will include oil, pastel, and acrylic. Art history will also be an important part of this class.

Music: Instrumental or Voice

Open to all levels. Northwood's music courses are focused on improving student musicianship through the study of music theory, fostering an appreciation of music from different genres and time periods, and, most importantly, through practical development and application of technique

in preparation for performance. When registering, students should indicate their instrument of choice as well as their level: beginner (0-1 years), intermediate (1-3 years), or advanced (4+ years). Students should also indicate whether they intend to take music for one semester or a full year.

20th Century Dance

Open to all levels. Explore the most popular dances of each decade including, The Charleston, Lindy Hop, Swing, and Salsa. Students will investigate major dance trends in chronological order, analyzing and interpreting how dance influences cultural, social, historical, and personal contexts.

Dance, Music or Visual Art - Credited Studio Hours (P/F, .5 per semester)

In both visual art, dance and music, students can receive credit for studio hours. This option should only be pursued by students who have already achieved a foundation in the art form and who are committed to the independent pursuit of skill development. Mentorship throughout the process will be available. In order to receive credit from this option, students must:

- Apply with the appropriate teacher prior to the beginning of the term (Ms. Maiore, Ms. Van Slyke or Mr. Stewart). Teacher approval is required.
- Develop and maintain a Studio Journal, in an agreed upon format, which includes initial ideas, goals and objectives.
- Log hours consistently throughout the semester. (Evidence of 40 hours is required.)
- Incorporate some element of performance or presentation of one's work by end of the semester
- Provide a reflection at the end of the marking period in a format agreed upon with the appropriate teacher

Dance, Music or Visual Art - Friday course option (.5 credit per semester)

This course will be offered in the fall and spring semesters.

Not available to traveling athletes or those committed to other Friday courses.

In this course, students will attend music, dance or visual arts for half-day sessions on Fridays throughout the entire semester.

In order to receive full credit for the course, students will need to:

- Read / watch the assigned materials throughout the course and demonstrate understanding of the material
- Participate fully in each Friday's experience
- Satisfactorily perform the assessment tasks at each checkpoint throughout the semester
- Effort will also be assessed based on the student's willingness to participate and collaborate with peers

Credited Co-curricular option (P/F, .5 credit per semester)

Students enrolled in this course will engage in dance or music activities during the traditional co-curricular time on Tuesday - Thursday. This can count towards the graduation art requirement.

Additional dance opportunity for 2022-23:

Dance for Athletes – All students participating in athletic programs at Northwood will engage in at least one session per semester of cross-training exposure through our “Dance for Athletes” curriculum. These workshops are organized at the beginning of the school year and take place during normally scheduled practice times. Taught by our dance faculty, the workshops will focus on balance, coordination, flexibility, agility, anatomy, and kinesiology as dictated by the needs of the team and wishes of the coaches.

STEM DEPARTMENT

(Core subjects: Sciences, Mathematics)

Sciences

Adirondack Sciences

Using the Adirondack Park as the laboratory for learning, this interdisciplinary science course will emphasize ecological and geological concepts while integrating elements from traditional biology, chemistry and environmental science coursework. Students will dive into the forces that created and shaped the Adirondack Park and explore its flora and fauna. How the park has changed over time due to climate change and tourism will also be covered. Field work and labs will be a central part of this course, and students will gain an appreciation for why the Adirondack Park is Forever Wild.

Biology

Prerequisites: none. Biology includes the basic concepts of life science with an emphasis on how they relate to the ecosystems in the Adirondack Park. Topics include ecology, chemistry of life, cellular structure and function, genetics, and human systems. Field trips, critical thinking activities, laboratory exercises and classroom discussions reinforce the topics covered. The six-million-acre Adirondack Park serves as nature's classroom for this course; the woods, lakes, rivers, and mountains provide unique learning opportunities for students. Biology is a graduation requirement.

Chemistry

Prerequisites: Biology and must be enrolled in Algebra II. Chemistry develops a foundational understanding of major concepts in the field such as atomic theory, periodic law, chemical bonding, and stoichiometry. Critical thinking activities, laboratory exercises, and classroom discussions about chemistry in our everyday lives reinforce this knowledge. Students also gain experience writing lab reports, solving practical problems, and analyzing experimental data.

Physics: Principles of Engineering

**This course can count as a science credit and/or as an Engineering elective*

Prerequisite: Satisfactory completion of Precalculus.

This honors-level, project-based course will examine several engineering disciplines including but not limited to Environmental, Civil, Structural, Mechanical, Electrical and Biomedical Engineering. In each discipline we will explore the fundamental principles that are required in each field. Students will understand how the disciplines differ and what type of problems each type of engineer solves. For each discipline this will culminate with a project-based question that you would experience in that specific field.

Applied Physics

This project-based course will examine the fundamental Physics concepts through the lens of applied problems. We will examine how we can use Physics principles to solve real world problems such as how does Google maps calculate estimated time, how can we build a bridge to withstand a certain load, and how roller coasters are designed. Each chapter / fundamental concept (projectile motion, Newton's laws, energy, etc.) will have an associated real-world problem to solve.

Human Biology

Prerequisites: biology and one other lab science. Human Biology takes a hands-on approach to learning the structure and function of human body systems. The course aims to expand the student's current knowledge of how the human body works by studying the major body systems, leading to an understanding of how their daily activities affect their health now and in the future. Students will also relate how disease leads to loss of functioning in the systems. Labs include dissections of a number of major animal organs. Students will also have the opportunity to get American Red Cross First Aid and CPR certified upon successful completion of the First Aid unit.

A.P. Biology

Prerequisites: honors grades in previous course and teacher recommendation. All students taking AP courses must take the National AP exam for that course. If a student fails to take an AP exam, he/she may not have the AP name placed on his/her transcript at the end of the year and will lose the course weighting.

Offered to qualified students who have successfully completed biology and chemistry with a record of high achievement in the sciences. AP Biology is a challenging full-year college-level introduction to the study of biology. The course examines life from the molecular and cellular levels through organisms, genetics, and evolution. Throughout the year, students will develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical solutions, and connecting concepts in and across areas of study. All students must take the national AP Exam in May.

Advanced STEM Research Program

The Advanced STEM Research Program provides a platform to engage in independent research within the fields of biological sciences, physical sciences, behavioral sciences and engineering. Students with a deep interest in scientific discovery will design and implement their own research projects throughout this year-long, A.P. equivalent-level course. By engaging in literature research, generating a testable hypothesis, implementing an experiment and analyzing the results, students will develop the mastery to critically think about the scientific world. Formal presentations of the results at the end of the year will further develop the students' communication and critical thinking skills.

Enrolled students must hold an interest in problem solving and a deep desire to conduct independent research. Depending on the students' interests, mentorships with regional scientists may be arranged to support the student with expert advice and exposure to a higher level of academic engagement. Placing a special emphasis on research directly related to systems within the Adirondack Park will further develop the relationship between Northwood School and the community and foster with these young scientists a deeper awareness of their living environment.

Prerequisites: Honors grades in chemistry required. Successful completion of an AP Science course is beneficial. Interested students must fill out an application to be considered for the course. Enrolment is limited.

Mathematics

Algebra I

This is a first-year algebra course in which students learn to reason symbolically. The key content involves writing, solving, and graphing linear and quadratic equations, including systems of two linear equations in two unknowns. Quadratic equations are solved by factoring, completing the square, graphically, or by application of the quadratic formula. The course also includes the study of monomial and polynomial expressions, inequalities, exponents, functions, rational expressions, ratio, and proportion. Algebraic skills are applied in a wide variety of problem-solving situations.

Geometry

Prerequisites: Algebra I. In this course, students' study two- and three-dimensional shapes and their relationships in plane and space. It is a visual as well as analytic subject, integrating spatial and numerical concepts. Students classify and describe shapes in terms of congruence, similarity, and transformations. The course introduces students to different forms of mathematical logic, including inductive and deductive reasoning. Students solve measurement and algebraic problems using properties, proportions, and trigonometric relationships. Algebra is reviewed with geometric applications.

Algebra II

Prerequisites: Algebra I and Geometry. Algebra II is intended to help students enrich their skills and develop more concepts beyond basic algebra as they prepare for higher level math courses. This course is designed to help students apply the mathematics they learn in the classroom to real world situations, communicate mathematically, and use technology appropriately. Topics that connect various areas of mathematics to algebra, geometry and trigonometry will be studied. Students will study real numbers, operations, and patterns as they extend their understanding of algebraic concepts. They will work with complex numbers, logarithms, polynomial functions, systems of equations and inequalities, transformations, and mathematical models.

Pre-Calculus

Prerequisites: Algebra II. Pre-calculus builds upon mathematical and analytical concepts introduced in Algebra II and prepares students for upper-level mathematics courses, both at the secondary and collegiate levels. Students study linear, quadratic, polynomial, rational, exponential and logarithmic functions, analytic geometry, triangle trigonometry and trigonometric functions, complex numbers, probability, and statistics.

Honors Pre-Calculus

Prerequisites: Honors Algebra II or honors grades in previous courses and teacher recommendation. This course is designed to provide students with a strong foundation of precalculus concepts, techniques, skills, and applications necessary to succeed in upper-level mathematics courses, both at the high school and college levels. Students will develop quantitative reasoning and problem-solving skills by being active learners and expanding their ability to analyze and interpret given information. Students will develop the ability to understand and communicate mathematical ideas effectively and develop an appreciation of the wide range of mathematical applications and opportunities in the world around us.

Calculus

Prerequisites: Honors Pre-calculus or honors grades in earlier courses and teacher recommendation. Calculus explores the concepts of derivative and integral calculus to give students a solid foundation upon which to build mathematical knowledge in future courses. Specifically, students study functions and different representations of functions (graphically, numerically, algebraically, etc.), limits, derivatives and differentiation, applications of derivatives, definite integrals, indefinite integrals, and applications of integrals. Students should have a solid foundation and a proven understanding of functions (polynomials, exponential, logarithmic, trigonometric) from a Pre- calculus course. This is an honors level course.

Statistics

Prerequisites: Algebra II or equivalent. Statistics' students explore statistical concepts central to the analysis of data in many sciences and social science disciplines. Specifically, students explore data to describe patterns, departures from patterns, and associations between variables; plan and conduct experimental studies; investigate chance and random processes using probability and simulation; and learn how to objectively estimate population parameters and scientifically test hypotheses using statistical inference. Critical thinking, inferential reasoning, and communication – both oral and written – are emphasized over calculation and algebraic manipulation. Use of technology – graphing calculators, spreadsheets, and statistical analysis software – is prevalent throughout the course.

Game Theory (1 semester, .5 credit)

Prerequisites: Algebra II or equivalent. What is a game? In its broadest sense Game Theory is a study of conflict and cooperation amongst people. We can use mathematical models to analyze the interactions between players in a game, by quantifying payoffs for different results. This approach will allow us to both develop strategy and predict behavior. Beginning with simple zero-sum games such as tic-tac-toe and chess, through societal level games of international politics, or global warming students will learn to see the world through a new lens. Special attention will be paid to the natural 'paradoxes' that occur in game theory, such as the only stable equilibrium of a game of chicken resulting in a worse outcome (death) for all. Students will play games, develop strategies for games such as prisoner's dilemma, test strategies against each other (in a simulated environment, no students or vehicles will be harmed) and develop new games. The capstone project will be an analysis of a real-world current event, from a game theoretical lens.

Data Science (1 semester, .5 credit)

Prerequisites: Algebra II or equivalent. Data science is an interdisciplinary field that extracts important or underlying information from large, typically noisy, data sets. It can be thought of as applied statistics, where statistical methods are used to gather insight about a specific set of data. We see the implications of data science in our everyday life, from the posts on our social media feeds, to the advertisements we see on YouTube, even to the movie suggestions seen on Netflix. Throughout this class we will examine how we get large data sets, what we do with the data, how we analyze the data, and ultimately how we present data to an audience of interest.

A.P. Calculus (AB)

Prerequisites: honors grades in previous course and teacher recommendation. All students taking AP courses must take the National AP exam for that course. If a student fails to take an AP exam, he/she may not have the AP name placed on his/her transcript at the end of the year and will lose the course weighting.

This course prepares students for the AP Calculus exam. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

A.P. Statistics

Prerequisites: honors grades in previous course and teacher recommendation. All students taking AP courses must take the National AP exam for that course. If a student fails to take an AP exam, he/she may not have the AP name placed on his/her transcript at the end of the year and will lose the course weighting.

This course follows a curriculum that prepares students for the AP Statistics exam. Students explore the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data to describe patterns and departures from patterns, planning and conducting an experimental study, exploring random phenomena using probability and simulation to predict patterns, and estimating population parameters and testing hypotheses using statistical inference. Students must show strong critical thinking and inferential reasoning skills as well as excellent communication skills, both oral and written. Use of technology – graphing calculators and statistical analysis software – is prevalent throughout the course.

INNOVATION, ENGINEERING, AND ENTREPRENEURSHIP (I.E.E.)

Introduction to Design Thinking (1 semester, .5 credit)

In this out-of-the-box course, students become real world problem solvers and learn the five stages of the design thinking process (to empathize, define, ideate, prototype, & test/refine). Faced with design thinking challenges, students leverage industry-standard tools and real-world experts to create innovative solutions to personal, local, and global problems. Part design studio, part think tank and makerspace, this hands-on and minds-on course takes place at the Innovation Hub and requires students to grow as critical and creative thinkers, communicators, and collaborators.

Entrepreneurship: From Case Study to Pursuing the Capstone Project (1 semester, .5 credit)

Entrepreneurship is the process of growing ideas into a viable business, organization, or social innovation, and the entrepreneurial spirit is a mindset of how one approaches problems and proposes solutions. In the first trimester, the course will explore the mindset one needs to succeed should they wish to become an entrepreneur. Students will acquire a toolkit for identifying and forming a new venture, including creative thinking, critical thinking, problem-solving, collaboration, and communication. The majority of the work will focus on a case study inspired by marketing genius and Northwood Alumni Dill Driscoll '71. In the second trimester, students will use the skills they acquired in the first trimester and apply them to developing a business, venture, or social solution. The work will culminate in a capstone project that will include key steps to bring their idea to fruition.

Introduction to 3D Modeling and Fabrication (1 semester, .5 credit)

This course introduces modern 3D design, modelling, and fabrication skills. Students learn basic CAD drawing and assembly skills to create software-based models. Spatial resolution, dimensioning and part integration skills are developed through a series of design projects. Students develop an understanding of CAD software and file management in the creation of 3D parts. 3D printing, CNC (computer numeric control) routing, and laser cutting machines are utilized to bring CAD designs to life. Students are trained in the use of these machines and develop an understanding of the design and prototyping process from start to finish. Finally, model evaluation, fabrication troubleshooting, and quality control techniques give students who complete the course the ability to design, draw and create their own high-end products.

Physics: Principles of Engineering

**This course can count as a science credit and/or as an Engineering elective.*

Prerequisite: Satisfactory completion of Precalculus. See course description under Sciences on p.23.

Northwood School Robotics Courses

This curriculum offers beginner and advanced sections and is intended to introduce students to hands-on, project-based applications of the engineering process. Students design, build, test, and program robots, utilizing the programming languages and logic skills covered in the course curriculum. Students will develop logic skills, gain proficiency in appropriate programming languages, and develop an intimate understanding of the engineering design process and the mechanical, electrical, and software components of robotics. Students in both courses will have the opportunity to compete on one of Northwood School's robotics teams at national/international high school robotics competitions. Integration of 3D printing design and modeling is intended to support skill development in all areas of this course.

Introduction to Robotics (1 semester, .5 credit)

This course will focus on basic skill development and requires no programming experience. Students will work with VEX EDR robots, designing and building robots for the VEX Robotics Competition. Students will face game-specific engineering challenges and be required to develop the necessary skills to build effective robots. Engineering design, mechanics and construction techniques will be developed as students improve their robot designs. Students have the option to compete as part of VEX Robotics Team 12946 in regional competitions. A thorough introduction to robot programming using C++ will help students develop fundamental programming-based logic skills. Grading in this course is based on the successful completion of projects and level of proficiency in skill areas.

Applied Robotics (Honors-level full year course)

**Offered within the academic day or as a Friday Course*

This course is designed to be an intermediate / advanced level course, and students are expected to have a basic knowledge or experience with logic and computer programming. Students will be members of the Northwood FIRST FRC robotics team (Team #6300). Students will design and build industrial robots from scratch – mastering the fundamental concepts in the process. Mechanical assembly, drive train design, electrical wiring, Java programming, mechanical engineering, and robot command and control are skills students will develop in this process. This course will employ advanced 3D printing tools and develop skills for 3D model and part design. Grading in this course is based on the successful completion of projects and level of proficiency in skill areas.

Credited Robotics Co-curricular option (P/F, .5 credit per semester)

- Students enrolled in this course will engage in robotics activities during the traditional co-curricular time on Tuesday - Thursday. This can count towards the graduation co-curricular requirement.

NORTHWOOD OUTING CLUB COURSES

Northwood Outing Club - Education and Adventure Program

The Northwood Outing Club (NOC) is designed for aspiring adventure sports enthusiasts. Within your four years at Northwood School, you will have the opportunity to build a lifelong passion for adventure sports while utilizing world class venues and unique assets within the Adirondack Park, North America, and internationally. You will develop soft and hard skills, environmental stewardships, risk management procedures, and leadership skills while working closely and in collaboration with faculty, staff, and professional guides. The courses offered under NOC align with the guiding principle of our experiential learning L.E.A.P. program launched in 2017. There are NOC courses for credit available as 48-hour “Weekend” options or Friday classes. Throughout the school year there are also numerous opportunities for non-credited NOC experiences at various experience levels.

48-hour “Weekend” options (P/F, .5 credit)

These courses will be offered at various times in each season.

In these courses, students will prepare for, plan and execute an outdoor wilderness experience which includes an overnight in the woods. In order to receive full credit for the course, students will need to:

- Read / watch the assigned preparatory materials and demonstrate understanding of the material
- Participate fully in the planning, execution and reflection stages of the wilderness experience
- Satisfactorily perform the assessment tasks at each checkpoint on the trip
- Effort will also be assessed based on the student’s willingness to participate and collaborate with peers

Friday course option (.5 credit per semester)

This course will be offered in the fall and spring semesters.

Not available to traveling athletes or those committed to other Friday courses.

In this course, students will attend NOC on Fridays throughout the entire semester. Depending on the nature of the day’s lesson, the course will run half or full day (students will be informed in advance).

In order to receive full credit for the course, students will need to:

- Read / watch the assigned materials throughout the course and demonstrate understanding of the material
- Participate fully in each Friday’s experience
- Satisfactorily perform the assessment tasks at each checkpoint throughout the semester
- Effort will also be assessed based on the student’s willingness to participate and collaborate with peers

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Credited Co-curricular option (P/F, .5 credit per semester)

Students enrolled in this course will engage in NOC activities such as climbing, paddling, and joining expeditions, as appropriate to the season, during the traditional co-curricular time on Tuesday- Thursday. This can count towards the graduation co-curricular requirement.

Intro to Climbing (Offered each semester, graded, .5 credit)

Meant for beginners, this course offers a broad overview of the different disciplines within the world of climbing (rock, ice, mountaineering, etc.) and will adjust based on the season. Students will learn basic techniques, terminology, and skills, first through classroom-based work and then ultimately through practical experience on Northwood's climbing wall and on our own Cobble Hill.