Upper School Course Offerings

Academic Year 2022-23

March 4, 2022
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LETTER FROM THE HEAD OF SCHOOL</td>
<td>2</td>
</tr>
<tr>
<td>MISSION AND GUIDING PRINCIPLES</td>
<td>3</td>
</tr>
<tr>
<td>OVERVIEW</td>
<td>4</td>
</tr>
<tr>
<td>GRADUATION REQUIREMENTS</td>
<td>5</td>
</tr>
<tr>
<td>ACADEMIC POLICIES</td>
<td>6</td>
</tr>
<tr>
<td>ENGLISH</td>
<td>9</td>
</tr>
<tr>
<td>MATHEMATICS AND COMPUTER SCIENCE</td>
<td>12</td>
</tr>
<tr>
<td>HISTORY AND SOCIAL SCIENCES</td>
<td>16</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>19</td>
</tr>
<tr>
<td>WORLD LANGUAGES AND CULTURES</td>
<td>22</td>
</tr>
<tr>
<td>SIGNATURE PROGRAMS</td>
<td>24</td>
</tr>
<tr>
<td>VISUAL AND PERFORMING ARTS</td>
<td>31</td>
</tr>
<tr>
<td>WELLNESS AND PHYSICAL EDUCATION</td>
<td>38</td>
</tr>
<tr>
<td>INTENSIVES</td>
<td>40</td>
</tr>
</tbody>
</table>
LETTER FROM THE HEAD OF SCHOOL

Thaden Families,

Over the past year, our faculty and academic leadership team have been working creatively and collaboratively to prepare an engaging and challenging set of course offerings for AY 2022-23. I am pleased to announce that the Upper School offerings are now ready for students to review.

The many pathways through our Upper School curriculum all lead to independence. Whether our students are reading *Macbeth*, exploring the culinary and cultural roots of the American South, testing the laws of physics, or writing and staging a one-act play, they will learn how to think, speak, and act for themselves. Our curriculum is designed to develop not only the critical thinking skills of discerning citizens, but also the empathy and curiosity of scholars who can explore complex questions from many perspectives. We also strive to help students balance their convictions with humility and respect for civil discourse and free inquiry. Finally, a Thaden education should fill students with confidence in themselves and a joy in learning that lifts them up and carries them far on the path to independence.

In March and April, our students will begin to chart their continuing course of study at Thaden in close consultation with their families, teachers, and academic advisors. We encourage all parents to partner with us in this process. Enjoy the course offerings, and please do not hesitate to share questions with Michael Maloy, Dean of Academics, or Jessica Bonnem, Dean of Faculty.

Together we fly.

Clayton K. Marsh
Founding Head of School
MISSION AND GUIDING PRINCIPLES

Our mission is to provide a balanced and challenging education that ignites in our students a passion for discovery and learning, prepares them to succeed in college, and inspires them to lead lives of integrity, purpose, and responsible global citizenship.

In pursuing our mission, we are guided by these principles:

- The diversity of a school is essential to the quality of education that it provides.
- In a small school, students are better able to form close relationships with teachers that will give them a strong sense of belonging, self-confidence, and responsibility.
- There is an art in masterful teaching, which requires resources, mentorship, and recognition.
- A well-balanced curriculum empowers students:
  - To think ethically, critically, and creatively about global issues and their local manifestations;
  - To see connections among the humanities, sciences, and mathematics as integrative disciplines in the search for knowledge, meaning, and beauty;
  - To build coherent, compelling, and innovative arguments;
  - To establish their voice in the world by writing and speaking well and expressing themselves creatively;
  - To work independently and collaboratively.
- Activities outside of the classroom (such as acting in a play, competing on a team, or working on a sustainability project) give students essential opportunities to develop as leaders, volunteers, and contributors to the life and spirit of the greater community.
- A school must create a safe and healthy environment where students have time and space for reflection, freedom to make important decisions, and opportunities to learn from mistakes.
- The harmony of a school community depends on a shared commitment to honesty, compassion, and fair play.
OVERVIEW

Giving equal emphasis to the sciences and humanities, Thaden School’s graduation requirements are designed to ensure that students build a strong and balanced foundation across all major disciplines. While our curriculum respects the boundaries of the core academic disciplines so that students understand how scientists, artists, mathematicians, historians, and others create knowledge and understand the world, the course of study within a given discipline often intersects with other disciplines in ways that help students discover larger patterns and explore broad topics and questions from multiple angles.

Our commitment to interdisciplinary problem solving also finds rich expression within the context of our three signature programs – Meals, Reels, and Wheels – where students combine multiple fields of study and engage with community partners in ways that foster a strong sense of civic responsibility. Intensives and other forms of independent study as well as Community-Based Learning (CBL) courses provide further opportunities for students to form and investigate their own questions from many perspectives.

While our curriculum committee and academic leadership oversee the development of our academic program to ensure consistency and coherence, we leverage the special interests and expertise of our nationally recruited faculty by giving them considerable discretion in the design of their courses. Our faculty use a wide range of pedagogical methods – from seminar-style discussions to community-engaged projects – that collectively enhance students’ versatility as problem solvers who can work independently and collaboratively in a rapidly changing world.

By virtue of our indexed tuition program and small class sizes, we also offer a classroom experience in which students of many interests, aspirations, and backgrounds share and explore different points of view under the guidance of nurturing, even-handed educators. As our students discover their common ground and learn from their differences, they grow better prepared for life and citizenship in a nation founded upon a shared commitment to the value of civil debate and diversity of thought.

Our approach to the assessment of academic work is designed to foster a “growth mindset” and resilience in the face of challenge. In particular, our standards-based grading practices illuminate the path to self-improvement by helping students focus on the skills and habits essential to their success at Thaden and beyond. Given our small class sizes, we also expect faculty to provide their students with detailed written feedback and personal encouragement that builds their self-confidence and ignites a lifelong passion for learning and discovery.
## GRADUATION REQUIREMENTS

Thaden School’s graduation requirements ensure that all students build a strong and balanced foundation, while also offering freedom to explore and develop a wide range of interests.

<table>
<thead>
<tr>
<th>Program</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>The required sequence in Grades 9-12 (English I, II, III, IV) fulfills this four-credit requirement.</td>
</tr>
<tr>
<td>Mathematics and Computer Science</td>
<td>4</td>
<td>The required sequence in Grades 9-11 (Algebra I-II and Geometry) fulfills three credits of this four-credit requirement. Courses taken in Middle School may also count for up to one credit with approval of the Upper School Director.</td>
</tr>
<tr>
<td>History and Social Sciences</td>
<td>3</td>
<td>The required sequence in Grades 9-11 (Modern World History, Government and Economics, U.S. History) fulfills this three-credit requirement.</td>
</tr>
<tr>
<td>Science</td>
<td>3</td>
<td>The required sequence in Grades 9-10 (Inquiries in Biological and Environmental Sciences, Inquiries in Chemical and Physical Sciences) and one additional year-long course fulfills this three-credit requirement.</td>
</tr>
<tr>
<td>World Languages and Cultures</td>
<td>3</td>
<td>Students must study the same language for at least two consecutive years in the Upper School. Foreign language study in Middle School may count for up to one credit with approval of the Upper School Director.</td>
</tr>
<tr>
<td>Signature Programs</td>
<td>2</td>
<td>Students may choose elective courses in three areas: Meals, Wheels, and Reels.</td>
</tr>
<tr>
<td>Visual and Performing Arts</td>
<td>2</td>
<td>Students may choose elective courses in three areas: music, theater, and visual art. Courses in dance will be offered in future years.</td>
</tr>
<tr>
<td>Wellness and Physical Education</td>
<td>2</td>
<td>&quot;The Wellness requirement is fulfilled by taking a one-trimester course during Grades 9 and 11. The Physical Education requirement is fulfilled by taking four one-trimester courses (one each year) or by participating on a Thaden athletics team.</td>
</tr>
<tr>
<td>Additional Courses</td>
<td>3</td>
<td>This requirement may be fulfilled by taking elective courses in any field of study at Thaden School  \</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>To fulfill the total graduation requirements of 26 credits, students must carry a course load averaging 6.5 courses per trimester. Students may take no less than six courses and no more than seven courses during any one trimester.</td>
</tr>
</tbody>
</table>

+ While fulfilling these requirements, students must also take at least three one-trimester courses that carry the Community-Based Learning (CBL) designation.

+ In most cases, one credit equals three trimesters of study. The number of credits required represent the minimum that a student must earn to fulfill that requirement. Thaden School’s graduation requirements exceed Arkansas state standards.
ACADEMIC POLICIES

Course Selection

Thaden School’s upper school course selection process will begin on March 4, 2021. Students start the process by referring to the 2022-23 Upper School Course Offerings and setting their long-range academic goals as well as their specific selections for the upcoming year. During this planning phase, students are encouraged to consult with their parents, advisor, college counselor, teachers, and the associate and divisional directors.

When students have identified their desired course of study for the upcoming year, they should complete the Course Selection Form through the Portal. Course selections are due on April 8, 2022.

Advanced Coursework

At many schools, especially those serving students with a broad range of academic trajectories and needs, courses that are specifically designed to prepare students for college often carry the Advanced Placement (AP) designation in order to signal their academic rigor. Thaden has not adopted an AP curriculum because our required course of study, consistent with our mission, is designed to prepare students for success at even the most academically challenging colleges and universities. Many of our courses have distinctive features that set them apart as especially challenging and comparable to college level work. These more advanced course offerings are denoted on the Thaden transcript with an asterisk (*).

Independent Study

Students who have exhausted Thaden School’s course offerings in a particular area of study may submit a proposal for an independent study, which they complete in partnership with a faculty mentor.

Senior Thesis

In the spring of the Grade 11 year, a student may submit a proposal for a senior thesis project. Senior theses are an opportunity to pursue original research, in partnership with faculty mentors. Students may develop their projects from ideas sparked by past courses or pursue topics of long-standing personal interest.

Course Add/Drop Policies

Thaden School conducts its course registration process prior to scheduling course meeting times for the following academic year with the goal of accommodating students’ preferences to the fullest extent possible. Once the schedule has been constructed, changes may be difficult or even impossible, and students may be precluded from altering their schedule due to conflicts, class sizes, or other factors. The policies and procedures for adding and dropping courses are set forth below.

Adding Courses
Upper School students who are enrolled in fewer than seven courses may request to add additional courses within the first two weeks of the year for year-long courses and the first week of the trimester for trimester-long courses.

To initiate the process for adding a course, students should complete the Course Add Form (available on the Portal and in the Main Office) by indicating the course they wish to add and obtaining the signed approval of their advisor, parent or guardian, and the relevant course instructor. Course Add forms should then be submitted to the Dean of Faculty, who makes the final decision in consultation with the academic leadership team.

Students who add courses are responsible for making up all work assigned prior to their enrollment.

Dropping Courses

Upper School students must enroll in a minimum of six courses per trimester. Dropping a course is only allowed in cases where a student discovers that their overall course load is too heavy or there is a clear, documented reason why the course is not a good fit for the student. Thaden School does not allow students to change or drop courses to accommodate preference for a teacher, time of day, or sports and other outside activities.

To initiate the process for dropping a course, students should complete the Course Drop Form (available on the Portal and in the Main Office) by indicating the relevant course and obtaining the signed approval of their advisor, parent or guardian, and the course instructor. Course Drop forms should then be submitted to the Dean of Faculty, who makes the final decision in consultation with the academic leadership team.

A student who drops a course receives no credit for that course, and the course does not appear on the student's transcript.

Grading and Assessment

Thaden School faculty use a system called standards-based grading (SBG). In this system, students are evaluated based on their proficiency in meeting clearly articulated course objectives. Instead of receiving a single overall grade, SBG breaks down subject matter into smaller “learning targets.” We employ standards-based grading practices because the learning goals and ratings provide students with more specific information about their progress, above and beyond what a letter grade can reveal.

To communicate students’ standards-based ratings, Thaden School opens the gradebook at the mid-point of each trimester and releases progress reports at the end of each trimester. Upper School students receive ratings on their progress in meeting specific learning goals for each course as well as letter grades. In addition, students receive narrative comments from their teachers twice a year and a personal letter at the end of the year, written by their advisor or another member of the faculty, that reflects on their growth.
The specific learning goals are divided into two categories:

Skills
- **Factual Knowledge**: accurately recalls and uses factual information and vocabulary
- **Conceptual Understanding**: grasps fundamental ideas, constructs, frameworks, and theories
- **Procedural Technique**: understands and follows disciplinary methods and processes
- **Critical Thinking**: effectively analyzes complex problems using factual knowledge, conceptual understandings, and procedural techniques
- **Communication**: clearly and/or persuasively articulates ideas and arguments with appreciation for the audience and context
- **Creativity and Originality**: generates and advances novel ideas, products, or points of view

Habits
- **Preparation**: brings relevant materials to class and effectively manages time
- **Initiative and Perseverance**: actively engages in the learning process and demonstrates an eagerness to improve
- **Collaboration**: works well in diverse groups to achieve a common goal

While students may cultivate many, if not most, of these Skills and Habits in each of their courses, progress reports identify and rate only the goals that a teacher deems most important in the context of a given course. A student's progress with respect to each goal is rated numerically on a four-point scale, indicating the degree to which the student has progressed in meeting grade-level expectations: (1) Beginning; (2) Approaching; (3) Meeting; (4) Exceeding. The absence of a rating next to a certain Skill or Habit indicates that not enough information or data has yet been collected to provide meaningful feedback.

Thaden uses a decaying average to calculate students’ overarching scores in each skill and habit. The decaying average formula is a calculation method that places more weight on the most recently scored material, allowing for a better measure of growth by rewarding students for how far they have come regardless of where they started. To translate ratings into letter grades, faculty take the average of a student's overall rating in each of the course's identified transdisciplinary skills – only skills, not habits – and then use the following conversion scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Description</th>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>&gt;3.5</td>
<td>C+</td>
<td>A-</td>
<td>3.25-3.49</td>
</tr>
<tr>
<td>A-</td>
<td>3.0-3.24</td>
<td>C-</td>
<td>B+</td>
<td>2.75-2.99</td>
</tr>
<tr>
<td>B</td>
<td>2.5-2.74</td>
<td>NC (no credit)</td>
<td>B-</td>
<td>&lt;1.49</td>
</tr>
</tbody>
</table>
ENGLISH

Required Courses

English I: Journeys and Transformations

This year-long course introduces students to the study of literature as an academic discipline. As students read texts in many forms and from many periods and places, such as Homer's *The Odyssey*, Adichie's *Purple Hibiscus*, and Portis’ *True Grit*, they investigate the importance of storytelling in the human experience through the lenses of journeys and transformations. Using annotation and other close-reading strategies, students deepen their understanding of the course texts. In addition, they write numerous analytical paragraphs and three extended essays, while also exploring their own journeys and transformations through autobiographical and creative writing assignments. Seminar-style discussions develop students’ oral presentation skills and their ability to listen actively and contribute, one of the hallmarks of a Thaden education.

Required for Grade 9
1 Credit
Prerequisites: None

English II: Individuals and Communities

This year-long course builds on the reading, writing, and thinking skills students develop in English I, applying them with greater sophistication and to more complex texts. Students read books such as Dürrenmatt's *The Visit*, Satrapi's *Persepolis*, Kelley’s *A Different Drummer*, Shelley’s *Frankenstein*, and a choice of Baldwin novels. Focusing on individuals and communities, they investigate fundamental questions related to the formation and negotiation of one’s identity relative to the status quo. Through reading, writing, and critical conversations, students explore how one becomes oneself; how society shapes an individual; how societies can be just or unjust; and how individuals contribute to the formation and preservations of just societies. These questions – and many more – emerge through textual encounters that span periods and genres, from graphic memoir and horror to fabulism, realism, and bildungsroman. While students continue to work on their writing at the paragraph level, their focus is primarily on extended pieces, including four major papers and creative and reflective responses.

Required for Grade 10
1 Credit
Prerequisites: None

English III-A: Money and Power

This year-long course uses literature as a lens to explore the roles of money and power in the human experience. Students read works such as Kafka’s *Metamorphosis*, García Márquez’s *Chronicle of a Death Foretold*, Heaney’s translation of *Beowulf*, Shakespeare’s *Macbeth*, and Whitehead’s *The Nickel Boys*, along with selected poems and short stories. These texts raise fundamental questions about how money
and power reveal and shape the human heart. What do people truly value and deeply desire? What forces influence those yearnings? To what lengths will individuals go to get what they want? Is it true that “absolute power corrupts absolutely” and “the love of money is the root of all evil?” Is it possible to have great wealth and great power, yet be good? These questions are more than literary hypotheticals. They have shaped our world for centuries. As students develop thoughts around these questions, they hone their writing skills by crafting extended argumentative essays that analyze text and communicate complex ideas clearly. Students also spend significant time writing personal essays in preparation for the college application process.

Required for Grade 11 (students must enroll in English III-A or B)
1 Credit
Prerequisites: None

**English III-B: Love and Loss**

This year-long course uses literature as a lens to explore the roles of love and loss in the human experience. As any student of literature knows, these two words are often connected. So many books are about love, and so many books end in death. Why? And how should we respond? To explore these questions, students read works such as Rhys’ *Wide Sargasso Sea*, Garcia Marquez’s *Chronicle of a Death Foretold*, Shakespeare’s *Othello*, Achebe’s *Things Fall Apart*, and Highsmith’s *Strangers on a Train*, along with selected poems and short stories. These texts all explore the multifaceted nature of love: its beauty and darkness, its power to redeem and destroy. And these texts all grapple with the reality that everything we love will die. These concepts are more than literary hypotheticals. They are fundamental to the human experience. As students develop thoughts around these concepts, they hone their writing skills by crafting extended argumentative essays that analyze text and communicate complex ideas clearly. Students also spend significant time writing personal essays in preparation for the college application process.

Required for Grade 11 (students must enroll in English III-A or B)
1 Credit
Prerequisites: None

**English IV-A: Tragedy**

Ancient Greek tragedian Aristotle once defined tragedy as “an imitation of life.” This year-long senior English course is the study of the tragic tradition in literature. The course studies the evolution of tragedy, considering famous tragic works such as Sophocles’ *Oedipus Rex*, Shakespeare’s *Hamlet*, Hardy’s *Tess of the d’Urbervilles*, Wright’s *Native Son*, and Shamshie’s *Home Fire*. As students study these works, they continue to hone their analytical reading and writing skills in preparation for college. They also explore tragedy’s role in the human experience. This course probes questions such as: What is tragedy and what is its artistic purpose? To what extent does tragedy shape society? How has it changed over time? And, perhaps most importantly, if life is full of pain, why do we need to experience it in art?

Required for Grade 12 (students must enroll in English IV-A or B)
English IV-B: Comedy

Erma Bombeck, a 20th-century American humorist, once said, “When comedy goes, there goes civilization.” This year-long senior English course is the study of the comic tradition in literature. The course studies the evolution of comedy, considering famous comedic works such as Chaucer’s Canterbury Tales, Austen’s Pride and Prejudice, Vonnegut’s Slaughterhouse 5, and Beatty’s The Sellout. As students study these works, they continue to hone their analytical reading and writing skills in preparation for college. They also explore comedy’s role in society. This course – ironically enough – takes Bombeck’s quote seriously by asking questions such as: What’s funny? Why do we laugh? To what extent does comedy shape and critique society? How has comedy changed over time? What can it do that tragedy cannot? And, perhaps most importantly, why do we need it?

Required for Grade 12 (students must enroll in English IV-A or B)

Elective Courses

Writers’ Room

In this trimester-long elective, students experience the fast-paced environment of a television writers’ room, working collaboratively to develop a series from scratch. Students begin by pitching series ideas and collaboratively writing an outline, beat sheet, and character profiles. After that, each student is responsible for writing one episode of the series independently while also workshopping their and classmates’ drafts. Students are encouraged to share opinions and observations and learn to hone the ability to apply and give feedback throughout the course. Academically, students gain new insight into story structure, character development, and scene analysis. They also discover world-building and themes through close interpretation and analysis of their own work and that of their peers.

Open to Grades 9-12
1/3 Credit English or 1/3 Credit Reels
Prerequisites: None
MATHEMATICS AND COMPUTER SCIENCE

Required Courses

Algebra I

This year-long course emphasizes problem-solving and critical thinking while introducing students to the basic structure of algebra. With a focus on data analysis and visual representation, the course explores the real-life implications and key properties of functions and their corresponding graphs. Using data sets collected from Thaden's campus and school community as well as big data sets from sources such as the United States Census Bureau, students analyze what data reveal about the past and present. This analytical work is empowered by strategic use of algebraic tools, technology, and regular check-ups on mathematical skill sets. Through discussion, partner work, and written work, students develop their mathematical voice.

Required in Math Sequence (Grade 8 or 9)
1 Credit
Prerequisites: None

Geometry

This year-long course focuses on the development of geometrical vocabulary, problem-solving skills, mathematical communication, and logical proof. Students develop these skills with a variety of physical and digital tools that allow them to apply their knowledge constructively and creatively. Students also learn to work individually and collaboratively to solve problems, convey their thought processes, and communicate their results – verbally and in writing. Activities and assignments in this course push students to recognize the wide spectrum of mathematical questions, from the abstract to the applied.

Required in Math Sequence (Grade 9 or 10)
1 Credit
Prerequisites: Algebra I

Algebra II

This year-long course takes students into a variety of function families and enables them to integrate algebraic symbols and equations with tabular, graphical, and algorithmic representations. Students begin the year by spiraling back to linear and quadratic functions. With these core skills, they then survey other major function families (e.g., radical, rational, exponential, and logarithmic) and enhance their algebraic toolkit with additional models to represent real-world phenomena. The course prepares students for college entrance exams, more advanced courses in mathematics, and other math-intensive STEM courses (e.g., physics and computer science).

Required in Math Sequence (Grade 10 or 11; students must enroll in either Algebra II or Accelerated
Algebra II with Precalculus
1 Credit
Prerequisites: Algebra I and Geometry

Accelerated Algebra II with Precalculus

The scope of this year-long course is equivalent to that of Algebra II and Precalculus combined. Covering the same set of concepts and procedural skills, it moves at a much quicker pace, beginning with a study of polynomial functions that generalizes and builds on students' familiarity with linear and quadratic functions. Students then explore a host of transcendental functions (e.g., radical, rational, exponential, logarithmic, and trigonometric), paying close attention to the unique properties of each function family, those they share in common, and other relationships among them (e.g., inverses). In preparation for future calculus and advanced mathematics courses, students devote considerable practice to simplifying complicated expressions, equations, and functions. Students enrolling in this course should have strong number and algebra skills and an appetite for being challenged.

Required in Math Sequence (Grade 10 or 11; students must enroll in either Algebra II or Accelerated Algebra II with Precalculus)
1 Credit
Prerequisites: Algebra I and Geometry

Elective Courses – Mathematics

Precalculus

This year-long course makes complex mathematical concepts accessible for algebraic, graphical, and numerical analyses. Through the study of a wide variety of functions, including trigonometric functions, students discover the similarities and differences among a variety of predictive models. In preparation for future calculus and advanced mathematics courses, students devote considerable practice to simplifying complicated expressions, equations, and functions. They also participate in group and individual exercises that develop their ability to employ algebraic skills strategically as they gather information from graphs and tables, and present and articulate their findings and rationales with confidence.

Open to Grades 11-12
1 Credit
Prerequisites: Algebra II and Geometry

Calculus I

This year-long course in differential and integral calculus arms students with the mathematical tools to explore the nature of continuous change. The course begins with advanced precalculus topics before undertaking in-depth investigations of calculus topics, including derivatives, antiderivatives,
and their applications. This overview prepares students for college-level calculus by giving them ample opportunities to develop their algebraic technical skills, refine their problem-solving strategies, and utilize technology as a powerful resource in the study of mathematics.

Open to Grades 11-12
1 Credit
Prerequisites: Precalculus or Accelerated Algebra II with Precalculus

Calculus II*

This year-long course is a continuation of Calculus I. Building upon the fundamental techniques of calculus, students explore additional methods of integration: L'Hôpital's rule, integration by parts, trigonometric substitution, partial fractions, and improper integrals. Additional applications include arc length, area for solids of revolution, and centers of mass. Students are introduced to techniques for analyzing infinite series and drawing conclusions about their behavior, and they also investigate parametric equations and coordinate transformation, with an emphasis on the transition between Cartesian and polar coordinates. The course concludes with a study of vector-valued functions and the geometry of space.

Open to Grades 11-12
1 Credit
Prerequisites: Calculus I

Statistics

This year-long course teaches students how to collect, represent, and interpret data. Students develop the skills of exploratory data analysis in real-world contexts, learn to implement statistical best practices in experimental design, examine the concepts of probability that inform statistical inference, and explore the methodology of making data-based factual claims. Students engage with the mathematical underpinnings of statistical methods and think critically about the philosophical and societal implications of data-driven decision making in the modern world.

Open to Grades 11-12
1 Credit
Prerequisites: Algebra II

Elective Courses – Computer Science

Programming I

This year-long course provides a practical introduction to programming in the Python language. Students explore not only theoretical issues (e.g., algorithms and object-oriented and functional approaches to programming) but also practical ones (e.g., data types, control structures, and syntax). While gaining facility with the basic building blocks of the Python language, students work on increasingly complex and realistic programming puzzles and projects. At the same time, they pursue
programming tasks of their own design, customizing their learning experiences according to their own goals and interests. Overall, the course enables students to engineer and execute simple programming tasks unassisted and to succeed in a college programming course in Python or any other programming language. While the course does not require prior knowledge of any programming language or mastery of mathematics beyond pre-algebra, students with less experience in these fields should bring a genuine desire to deepen and enhance their mathematical and computational skills.

Open to Grades 9-12
1 Credit
Prerequisites: None

Programming II*/III*

Building on the foundational Python skills acquired in Programming I, this intermediate year-long course in programming equips students with the basic experience necessary for designing, implementing, and maintaining larger coding projects. As students gain familiarity with new modules and acquire new coding skills by exploring collaboratively a range of intermediate programming topics (e.g., GUI-development, natural language processing, machine learning, data analysis), they also work individually on independent projects that require careful planning and sustained development and that invite creative problem-solving and self-reflection. Students work closely with the instructor to identify, design, and execute projects they find interesting and meaningful, and they are expected to study other technologies (e.g., web development, databases, XML, etc.) that fit their projects’ needs. After completing this course, students are well-equipped for more independent study of programming at Thaden and for coursework in computer science at the college level.

Open to Grades 10-12
1 Credit
Prerequisites: Programming I/II*

Elective Courses

Robotics

See Science offerings for course description.

Open to Grades 9-12
1 Credit (cannot be used to fulfill the 4 math credits required for graduation)
Prerequisites: None
HISTORY AND SOCIAL SCIENCES

Required Courses

Modern World History, 1500-present

This year-long course introduces students to major periods, events, and concepts that shaped world history from around 1500 to the present, with an emphasis on the 19th and 20th centuries. Its learning goals prioritize equipping students with the fundamental skills of historical investigation: shaping good questions, reading primary and secondary sources, and communicating analyses and interpretations orally and in writing. Students engage both individually and collaboratively with selected primary, secondary, and non-textual sources to investigate the histories of various world regions in the modern era. Beginning with units on the Ottoman Empire and the global conflicts of the twentieth century, then shifting focus to themes of revolution and independence in multiple global contexts (including Africa, Asia, and the Americas), students practice their conceptual understanding, critical thinking, and communication skills through a variety of written assessments, reflective paragraphs, and class discussions. By engaging with the past globally, critically, and ethically, students gain an appreciation for history as shaped by the voices that tell it.

Required for Grade 9
1 Credit
Prerequisites: None

Design Thinking for Social Issues

This trimester-long course introduces students in Grade 9 to the five stages of design thinking, a methodology for creative problem solving: empathize, define (the problem), ideate, prototype, and test. Working with community partners, students apply the design thinking methodology to one of three social issues: environmental conservation, homelessness, or food insecurity. By providing students with the knowledge and skills necessary to develop an empathic understanding of issues in their home region, this course prepares students to engage in strategic action in future community-based projects in their upper school courses.

Required for Grade 9
1/3 Credit; CBL
Prerequisites: None

United States Government and Economics

This year-long course introduces students to foundational economic and governmental concepts. Using a series of case studies, students explore the relationships between the United States’ political and economic institutions and consider the proper role of government in a democracy. This writing-intensive course requires students to develop and communicate their positions on complex and, at times, controversial topics by synthesizing and presenting evidence. The course also gives
students opportunities to develop civic skills by applying their knowledge to real world issues.

Required for Grade 10
1 Credit
Prerequisites: None

United States History

In this year-long course, students investigate key themes and pivotal events in the history of the United States from the 16th to the 21st century. Readings include classic works of American political life, contemporary social and cultural critiques, and foundational primary and secondary historical sources. While developing the research methods and writing skills needed to produce substantial works of historical analysis, students are challenged to think critically and creatively about what it means to be an American citizen, whose voices may be misrepresented or missing, and how the complexities of the past continue to shape the course of events and the construction of historical accounts.

Required for Grade 11
1 Credit
Prerequisites: None

Elective Courses

Art History*

In this year-long course, students become familiar with artistic production across different geographies, time periods, and societies while being introduced to the discipline of art history. The course progresses thematically, with each unit exploring the role of art in relation to a facet of human experience: Art & History, Art & Power, Art & Death, Art & Faith, and Art & Identity. We end the year with an investigation of art's evolving forms and meanings in the late 20th and early 21st centuries in a unit called Art & the Expanded Field. By combining thematic, geographic, and chronological approaches, students develop a broad understanding of the evolution of visual and material culture from prehistory to the present while working comparatively and trans-historically. The class emphasizes looking at art in person, making extensive use of Crystal Bridges, the Momentary, and other local resources. Over the course of the year, students develop both the skills of visual analysis and a personal, creative relationship with art. On a daily basis, students look closely at images and objects, think critically about what they see and read, and communicate their thoughts both orally and in writing.

Open to Grades 11-12
1 Credit; 1/3 CBL
Prerequisites: None

Psychology
Psychology is the systematic study of human behavior and thought. This year-long course introduces students to the fundamental principles, goals, and methods of psychological inquiry in several fields such as cognitive, social, and behavioral psychology. The course also explores connections to biology, chemistry, statistics, and humanities so that students understand the interdisciplinary nature of psychology. Students work independently and collaboratively as they examine psychological theories, evaluate research studies, conduct experiments, classify behavior, and assess personality traits. Considerable attention is given to the importance of experimental design and methodological consistency as well as the application of psychological research in other domains such as advertising, politics, and industrial management.

Open to Grades 11-12
1 Credit
Prerequisites: None

The Culinary and Cultural Roots of the South

This one-trimester course explores the multiple narratives that connect Southern geography, peoples, history, agriculture, and cuisine. Neither the history of the American South nor its food is a monolith. Students use the work of chefs like Michael Twitty, Edna Lewis, Vivian Howard, and Sean Brock to investigate the multiple stories that make up Southern foodways. This investigation includes a discussion of the influence of African American and immigrant cooks whose impact has historically been overlooked. Students use specific dishes and their variations to trace cultural diffusion throughout the region. The complexity of the South is illustrated in its recipes—from low country boils in South Carolina to chow chow pickles in Appalachia to barbeque in Memphis to fried hand pies in Arkansas.

Open to Grades 9-12
1/3 Credit Meals or 1/3 Credit History; CBL
Prerequisites: None

The Culinary and Cultural Roots of Western Civilization

This one-trimester course explores the culinary and cultural roots of Western Civilization through the lens of experimental archeology and primary sources analysis. We begin with prehistory and look at the archeological evidence for the first bread and how the need for bread led to the agricultural revolution. Next, we examine the Sumerians’ myriad contributions as the world’s first civilization and how some of the earliest written recipes and diets contributed to social stratification. Our investigation leads us through Egypt, the Greco-Roman world, Judaism, pastoralism’s “rosy retrospection,” and pre-colonial Native America. Units center around a set of themes that weave through the entirety of the course. Each unit begins with a lesson based on historical content and the significance of relevant food and drink and their contributions to the western culinary tradition.

Open to Grades 9-12
1/3 Credit Meals or 1/3 Credit History
Prerequisites: None
SCIENCE

Required Courses

Inquiries in Biological and Environmental Sciences

This year-long course explores interactions in the natural world – from the molecular processes behind cell division to the genetics of endangered species. Building on previous coursework, students learn how living organisms develop, adapt, and interact with their environment, while lessons in agrobiology and bionomics advance their learning in the Meals Program. Through activities and laboratory time, students develop their critical thinking, communication (both written and oral), laboratory, and research skills. Whenever possible, they venture outdoors to explore the rich natural environment in Northwest Arkansas. Class discussions create ample opportunities to tackle questions about bioethics in the rapidly changing world of modern medicine.

Required for Grade 9
1 Credit
Prerequisites: None

Inquiries in Chemical and Physical Sciences

This year-long laboratory course investigates the composition of matter and the physical and chemical changes it undergoes. Students study the fundamental structure of atoms, the way atoms combine to form compounds, and the interactions between matter and energy. This course focuses on quantitative measurement, dimensional units, and experimental variability. Students use a range of tools for tabulation, graphical representation, visualization, and statistical analysis. In addition, they continue to hone their ability to ask scientific questions, design relevant experiments, develop models, engage in argument, and determine possible solutions using empirical evidence. The ability to read, interpret, and produce scientific and technical text are fundamental foci of this course, as is the ability to communicate clearly and persuasively.

Required for Grade 10
1 Credit
Prerequisites: None

Elective Courses

Chemistry II*

This advanced year-long laboratory course is designed for students who wish to further their studies in this core scientific field. The key concepts underpinning this course include atoms and forces, patterns in chemical behavior and reactions, chemical bonds, energy changes, and experiments and evidence. Students delve deeply into physical chemistry, inorganic chemistry, organic chemistry, and analytical techniques through laboratory work. Throughout this course, students gain a greater depth as well as breadth of subject knowledge, confidence in applying knowledge and skills in new
situations, and the vocabulary to discuss this subject conceptually and show how different parts link together. Developing a deeper theoretical and practical knowledge of matter and energy enhances learning and understanding in biological sciences and physical sciences as well as the Signature Programs, thereby advancing students’ appreciation for the beauty and complexity of this essential science.

Open to Grades 11-12
1 Credit
Prerequisites: Inquiries in Chemical and Physical Sciences

Environmental Science

In this year-long course, students develop a deeper understanding of environmental systems and the cultural, economic, ethical, political, and social interactions between societies and the environment. This course explores three key areas of environmental science:

- Ecology and Human Impact: Students explore ecological concepts such as biodiversity, ecological footprint, and population dynamics as they seek to understand how humans impact the Earth. Computational skills and graphical analysis are emphasized.

- Atmosphere and Human Impact: Students consider how the Earth’s atmosphere was formed, what elements compose the atmosphere, and how these elements relate to human beings and their evolving behaviors. Scientific observation and scientific reading skills are essential as students analyze texts such as the Intergovernmental Panel on Climate Change’s most recent report on atmospheric climate changes.

- Earth System and Human Impact: Students learn about the history of the Earth, geological timelines, the history of life, and the evolution of humans and how they have impacted Earth’s processes.

Open to Grades 11-12
1 Credit; 1/3 CBL
Prerequisites: None

Molecular Genetics*

Molecular genetics is a field that makes advances in research and technology every day. In Molecular Genetics students learn about the molecules that make up genes, how they function, how they evolve, and how they control the function of cells. This is a lab-intensive course where students use the knowledge gained to control, alter, and replicate genes (in other words, genetically engineer living microbes) using advanced molecular techniques like PCR, CRISPR, protein purification, and gel electrophoresis. The course begins with the study of Mendelian and non-Mendelian inheritance and their influence on health and disease, continues with the molecular properties of genetic material, and concludes by analyzing genetic mechanisms in individual organisms and populations.
Open to Grades 11-12
1 Credit
Prerequisites: Inquiries in Biological and Environmental Sciences and Inquiries in Chemical and Physical Sciences

Physics II*

This advanced year-long course builds on the foundations laid in previous science courses. Students are exposed to greater challenges as they deepen their conceptual understanding of physics and experimental design, as well as their problem-solving skills. Topics include mechanics, sound, light, optics, electricity, and magnetism. Students also have the opportunity to choose a strand of particular interest to pursue in greater depth.

Open to Grades 11-12
1 Credit
Prerequisites: Inquiries in Chemical and Physical Sciences
Prerequisites or Corequisites: Calculus

Robotics

Throughout this year-long course, students develop STEM skills and practice engineering principles while realizing the value of innovation and teamwork. Students are encouraged to bring any skills they already have, like coding, electronics, metalworking, graphic design, web creation, public speaking, and videography. All skill levels are welcome! Students learn to think like engineers as they design, build, and code robots to compete in an alliance format against other teams. Students construct robots from a reusable platform powered by Android technology, and also code using a variety of programming languages. This course is offered in collaboration with a mentor from Springdale Robotics Center who visits Thaden at regular intervals to work with students in preparation for the FIRST Tech Challenge. This course culminates in a regional robotics competition in the spring where qualifying teams compete for awards and a spot at the FIRST Championship.

Open to Grades 9-12
1 Credit (cannot be used to fulfill the 3 science credits required for graduation)
Prerequisites: None
WORLD LANGUAGES AND CULTURES

Required Courses

Students in the Upper School must study within the same world language of their choice (Latin, Mandarin, or Spanish) for at least two years.

Latin I, II, III IV*, and V*

This sequence of four year-long courses in Latin enables students new to the language to achieve a degree of mastery sufficient to read and understand a variety of Latin texts that span more than 2,000 years. Using Ørberg's *Lingua Latina per se Illustrata*, podcasts, videos, and conversations with Latin speakers, students gradually build confidence and find their voice through repeated use of the language in and outside of class. Along the way, students explore Greco-Roman mythology and Roman history and culture, and they celebrate certain festivals to demonstrate the continuity of tradition from antiquity to the 21st century. Students also participate in nationally recognized exams sponsored by the American Classical League (e.g., the National Mythology Exam and the National Latin Exam) and may take trips to manuscript collections, foreign language competitions, and local universities to engage in relevant events.

Open to Grades 9-12
Up to 5 Credits (one for each year)
Prerequisites: None for Latin I

Mandarin I, II, III, and IV*, and V*

This sequence of four year-long courses in Mandarin enables students new to the language to achieve a degree of mastery sufficient for meaningful engagement with the cultures of the Chinese speaking world. Pronunciation of the four tones is emphasized through a variety of speaking and listening exercises that strengthen students’ command of the Pinyin system, while reading and writing of Chinese characters is introduced through short dialogues and elementary patterns of Chinese grammar. As each course progresses, students master increasingly complex grammatical patterns and acquire additional characters that extend their ability to speak and write in Mandarin. Students also explore the traditions of China, compare and contrast socio-cultural norms and practices, and learn about the nation’s current governmental, economic, and technological evolutions.

Open to Grades 9-12
Up to 5 Credits (one for each year)
Prerequisites: None for Mandarin I

Spanish I, II, III, IV*, IV*, and V*

This sequence of five year-long courses in Spanish enables students new to the language to achieve a
degree of mastery sufficient for meaningful engagement with the cultures of the Spanish-speaking world. Students develop the four core skills of language learning: listening comprehension, speaking, reading, and writing. From the beginning, students are expected to participate actively in class using the target language. They also read and write about selected topics that give them opportunities to explore popular culture, customs, and traditions from the Spanish-speaking world. Spanish literature (poetry, drama, and short stories) and other cultural materials, including film and video, complement the lessons in the textbook. Students also have opportunities to develop their skills in conversation with guests and community members from Spanish-speaking countries.

Open to Grades 9-12
Up to 5 Credits (one for each year)
Prerequisites: None for Spanish I
SIGNATURE PROGRAMS

Elective Courses – Meals

Cooking Methods

This one-trimester course provides students with foundational skills in the culinary arts. The course includes instruction in recipe and menu planning as well as preparing and cooking foods using different methods such as dry-heat, moist-heat, and combination heats. The course takes a deeper look at some of the more popular cooking methods such as baking, braising, roasting, grilling, steaming, poaching, broiling, smoking, and open flame. The course also focuses on the aesthetics of food presentation and introduces students to a wide variety of cuisines and culinary techniques. Additional topics include safety and sanitation, communication, management, and hospitality.

Open to Grades 9-12
1/3 Credit
Prerequisites: None

The Culinary and Cultural Roots of the South

See History and Social Sciences offerings for course description.

Open to Grades 9-12
1/3 Credit Meals or 1/3 Credit History; CBL
Prerequisites: None

The Culinary and Cultural Roots of Western Civilization

See History and Social Sciences offerings for course description.

Open to Grades 9-12
1/3 Credit Meals or 1/3 Credit History
Prerequisites: None

Culinary Operations*

This one-trimester course introduces students to operations in the culinary world and the fast-paced environment of professional kitchens. Students develop the content and skills necessary to be successful in a professional setting – sanitation, safety, food preparation, communication, and teamwork. Students also have the opportunity to learn from culinary professionals, as well as put their knowledge into action by participating in local and national culinary competitions. This course is designed to be a capstone to our Meals program, allowing students to hone and display previously learned skills.

Open to Grades 10-12
1/3 Credit
Prerequisites: at least 1 previous Meals course

**Delicious Art**

See Visual and Performing Arts offerings for course description.

Open to Grades 9-12  
1/3 Credit Visual Art or 1/3 Credit Meals  
Prerequisites: None

**Documenting Foodways**

The one-trimester course explores aspects of Northwest Arkansas’ local food culture through the eye of a lens. Northwest Arkansas is rich with food culture like Arkansas black apples, earthy morel mushrooms, or AQ fried chicken. Students explore the stories around these items while working through the process of researching, storyboarding, and filming a selected aspect of the region’s local foodways. This class is a collaboration between the Reels & Meals program and culminates in the creation of a short form film highlighting local voices, stories, and dishes.

Open to Grades 10-12  
1/3 Credit Meals or 1/3 Credit Reels  
Prerequisites: None

**Food and Community: Harvest Festival**

The Thaden School Harvest Festival is a much anticipated annual event that brings together our school community through a celebration of food and community. As they plan the 2022 Harvest Festival, students in the Food and Community course explore how foodways can be a vehicle to share values and cultivate community. Students in this course gain experience in both the Thaden school gardens and teaching kitchen as they cultivate and prepare food to share with our community during the Harvest Festival. Additionally, as part of their coursework students engage with the school community, farmers, and food producers from the broader community to create a speaker series highlighting food producers from our local community.

Open to Grades 9-12  
1/3 Credit; CBL  
Prerequisites: None

**Ready, Set, Grow!**

Do you enjoy working with your hands, spending time outside, and problem-solving? Would you like to learn how to grow a wide variety of tasty vegetables and herbs? Are you interested in helping to choose the varieties of food to grow in the Thaden gardens that will make their way to the table at
breakfast and lunch each day? Might you be interested in growing your own vegetable and herb garden in the future?

In this one-trimester course, students learn to plant, cultivate, and harvest a variety of vegetables and herbs, as well as learn and practice multiple ways to propagate plants, such as sowing from seed and grafting from cuttings. The course also exposes students to a variety of fundamental techniques and practices for growing seasonally appropriate food in the greenhouse and outdoors through experiential learning, selected readings, films, discussion, and reflection. While mastering cooking-related skills is not the main focus of this course, there are opportunities throughout the course to prepare, taste and enjoy food that we grow.

Open to Grades 9-12
1/3 Credit
Prerequisites: None

Sustainable Table

Is the food we eat sustainable for the health of humans and the planet? How can we determine whether a food has been produced in a sustainable way? What are some of the ways that concerned individuals can help to advocate for more sustainable food production practices? Questions related to sustainability are complex, fascinating, and rarely have easy answers. This one-trimester course explores the concept of sustainability as it relates to farming practices and food production. Students learn from organizations and farms about their practices, challenges, and perspectives. Students also study sustainable farming practices and implement a number of them on the campus farm and greenhouse. Part of this exploration includes regular opportunities to prepare and share meals in the teaching kitchen.

Open to Grades 9-12
1/3 Credit; CBL
Prerequisites: None

World Cuisine

This one-trimester course explores the cuisines of different cultures from around the world through lessons in the kitchen, garden, and classroom. The course focus on the following five concepts: 1) continental food difference; 2) the relationship of attitudes and practices of food preferences; 3) the relationship of food contribution to American culture and cuisine; 4) how foods of a country show a relationship to the agriculture of a country; and 5) practical application of international cooking in a collaborative kitchen environment.

In this course, students simultaneously develop their culinary skills and their global culinary fluency. Coursework includes hands-on learning through growing and harvesting foods from the regions of the world that students learn about. For example, they may harvest ginger grown in the greenhouse and then learn and apply culinary uses for ginger in Thai cuisine. After preparing and sampling traditional
recipes that represent specific areas of the world, students have a clearer understanding of the contributions that many cultures have made to contemporary cuisine.

Open to Grades 9-12
1/3 Credit
Prerequisites: None

**Elective Courses – Reels**

**Director’s Journey**

This trimester-long course explores three diverse commercial filmmakers to help students better understand the direction, style, influences, and career path that directors can take. Students learn to identify the director based on the signature style and directorial elements they can identify from work viewed in the class. The course combines weekly viewings with lectures, advanced group discussions, written assignments, and group presentations.

Open to Grades 10-12
1/3 Credit
Prerequisites: None

**Reels Mentorship Lab***

In this trimester-long course, Upper School Reels students have the opportunity to mentor the next generation of Reels students. The students in this course work as a team to develop, plan, and lead interdisciplinary projects with three different Grade 6 classes. Upper School students show mastery of their craft as they teach Reels skills to younger students and also ignite in them a passion for cross-curricular learning. This course provides opportunities to deepen both relationships and learning. In doing so, the students in this course help build not only Thaden’s next generation of storytellers, but also our next generation of balanced learners.

Because of its collaborative nature, this course is limited to six students.

Open to Grades 10-12
1/3 Credit; CBL
Prerequisites: Short-Form Video Production I

**Podcasting**

In this trimester-long course, students learn the basics of creating podcasts, gaining technical skills of audio interviewing techniques, workflow organization, structuring episodes, scriptwriting, post-production mixing, scoring, and critical review. Students leave this class understanding the mechanics of audio storytelling and how to approach and evaluate pitches. This course is a hands-on workshop, and students can expect to end this course with the start of an audio portfolio. The
students are encouraged but not required to enter their podcasts in the NPR student podcast challenge.

Open to Grades 9-12
1/3 Credit
Prerequisites: None

Reels Showcase

In this project-based learning course, students develop, plan, and execute the annual Thaden School Reels Showcase, to be held in late spring 2023. This event is designed to showcase the Reels program’s work during the 2022-23 school year and will be open to the greater Thaden community.

The trimester-long course includes learning about exhibition, marketing, and building audience awareness, as well as curation and programming. Working as a team, students hone their logistical and collaborative skills to plan, market, and execute a large-scale community event. Students also gain facilitation skills, such as mediating a panel discussion or question and answer session, and curatorial skills in building the screening program. Guest speakers help give students a framework for understanding the dynamics of the global film industry and specifically highlight how film festivals provide a platform for new artists. Students also are required to attend filmmaker question and answer sessions and reflect on the role of national institutions, such as the Independent Film Project (IFP).

Open to Grades 9-12
1/3 Credit; CBL
Prerequisites: None

Short-Form Video Production I

This year-long course provides students with foundational storytelling and technical skills to be multimedia storytellers. Students learn visual analysis, directing, cinematography, lighting, production sound, and editing through class lectures and workshops. The course consists of one project per trimester: a documentary portrait, an audio piece, and a narrative film. Each project focuses on different production skills. Production generally takes place on the Thaden campus, and some class time is dedicated to learning on-set skills as a group. Particular emphasis is placed on gaining fluency with Thaden's camera equipment and Adobe Premiere Pro.

Collaboration is highly emphasized. In addition to creating their own exercises, students are expected to assist and give feedback to classmates’ projects.

Open to Grades 9-12
1 Credit
Prerequisites: None

Short-Form Video Production II*
This year-long course builds upon skills gained in Short Form I and teaches students the advanced fundamentals of short-form video production, with a particular emphasis on story development. Students learn new skills such as treatment writing, screenwriting, casting, storyboarding, producing, sound design, and color correction through class lectures and workshops. Students focus on either narrative, documentary, or experimental filmmaking and are expected to complete a 7-10 minute independent project to be presented at the end of the school year, focusing on stories that can positively affect our community.

Students not only continue to build their technical skills but also reflect on their observations and personal growth as they learn how to create meaningful work that potentially expresses social, cultural, or historical issues, as well as appreciate the broader social responsibilities of media making.

Open to Grades 11-12
1 Credit; CBL
Prerequisites: Short-Form Video Production I

Writers’ Room

See English offerings for course description.

Open to Grades 9-12
1/3 Credit English or 1/3 Credit Reels
Prerequisites: None

Elective Courses – Wheels

Cycle Mechanics and Design I

In this trimester-long course, students explore both the mechanics of bicycles as well as foundational bicycle design elements to strengthen their problem solving skills and relationship with the physical world. Students first use the Thaden bike shop as a laboratory for learning the procedures of working in a professional bike shop: diagnostics, service writing, optimizing rotational systems, and adjusting brakes and drivetrain systems. Their work culminates with a bicycle repair project. Visits to local shops to better understand the day-to-day workings of a retail bike shop are also integral to this course.

Open to Grades 9-12
1/3 Credit Wheels
Prerequisites: None

Cycle Mechanics and Design II*

In this trimester-long course, students explore both the advanced mechanics of bicycles as well as bicycle design elements to strengthen their problem solving skills and relationship with the physical
world. In Cycle Mechanics and Design II, students expand their learning to include more advanced topics such as bicycle frame design and construction, bio-dynamic bicycle fitting, wheel building, and suspension overhaul. Visits to local shops to better understand the day-to-day workings of a retail bike shop are also integral to this course. Their work culminates with a project to repair bicycles for our local non-profit partner Pedal It Forward.

Open to Grades 9-12
1/3 Credit Wheels; CBL
Prerequisites: Cycle Mechanics and Design I, or Riding and Wrenching, or The Culture and Craft of Cycle Mechanics, or equivalent experience

Trail Mechanics and Design

Whether you are mountain biker, trail runner, hiker, or dog walker, Northwest Arkansas' soft surface trails have become a central pillar of the local lifestyle. This trimester-long course offers students interested in learning the intricacies of sustainable multi-use trail design, construction, and maintenance an opportunity to explore how Bentonville became known as the “Mountain Bike Capital of The World.” Along with class visits from local trail designers and builders, students go through the process of identifying project goals; understanding their ecological impacts and considerations; and building a trail that lasts, taking a conceptual design into reality using tools of the trade. During the trimester, students are out in the community doing meaningful work to contribute to the local trail network.

Open to Grades 9-12
1/3 Credit Wheels; CBL
Prerequisites: None

Urban Studies

In this cross-listed Wheels/Social Sciences course, students learn about the basics of urban studies in America through documentaries, podcasts, and excerpts from *The City Reader*. Students also conduct fieldwork in order to develop a deeper understanding of the processes, politics, and practical considerations that influence how communities are designed, built, and inhabited. Further, students engage in critical examinations of these environments to assess how they influence the people who move through them and how people, in turn, influence their environments. Ultimately, students are empowered to think critically and creatively about how they can catalyze positive change by planning and executing real projects in their communities.

Open to Grades 9-12
1 Credit Wheels or 1 Credit History/Social Science; CBL
Prerequisites: None
VISUAL AND PERFORMING ARTS

Elective Courses – Music

Choral Ensemble

In this two-trimester course, students prepare and perform choral music. They develop music fundamentals (rhythm, melody, harmony, timbre, form, texture, and dynamics) and vocal techniques (sight-reading, breath support, and posture) with the goal of becoming independent musicians and strong musical leaders. Students also critique performances, reflect on connections to self and community, as well as other disciplines, and consider the role music plays as a form of expression, social change, and community building. This course provides opportunities for solo and large choir performances in our school and greater community.

Open to Grades 9-12
2/3 Credit (may be taken up to four years for a maximum of 2 and 2/3 credits)
Prerequisites: None

Instrumental Ensemble

In this two-trimester course, instrumentalists of a band or orchestra background come together to rehearse and perform music, building a firm music theory foundation as it pertains to instrumental repertoire and explore ensemble work in greater detail with the goal of becoming independent musicians. Students will explore a broader range of repertoire and musical styles, performing as a full ensemble as well as in smaller groups, chamber ensembles, and as soloists. Students will have opportunities to develop their leadership skills as section leaders, theory tutors, and music council members. This ensemble course will have performance opportunities in school concerts, around our community, and with participation in regional and national honor ensembles.

Open to Grades 9-12
2/3 Credit (may be taken up to four years for a maximum of 2 and 2/3 credits)
Prerequisites: Instrumental Studio or equivalent experience

Instrumental Studio

This one-trimester course provides an opportunity for students to focus on their individual and small ensemble instrumental skills. Open to all skill levels, this is a safe environment to learn an instrument for the first time, build instrumental technique, as well as adding greater musicality to one's performance abilities. Instrumentalists may also choose to focus on All-Region audition opportunities.

Open to Grades 9-12
1/3 Credit
Prerequisites: None
Jazz Studio

This one-trimester course provides an opportunity for vocalists and instrumentalists to learn, practice, and perform the fundamentals of jazz. We study the history and origins of jazz, but our primary focus is playing and learning the foundations of jazz. This course allows students to learn repertoire and introduces elements of improvisation. Students can expect to learn tunes and also learn chord/scale relationships as they dive into different styles of jazz such as traditional Dixieland, big band, hard bop, and Latin jazz. This course provides students with the opportunity to perform at school and in the community.

Open to Grades 9-12
1/3 Credit
Prerequisites: Instrumental Ensemble or equivalent experience

Modern Music Ensemble

This two-trimester course provides instrumentalists and vocalists an opportunity to focus on small ensemble instrumental skills within the context of popular music from the 1950’s to the present. This course allows students to learn musicianship skills, theoretical concepts, and stylistic methods that are applicable to today’s performance standards. Students have the opportunity to perform concerts at school and in the community. This course is open to vocalists and instrumentalists who play guitar, uke, bass, keys, and drums. It is open to all levels, including those with no prior experience.

Open to Grades 9-12
1/3 Credit
Prerequisites: None

Vocal Studio

This trimester-long course provides an opportunity for students to focus on their individual and small ensemble singing skills. Open to all skill levels, this course provides a safe environment to work through voice changes, expanding the range of, as well as adding greater musicality to, one's performance abilities. Singers may also choose to focus on all-region choir, national choir, and college music audition opportunities.

Open to Grades 9-12
1/3 Credit
Prerequisites: None

Theater Arts - Elective Courses

Introduction to Theater Arts
These trimester-long courses may be taken individually or as a year-long series:

- **Acting Techniques**: Students develop their acting skills by practicing their sense and emotion memory and improvisation and engaging in basic acting exercises. Scene study and technique as well as text analysis are studied in depth with individual critique and coaching by the instructor.

- **Original One-Act Play**: Students use guided writing exercises to produce and stage an original one-act play. This trimester-long course begins with guided exercises and scene writing prompts. Students then draft, revise, and rewrite their script, and ultimately stage their original play. Depending on their area of interest, students choose whether to serve as writer, actors, or director.

- **Scene and Character**: Students focus on scene and character work as they rehearse small performance pieces. They also prepare for the audition process by tackling cold reading techniques and preparing two contrasting monologues.

Open to Grades 9-12
1/3 Credit Each
Prerequisites: None

**One-Act Play**

In this one-trimester course, students experience theater as a live performing art as they move from page to stage. The class will spend the trimester working on the staging of a selected one-act play. Everyone in the course must participate in some element of the production, whether it be acting, stagecraft, or technical theater. Toward the end of the trimester, the show is mounted on the main stage for a minimum of two performances. This course requires a number of after-school rehearsals, especially as the time of performance approaches. To participate in the production, students should sign up for the class but must receive permission or audition for a spot to be officially enrolled.

Open to Grades 9-12
1/3 Credit
Prerequisites: By Audition

**Performance Workshop**

In this two-trimester course, students explore theatrical possibilities as they work on a full-length play for performance. They experience all stages of production, from rehearsal to show. To advance in their stage work, students practice fundamental performance skills which include deepening their understanding of acting terminology, voice and speech, physicality, and characterization. To participate in the production, students sign up for the class and then audition for a spot in it. This workshop requires a number of after-school rehearsals, especially as the time of performance approaches.
Stagecraft

Participants in this course learn shop, theater, materials, and tools safety; explore the fundamentals of metal, wood, and non-traditional materials fabrication; design construction and painting of scenery and props; and craft the lighting, audio, and video for productions. Students gain proficiency in using shop tools, stage equipment, and the lighting and sound systems in the Performing Art Center. Other activities include stage management; event staffing; and preparation for Thaden events, concerts, and theatrical productions.

Visual Arts - Elective Courses

Acrylic Painting

Students learn the procedures and techniques needed to develop a work of art in the opaque media of acrylic painting. The course introduces color mixing and acrylic painting techniques through projects that encourage students to create expressive realism within their work and explore the media's qualities with abstraction.

Ceramics

In Ceramics, students practice the fundamentals of handbuilding with clay in this trimester-long course. Working with a variety of clay bodies such as porcelain, stoneware, and terracotta, they learn about foundational concepts like pinching, coiling, and slabs. Students are introduced to the stages of clay and the vocabulary associated with it as they complete projects that transform balls of clay to glazed and fired finished works.
Artistic murals can help share a message and build community and culture. In Community Murals, students are introduced to the visual arts as a medium for social purpose, artistic expression, and critical thinking. During the trimester-long course, students research, design, develop, and collaborate to create a mural for the school campus or the local community. Students are responsible for many aspects of creating a public work of art, including identifying community partners, interviewing stakeholders, developing a proposal, creating a budget, and executing the mural. In addition to learning about the formal qualities of a successful work of public art, the class also contemplates the role visual art plays in different communities and the school community. The course culminates in the presentation of a community mural.

Open to Grades 9-12
1/3 Credit Visual Art; CBL
Prerequisites: None

Delicious Art

In this one-trimester elective, students sink their teeth into food-themed lessons that develop their appreciation of visual art. In collaboration with the Meals program, they engage in interdisciplinary projects such as hand-building ceramic serving bowls, creating paint studies of colorful vegetables from the Thaden garden, and designing and decorating cakes using fondant and frosting. Students also develop their visual fitness as they learn to read and digest works of art, such as historical and contemporary representations of the meal.

Open to Grades 9-12
1/3 Credit Visual Art or 1/3 Credit Meals
Prerequisites: None

Drawing

In this one-trimester course, students explore a variety of drawing tools and materials, emphasizing procedures and techniques. This course also exposes students to various historical artists, drawing styles, and art vocabulary. Students break down the process of drawing into its multiple foundations, such as line, volume, shading, and composition. Drawing focuses on direct observation, from quick sketches to longer, developed studies. Projects might include perspective drawings, still life, portraits, and non-objective work that explore the qualities of drawing tools. Sketchbook activities and peer and instructor feedback are also critical components of the course. By the end of the trimester, students develop drawing skills and a “critical eye,” building foundations that encourage individual and creative work success. Students with advanced drawing skills also explore using the medium for personal expression.

Open to Grades 9-12
1/3 Credit Visual Art
Prerequisites: None

Fiber Arts
In this one-trimester course, students learn to knit, crochet and cross stitch. In doing so, they also gain other fundamental skills: operating a sewing machine, following a pattern to sew an item of clothing, dying fabric using a variety of methods, and needle felting.

Open to Grades 9-12  
1/3 Credit Visual Art  
Prerequisites: None

Mixed Media Sculpture

This one-trimester course begins as students experiment with a variety of sculpting materials and techniques. As the trimester progresses, students develop a theme and piece of sculpture resulting from that theme. The theme may emerge from the object or medium they choose to work with or the theme may guide the process. Either way, the course is intended to introduce a variety of different materials and is ideally suited for those who like to have access to many materials and many options, and are independent thinkers. Possible materials include but are not limited to: wire, plaster, plaster cloth, clay, cloth, up-cycled/found objects, objects from nature, cardboard, polyurethane, wax and cement.

Open to Grades 9-12  
1/3 Credit Visual Art  
Prerequisites: None

Nerikomi

In this trimester-long course, students learn about Nerikomi, a Japanese ceramics technique. Using porcelain that is tinted with mason stains, they create complex patterns in clay and produce a set of functional dishware or jewelry. This course hones students’ attention to precision, measurement, and specific ceramic rules.

Open to Grades 9-12  
1/3 Credit Visual Art  
Prerequisites: None

Printmaking

This trimester-long course introduces students to the production of multiple images from a single design utilizing relief printmaking techniques. The course emphasizes design thinking and creative problem-solving techniques in woodcut and linocut followed by an opportunity for students to think “outside the box” utilizing collograph and experimental media to create prints. Students are also introduced to the history of printmaking, historical and contemporary printmaking artists, and an exploration into digital citizenship (such as the concept of copyright and fair use).

Open to Grades 9-12
1/3 Credit Visual Art
Prerequisites: None

**Slipcasting**

In this trimester-long course, students learn the art of slipcasting by creating original designs for plaster molds. Students produce several replications of the same design and use a variety of staining and glazing, as well as other decorative techniques, to acquire a different finish for each replication.

Open to Grades 9-12

1/3 Credit Visual Art
Prerequisites: None

**Sustained Investigation: 2-D Art***

In this one-trimester course, students undertake a sustained investigation – a series of two-dimensional works that communicate a connecting theme or concept. Two-dimensional media might include acrylic painting, color pencil, pastel, charcoal, experimental media, or printmaking. Each student’s investigation is informed by extensive research, preliminary drawings, sketchbook studies, and explorations that support conceptual development and solutions to technical and perceptual drawing problems. Regular group critiques, discussions, and writing assignments give students further opportunities to develop a more sophisticated understanding of two-dimensional media and how to use that media to communicate their ideas. This course is intended for students with advanced skills in two-dimensional arts.

Open to Grades 11-12

1/3 Credit Visual Art
Prerequisites: At least 1 previous Visual Art course

**Sustained Investigation: 3-D Art***

This one-trimester course is an opportunity for students with advanced skill in three-dimensional arts to independently pursue further investigation of a specific area of interest. Students can focus specifically on one art technique and one medium, or they can divide their study among more than one focal areas. In order to engage in a sustained investigation, students must have at least one trimester of previous study in the area of study they wish to investigate. Some potential areas of study include Ceramics, Mixed Media Sculpture, and Fiber Arts.

Open to Grades 11-12

1/3 Credit Visual Art
Prerequisites: At least 1 previous Visual Art course
WELLNESS AND PHYSICAL EDUCATION

Required Courses

Wellness I and II

These one-trimester courses inspire and enable students to practice healthy living, broadly conceived. With emphasis on interpersonal communication, decision-making, and conflict resolution, the courses address identity development, nutrition, anatomy, and physiology. Students also earn CPR and First Aid certifications.

Required for Grades 9 and 11
1/3 Credit each
Prerequisites: None

Elective Courses

The Physical Education requirement is fulfilled by taking four one-trimester courses (one each year) or by participating on one Thaden School athletics team per year. The one-trimester physical education offerings allow students to grow more comfortable and confident in the face of physical challenges, while giving them meaningful exposure to sports and activities they can enjoy for the rest of their lives.

Physical Education: General

This trimester-long course engages in a variety of games and activities to promote physical activity and the development of basic athletic skills.

Open to Grades 9-12
1/3 Credit
Prerequisites: None

Outdoor Activated Knowledge and Skills (OAKS) Program

The OAKS program consists of 3 trimester-long courses centered on an environmental education approach to physical education. Each trimester-long OAKS course combines an appreciation of the outdoors with focused attention to students’ physical, emotional, social, and intellectual well-being.

- Outdoor Education: This trimester-long course introduces students to basic wilderness skills, including orienteering, camp site readiness, wilderness first aid, and fly fishing.
• **Climbing**: This trimester-long course equips students with the knowledge and skills necessary to safely and effectively rock climb outdoors and indoors. Students also practice yoga and mindfulness, and team building exercises.

• **Outdoor Leadership**: This trimester-long course provides students with opportunities to develop their leadership skills as they practice outdoor sports (i.e., archery, fly fishing, and outdoor certified climbing) and orienteering. Students may also participate in an overnight camp excursion.

Open to Grades 9-12
1/3 Credit each
Prerequisites: None
INTENSIVES

Representative Elective Courses

Intensives are two-week periods of study in which students eschew their regular weekly schedule to participate in courses that meet all day, every day. This allows students to engage in educational experiences that are not always easily facilitated during our typical 60- and 75-minute class periods. Intensives also allow for the development of creative interdisciplinary course offerings that are complementary to but distinct from Thaden's core curriculum.

Mathematics and Beauty

In this intensives course, students approach art and nature through the lens of mathematics. Using a series of case studies, students build an appreciation for the patterns, equations, algorithms, and shapes that underride natural and artistic masterpieces, such as a Nautilus shell and Leonardo de Vinci's Mona Lisa. Based on interest and available art, students also have opportunities to explore new mathematical concepts such as fractals, binary code, and parametric curves. This course includes visits to Crystal Bridges and The Momentary.

1/3 Credit

New Media

This intensives course introduces students to basic components of new media: video production/editing, copywriting, graphic design, web design, social media, and still photography. Students learn about art and design principles, contemporary multimedia artists and designers, and critiques of mass media. In addition, students develop an appreciation for the ways in which story and composition can be used as powerful communication tools. In developing their own online portfolio, students gain exposure to these new forms of technology, while also understanding that the fundamentals of design and storytelling remain important in all forms of media.

1/3 Credit

Saddle Up, Huck – A Journey Down the Mississippi with *Huckleberry Finn*

Recounting his first few attempts to ride a pennyfarthing bicycle, Mark Twain wrote in 1896 that, to manage the machine, “[the intellect] has to teach the limbs to discard their old education and adopt the new.” Conversely, the body is sometimes the mind’s best mentor. In this cross-listed Wheels and English intensives course, students use the bicycle to deepen their understanding of and appreciation for Twain's *Huckleberry Finn*. The bulk of the class is dedicated to an in-depth study of Twain's seminal American novel, culminating in a multi-day bike ride along the Mississippi River. During the ride, students document their experience and conduct interviews with people they meet along the way to examine how themes in *Huckleberry Finn* manifest in today’s America.

1/3 Credit
Ways of Knowing

This intensives course introduces students to ways of thinking, reading, and writing within and across disciplines to prepare them to ask questions and generate knowledge in a college or university setting. Students analyze and engage a variety of primary and secondary texts designed to support their inquiry into a set of social and intellectual topics of broad concern. Themes vary but may include Power, Vision, Body, Self/Other, Time/Space, and Social Change. Each of these topics is explored through the lenses of literature, history, science, and art to demonstrate both the connections and the disciplinary distinctiveness of “ways of knowing” our world. When feasible, practicing scholars from colleges and universities (or Thaden School) participate in framing and facilitating class discussions on topics in which they hold expertise. Students cap their learning experience by producing their own contribution (an academic paper, article, podcast, video, etc.) to a scholarly conversation.

Open to Grades 9-12
1/3 Credit