MISSION STATEMENT

Cranbrook Schools are independent day and boarding schools that provide students with a challenging and comprehensive college preparatory education. We motivate students from diverse backgrounds to strive for intellectual, creative, and physical excellence, to develop a deep appreciation for the arts and different cultures, and to employ the technological tools of our modern age. Our schools seek to instill in students a strong sense of personal and social responsibility, the ability to think critically, and the competence to communicate and contribute in an increasingly global community.
CRANBROOK KINGSWOOD UPPER SCHOOL
COURSE OFFERINGS 2020-2021

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ENGLISH  8-11

Full Year Courses
1110,1120 English 9
1210,1220 World Literature
1310 American Literature

Semester 1 Courses
1521 Humor in Literature
1543 The African American Experience in Literature
1547 Literature: The Stranger in the Village
1549 Creative Nonfiction
1551 Shakespeare
1553 Heroes in British Literature
1557 The Female Bildungsroman in Literature
1559 Americans in Paris

Semester 2 Courses
1606 Creative Writing Workshop
1628 The Power of Story in Children's Literature
1648 Sports in American Literature
1652 Literary Landscapes
1654 The Artist's Journey: Capturing the Creative Process
1658 Immigration, Race, and Identity
1662 Imagined Spaces: Architecture in Fiction
1664 Lost and Found: The Search for Meaning

MATHEMATICS  12-14

Full Year Courses
2110 Algebra I
2200 Geometry B
2210 Geometry
2300 Algebra IIIB
2310 Algebra II
2320 Algebra IIH
2400 Algebra III/Trigonometry B
2500 Pre-Calculus Essentials
2510 Pre-Calculus
2520 Pre-Calculus H
2600 Calculus
2660 AP Calculus AB
2680 AP Calculus BC/Advanced
2700 Statistics
2780 AP Statistics

2860 Advanced Topics: Multivariable Calculus and Linear Algebra

Semester 1 Course
2863 Advanced Topics: Multivariable Calculus

Semester 2 Course
2864 Advanced Topics: Linear Algebra
2866 Number Theory with Programming

WORLD LANGUAGES  15-18

Full Year Courses
3000 Latin I
3020 Latin II
3030 Latin III: Language and Literature
3050 Latin IV: Literature
3060 AP Latin: Caesar & Vergil
3100 French I
3120 French II
3140 French III
3160 French IV
3170 French VH
3180 AP French Language
3300 Spanish I
3320 Spanish II
3340 Spanish III
3360 Spanish IV
3370 Spanish VH
3380 AP Spanish Language
3400 Chinese I
3420 Chinese II
3440 Chinese III
3460 Chinese IV
3480 AP Chinese Language

SCIENCE  19-21

Full Year Courses
4030, 4040 Introduction to Physics and Engineering
4110 Biology I
4120 Biology IH
4180 AP Biology
4200 Conceptual Chemistry
4210 Chemistry I
4220 Chemistry IH
4280 AP Chemistry
4310 Physics I
4320 Physics IH
4380 AP Physics: C - Mechanics

Semester 1 Courses
4515 Environmental Science: Systems
4505 Planetary Astronomy
4517 Anatomy
4519 The Chemistry of Food
9801 Health

Semester 2 Courses
4616 Environmental Science: The Human Element
4606 Stellar Astronomy
4618 Physiology
4622 The Chemistry of Food
4382 AP Physics: C - E/M w vPython
9802 Health
### COURSE OFFERINGS 2020-2021

#### HISTORY/SOCIAL SCIENCE 22-24

<table>
<thead>
<tr>
<th>Full Year Courses</th>
<th>Semester 1 Courses</th>
<th>Semester 2 Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>5110, 5120 Worldviews and Civilizations</td>
<td>5505 Principles of Economics</td>
<td>5606 Principles of Economics</td>
</tr>
<tr>
<td>5210, 5220 World History: Intersections Past and Present</td>
<td>5527 Civil Rights and Race in America</td>
<td>5628 Civil Rights and Race in America</td>
</tr>
<tr>
<td>5310 American History and Government (AS)</td>
<td>5533 The Rise of Nazi Germany and the Holocaust</td>
<td>5634 The Rise of Nazi Germany and the Holocaust</td>
</tr>
<tr>
<td>5380 AP United States History (AS)</td>
<td>5535 History of Feminist Thought in the Modern World</td>
<td>5636 History of Feminist Thought in the Modern World</td>
</tr>
<tr>
<td>5470 AP World History: Modern</td>
<td>5537 Modern Global Issues</td>
<td>5638 Modern Global Issues</td>
</tr>
<tr>
<td>5480 AP European History</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### RELIGION AND PHILOSOPHY 25-26

<table>
<thead>
<tr>
<th>Full Year Courses</th>
<th>Semester 1 Courses</th>
<th>Semester 2 Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>5110, 5120 Worldviews and Civilizations</td>
<td>6501 Western Religions: Moses, Jesus, Muhammad</td>
<td>6602 Eastern Religions: Paths to Enlightenment</td>
</tr>
<tr>
<td></td>
<td>6503 Ethics: Philosophical Perspectives</td>
<td>6616 Aesthetics: Philosophy of Art</td>
</tr>
<tr>
<td></td>
<td>6511 Eastern Religions: Paths to Enlightenment</td>
<td>6618 Ethics: Philosophy as a Way of Life</td>
</tr>
</tbody>
</table>

#### PERFORMING ARTS 27-29

<table>
<thead>
<tr>
<th>Full Year Course</th>
<th>Semester 1 and 2 Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>7100 Concert Choir</td>
<td>7401, 7402 Movement and Conditioning</td>
</tr>
<tr>
<td>7120 Madrigals</td>
<td>7403, 7404 Introduction to Popular Dance Styles</td>
</tr>
<tr>
<td>7140 The MasterSingers</td>
<td>7501, 7602 Speech</td>
</tr>
<tr>
<td>7200 Concert Band</td>
<td>7503, 7604 Acting</td>
</tr>
<tr>
<td>7220 Symphony Band</td>
<td>7507 Advanced Theatre and Performance</td>
</tr>
<tr>
<td>7320 Orchestra</td>
<td>7614 Introduction to Theatre: Stagecraft</td>
</tr>
<tr>
<td>7440 Intermediate Dance</td>
<td>7511, 7612 Video Production</td>
</tr>
<tr>
<td>7460 Advanced Dance</td>
<td></td>
</tr>
</tbody>
</table>

#### FINE ARTS 30-32

<table>
<thead>
<tr>
<th>Semester 1 and 2 Courses</th>
<th>Semester 1 and 2 Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>8501, 8602 Foundations in Design</td>
<td>9507, 9608 Introduction to Computer Science</td>
</tr>
<tr>
<td>8503, 8604 Design Studio H</td>
<td>9509, 9612 Introduction to Computer Science I</td>
</tr>
<tr>
<td>8505, 8606 Drawing</td>
<td>9511 Cyber Engineering</td>
</tr>
<tr>
<td>8507, 8608 Drawing Studio H</td>
<td>9614 Cyber Security</td>
</tr>
<tr>
<td>8551, 8666 Painting</td>
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</tr>
<tr>
<td>8567, 8668 Painting Studio H</td>
<td></td>
</tr>
<tr>
<td>8555, 8656 Digital Photography</td>
<td></td>
</tr>
<tr>
<td>8557, 8658 Digital Photography Studio H</td>
<td></td>
</tr>
<tr>
<td>8511, 8612 Ceramics</td>
<td></td>
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<tr>
<td>8517, 8618 Ceramics Studio H</td>
<td></td>
</tr>
<tr>
<td>8521, 8622 Sculpture</td>
<td></td>
</tr>
<tr>
<td>8527, 8628 Sculpture Studio H</td>
<td></td>
</tr>
<tr>
<td>8531, 8632 Weaving and Fiber Arts</td>
<td></td>
</tr>
<tr>
<td>8537, 8638 Weaving and Fiber Arts Studio H</td>
<td></td>
</tr>
<tr>
<td>8541, 8642 Metalsmithing/Creative Jewelry</td>
<td></td>
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<tr>
<td>8547, 8648 Metalsmithing/Creative Jewelry Studio H</td>
<td></td>
</tr>
<tr>
<td>8573, 8682 Digital Fabrication and Design Studio H</td>
<td></td>
</tr>
<tr>
<td>8583, 8684 Fashion Design</td>
<td></td>
</tr>
<tr>
<td>8589, 8692 Fashion Design Studio H</td>
<td></td>
</tr>
</tbody>
</table>

#### COMPUTER 33-34

<table>
<thead>
<tr>
<th>Full Year Courses</th>
<th>Semester 1 and 2 Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>9780 AP Computer Science A</td>
<td>9501 Startup Entrepreneurship</td>
</tr>
<tr>
<td>9790 AP Computer Science Principles</td>
<td>9411, 9412 The Human Question: Defining Humanity in a Digital Age</td>
</tr>
<tr>
<td></td>
<td>9503, 9404 Architecture: History, Theory and Design</td>
</tr>
<tr>
<td></td>
<td>9406 Psychology of Social Change</td>
</tr>
<tr>
<td></td>
<td>9408 Community Leadership</td>
</tr>
</tbody>
</table>

#### INTERNATIONAL STUDENT PROGRAMS 35

#### ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL) 35

<table>
<thead>
<tr>
<th>Full Year Courses</th>
<th>Semester 1 and 2 Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1010 English for Speakers of Other Languages (ESOL)</td>
<td>1020 Writing and Vocabulary Development for Non-Native Speakers of English</td>
</tr>
</tbody>
</table>

#### DEPARTMENT X 36

<table>
<thead>
<tr>
<th>Full Year Courses</th>
<th>Semester 1 and 2 Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>9300 Research Seminar in the Humanities H</td>
<td>9401 Startup Entrepreneurship</td>
</tr>
<tr>
<td></td>
<td>9411, 9412 The Human Question: Defining Humanity in a Digital Age</td>
</tr>
<tr>
<td></td>
<td>9403, 9404 Architecture: History, Theory and Design</td>
</tr>
<tr>
<td></td>
<td>9406 Psychology of Social Change</td>
</tr>
<tr>
<td></td>
<td>9408 Community Leadership</td>
</tr>
</tbody>
</table>

#### ATHLETICS 37

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#### FACULTY 39-42

#### GOA Course Guide 43
In order to be responsive to the needs and goals of each student, the curriculum of Cranbrook Kingswood Upper School offers academic flexibility and choice. The Distributional Requirements are based on a liberal arts format and emphasize fundamental skills within departments. The program that is developed for each student is the result of a comprehensive process involving:

- The personal interests and goals of the student
- The careful assessment of skill development in the disciplines
- The recommendations of departments based on placement tests and the evaluation of previous academic experiences
- The advice of the Academic Deans
- The college aspirations of the student
- The suggestions of the student's advisor
- The concerns of the student's parents

This process is vital because it provides thorough and thoughtful support to the student, and it assures that the student benefits from the richly varied curriculum of Cranbrook Kingswood Upper School.

It is important to note that a student's choice of program is a major factor in college admissions. Highly competitive colleges generally look for an academic program which includes four years of English, four years of mathematics, three or four years of one world language, three years of laboratory science, of which one year should be biology, and three years of history/social science. In addition, such institutions are interested in evidence of significant involvement in such areas as arts and athletics. These suggestions should not be interpreted as a dictate or guarantee of admission.

### Upper School Distributional Requirements

In choosing courses, students should follow the academic policies listed below:

1. Students are expected to carry five academic courses each semester selected from at least four different departments. Any change in this program requires permission from parent, adviser, appropriate Academic Dean and (in the case of seniors) College Counselor. An additional course may be selected from the Performing Arts, Fine Arts, or Computer departments.

2. Any student who wishes to take six academic courses must write a petition and obtain approval from the Academic Dean.

3. Credit is earned at the completion of a course; no partial credit is awarded for partial completion of a course unless approved by the department and Academic Dean and supported by the Educational Policies Committee (EPC). A student who withdraws from a course will not receive any credit for that course.

4. All students must pass four credits to move to the next level or to graduate.

It is highly recommended that all 9th and 10th grade students be in six courses (five academic courses and a fine or performing art or computer science class) each semester. During the 9th and 10th grade years, students must earn the minimum number of credits by department as indicated.

<table>
<thead>
<tr>
<th>Departmental Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>2 credits</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2 credits</td>
</tr>
<tr>
<td>World Languages*</td>
<td>2 credits</td>
</tr>
<tr>
<td>Science - normally Conceptual Physics</td>
<td>2 credits</td>
</tr>
<tr>
<td>History/Social Science</td>
<td>1.5 credits</td>
</tr>
<tr>
<td>Religion and Philosophy</td>
<td>0.5 credit</td>
</tr>
<tr>
<td>Arts (Fine or Performing)</td>
<td>0.5 credit</td>
</tr>
<tr>
<td>Health</td>
<td>0.25 credit</td>
</tr>
</tbody>
</table>

During the 11th and 12th grade years, a student must earn the minimum number of credits by department as indicated.

### Departmental Requirements

<table>
<thead>
<tr>
<th>Departmental Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English**</td>
<td>2 credits</td>
</tr>
<tr>
<td>Mathematics***</td>
<td>2 credits</td>
</tr>
<tr>
<td>Science</td>
<td>1 credit</td>
</tr>
<tr>
<td>History/Social Science****</td>
<td>1 credit</td>
</tr>
<tr>
<td>Religion and Philosophy</td>
<td>0.5 credit</td>
</tr>
<tr>
<td>Arts (Fine or Performing)</td>
<td>0.5 credit</td>
</tr>
</tbody>
</table>

* These credits must include two successive years of sequential levels of the same language. (ESOL students are exempt from this requirement.)

** These credits must include American Literature.

*** The mathematics sequence includes first-year algebra, geometry, and second-year algebra.

**** This credit must include a course designated “American Studies” (AS) unless the student has already passed a course in United States history in high school above the ninth grade and has department head approval.

### Upper School Athletic Requirement

Please see page 37 for complete athletic requirements.

### Global Online Academy

Cranbrook Kingswood Schools is a founding member of the Global Online Academy (GOA). This consortium of leading independent day schools offers semester-long online courses. Students from member schools may enroll in courses; courses are taught by faculty from member schools. Founding schools include: Cranbrook Kingswood Schools (Bloomfield Hills, MI), The Dalton School (NY), Germantown Friends School (PA), Head-Royce School (CA), King’s Academy (in Jordan), Lakeside School (WA), Punahou School (HI), and Sidwell Friends School (Washington, DC).

The mission of the Global Online Academy is to translate into online classrooms the intellectually rigorous programs and excellent teaching that are hallmarks of its member schools; to foster new and effective ways, through best practices in education, for all students to learn; and to promote students’ global awareness and understanding by creating truly diverse, worldwide, online schoolroom communities.

Courses elected through the GOA during the school year will be noted on the student’s official Cranbrook Schools transcript. The student will earn credit for courses and course grades will factor into the overall GPA. Online courses are as rigorous as classroom courses. Students enrolled in the GOA should expect to spend an equally appropriate amount of time studying. The full GOA catalogue can be found on CranNet.

### Directed Studies

Directed studies, if offered by individual departments, are semester-long student-initiated projects. The purpose of the directed study is to provide an opportunity for enrichment, or to cover material not offered in the regular curriculum. Directed studies are available only to individuals. It is the responsibility of the student to present the directed studies proposal to the appropriate Academic Dean at least one month prior to the next semester for final approval. To initiate a directed studies proposal, the student should meet first with the appropriate department head to explore the proposed course of study. If approved for further exploration by the department head, the student then must receive supporting signatures from the directed studies teacher and the student’s advisor. Credit for a directed studies course will be either .25 or .5 as determined by the department. Granting of credit as a graduation requirement must be approved by the department within which the course is offered.
CRANBROOK KINGSWOOD UPPER SCHOOL
CURRICULUM GUIDELINES

**Advanced Placement**

Students are recommended by departments to take AP courses based on previous course work and standardized test scores. **Students enrolled in an Advanced Placement course are expected to take the Advanced Placement examination for that course in May.** The standard Advanced Placement examination fee will be applicable.

**Summer Academic Work**

Students sometimes enroll in summer programs for the purpose of academic enrichment. Upon receipt of an official transcript documenting the successful completion of a recognized summer program, the transcript will be attached to the student’s Cranbrook transcript and noted in a separate section.

Students who wish to do summer academic work in order to skip an intermediate level in an established sequence (for example, Spanish I to Spanish III) must submit a “Summer Work Proposal” form to the Registrar’s Office by the end of April. The department head will describe the expectations for such summer work and make an assessment of this work upon the student’s return to school. Only the department head and Academic Dean may authorize the student to skip an intermediate level in a course sequence. **Under no circumstances should a student plan to satisfy a graduation requirement by doing summer work. Only coursework offered by the upper school can be considered for satisfying a graduation requirement.**

**Student Scheduling**

Placement tests, prerequisites, previous grades, department head/instructor approval, and the approval of an Academic Dean determine enrollment in a course. All course offerings are subject to certain constraints. These constraints include but are not limited to: the staffing of all sections of core departmental courses, minimum enrollment, and the availability of appropriate physical space.

A few of the courses listed may not be offered because of these constraints. Elective courses are designated with an “*e*” in the title. **Students must list three choices (except Senior English electives require 6 choices) they would be willing to take. No guarantee can be given for enrollment in “elective” courses.**

Each year, the master schedule is designed upon student course recommendations and requests. These recommendations and requests are collected during the registration process. The school makes every attempt to schedule students into the courses chosen. **As course requests are made for next year, please keep in mind that the courses offered, the number of sections of a course, and the schedule for classes for next year will be determined by the course recommendations and requests. For these reasons, it may not be possible to honor course requests handed in late or course request changes made at the end of April. PLEASE MAKE COURSE SELECTIONS PROMPTLY, CAREFULLY AND THOUGHTFULLY.**

**College Counseling**

As the Cranbrook Schools strive to prepare young men and women to move into higher education with competence and confidence, we in the College Counseling Department foster a student-centered atmosphere that encourages the development of a student’s self-awareness, and how that influences college application choices. In this environment of support and advocacy students acquire the ability to identify personal goals, explore post-secondary educational options and manage the complex process of applying to college. This is a process of collaboration between counselor and student in concert with parents, our common purpose being college list development and self-actualization and growth in accountability for the student.

Planning for college begins in the ninth grade, when the students make a commitment to their academics and learn to fully engage in their coursework by becoming active learners. Through a series of class meeting presentations and a regularly published newsletter, The Freshman Forum, students learn the importance of maintaining a balance with their academics and co-curricular activities; they begin to recognize the significance in understanding their own learning style. Students also become aware of leadership opportunities and resources that are available to them. Additionally, discovery of appropriate enrichments, service learning and summer activities that will enhance their knowledge in areas of interest are encouraged.

The need for continued balancing, preparing and depth of self-knowledge continues into sophomore year. Through a series of targeted large and small group meetings presentations and The Sophomore Sentinel newsletter, the college counselors, together with the Academic Deans, address these prominent concerns: learning how to use standardized test results to help them become better prepared academically; learning the importance of strong classroom performance and increase of course rigor each year; becoming aware of the tools that are available to help determine potential career interests; and developing an understanding of the various college forums and summer opportunities that are available to enhance knowledge of college and university options.

During the junior and senior years, student-centered discussion groups, topic-specific workshops (e.g. student athletes, fine arts students, performing artists), The Junior Journal and The Senior News newsletters, the introduction of new technology tools, attendance at local college fairs, and conversations with college admissions officers are all used by our students to gain insight into degree requirements, learning how to use standardized test results to help them become better prepared academically; learning the importance of strong classroom performance and increase of course rigor each year; becoming aware of the tools that are available to help determine potential career interests; and developing an understanding of the various college forums and summer opportunities that are available to enhance knowledge of college and university options.

Through ongoing meetings between student and counselor, a college list is developed. College research is an ongoing process that will lead to a final research list for each student. Every effort is made to assess and match the student’s proficiency, goals and interests with the appropriate college or university.

**College Entrance Examination Board Testing (CEEB)**

For many students, one of the first encounters with college admissions comes when taking a series of standardized tests. Most colleges require that students take the SAT Reasoning Exam or the ACT with writing. Some of the more selective colleges may also require SAT Subject Tests. All SAT and ACT test results, regardless of when the test was administered, can be forwarded on to colleges and universities by the student during the application process in the senior year.
## Models of Possible Academic Programs

<table>
<thead>
<tr>
<th>Freshman Model</th>
<th>Sophomore Model</th>
<th>Junior Model</th>
<th>Senior Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
<td><strong>English 9</strong></td>
<td><strong>World Literature</strong></td>
<td><strong>American Literature</strong></td>
</tr>
<tr>
<td><strong>Math</strong></td>
<td><strong>Algebra I/ Geometry/ Algebra II/H</strong></td>
<td><strong>Geometry/ Algebra II/H Precalc/H</strong></td>
<td><strong>Algebra IIB</strong></td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td><strong>1st or 2nd Year Language</strong></td>
<td><strong>2nd or 3rd Year Language</strong></td>
<td><strong>Stop Language</strong></td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td><strong>Introduction to Physics and Engineering Bio I/Bio IIII Chem IH</strong></td>
<td><strong>Bio I/Elect/ Conceptual Chem</strong></td>
<td><strong>Chem I or Chem IH</strong></td>
</tr>
<tr>
<td><strong>Hist/Soc Sci</strong></td>
<td><strong>Worldviews and Civilizations World History</strong></td>
<td><strong>AH&amp;G</strong></td>
<td><strong>AH&amp;G or AP</strong></td>
</tr>
<tr>
<td><strong>Per/Fine Arts</strong></td>
<td><strong>Art</strong></td>
<td><strong>Art</strong></td>
<td><strong>Art</strong></td>
</tr>
<tr>
<td><strong>Computer</strong></td>
<td><strong>Comp Sci/ Comp Sci I (Optional)</strong></td>
<td><strong>Comp Sci/ Comp Sci I/AP (Optional)</strong></td>
<td><strong>Comp Sci/ Comp Sci I/AP (Optional)</strong></td>
</tr>
<tr>
<td><strong>Health</strong></td>
<td><strong>Health (1 semester)</strong></td>
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A student’s program will be created from a combination of models for his/her grade based upon interest and departmental recommendations.
**EXPLANATION OF COURSE DESCRIPTIONS**

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<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>Chemistry I</td>
<td>2</td>
<td>4210</td>
<td>3</td>
<td>Full Year</td>
<td>5</td>
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<tr>
<td></td>
<td>11, 12</td>
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</tbody>
</table>

1) Course Title (If there is an *, then two alternate choices are required)

2) Course number (Course numbers ending in "0" are full year; course numbers ending in "odd" numbers are Semester 1; course numbers ending in "even" numbers are Semester 2)

3) Semester offered

4) Prerequisite and/or Approvals required
   - Instr. = Instructor Approval required
   - Dept. Head = Department Head Approval required
   - Dept. Rec. = Department Recommendation required

5) #/wk = number of meetings per week, if other than 5

6) Credit

7) Teacher name

8) Grade(s) for which course is open

**Course Description**
Course objectives: what the course deals with, teaching modes used, requirements or typical assignments, how student performance is evaluated, what materials are used.
English

English 9

World Literature 10, 11

American Literature 11, 12

Semester 1
The African American Experience
Americans in Paris
Creative Nonfiction
Heroes in British Literature
Humor in Literature
Literature: The Stranger in the Village
Shakespeare
The Female *Bildungsroman*

Semester 2
Creative Writing Workshop
Imagined Spaces: Architecture in Fiction
Immigration, Race, and Identity
Literary Landscapes
Lost and Found: The Search for Meaning
Sports in American Literature
The Artist's Journey
The Power of Story in Children's Literature

= Electives
The Upper School English Department believes that the study of literature is the foundation for the development of students’ skills in reading, writing, speaking, listening, and critical thinking. Properly trained to be better critical readers, students become independent thinkers equipped to take reasoned positions on complex questions and to develop an appreciation of other cultures. The department strives to teach clear and compelling writing; to develop critical inquiry and discussion skills, and to allow students to share their ideas in papers, presentations, and projects. All classes are taught in seminar format to provide these opportunities; instructors and students use appropriate technology to enrich the educational process. Faculty and students alike value their relatively small classes because they facilitate discussion and make it possible to devote time to individual students. While maintaining rigorous standards, we seek to meet students’ individual needs.

**English 9: The Journey**, **World Literature (10th grade)**, and **American Literature** (11th grade) are organized around core texts, and instructors may complement these with additional readings. **World Literature** and **American Literature** are intentionally aligned with the Upper School history curriculum to promote cross-curricular and global understanding. Vocabulary building proceeds continuously through the junior year, while formal grammar instruction gives way to an emphasis on style after the 10th grade. The primary method of assessment is the critical essay; however, students also write creatively and in other modes. Courses are year-long until the 12th grade, when students choose from a rich array of semester-long electives designed by individual instructors and based upon their own expertise.

Gender equity, cultural diversity, and historical context inform the selection of great literature in all genres in Upper School courses. Because the Department is committed to developing a diverse range of abilities and voices in the classroom, classes are not tracked. In the 9th and 10th grades, while students read the same core texts at each grade level, classes are single-sex to respond to the different learning styles and interests of younger students. At all levels, when possible, differentiated instruction meets students’ needs without modifying curriculum. The ESOL program supports international students in English classes and by offering two levels of instruction to meet the varied needs of English language learners.

The Department encourages qualified juniors and seniors to take one or both AP examinations and introduces them to the exams’ formats. **English 9** and **World Literature** prepare students for American Literature and the senior elective system: this calibrated program positions students strongly for AP exams, college English classes, and a unique high school experience. The range of electives honors student choice while going beyond AP classes in both breadth and depth. By allowing any senior to take any elective, the Department ensures that all students will enjoy a capstone seminar experience, building on and refining the unfettered discussions they have pursued during the previous three years, directing their own and one another’s learning in significant ways.

The Department fosters a culture of writing by honoring excellent writing through the annual award publication Prize Papers, Strickland Writing Awards, the Visiting Writer program, and the Upper School Libraries Alumni Collections. Cranbrook Kingswood alumni have given the school a national reputation for producing excellent writers, speakers, and critical thinkers. Several former students have become professional writers, and all leave better prepared to communicate in an age of globalization.
Conventional wisdom holds that to analyze a joke is to spoil it. Yet laughter is one of the principal pleasures of reading. This course challenges students to take humor in literature more seriously. What important subcategories can be defined, such as satire, farce, irony, nonsense? What's the difference between hearing a joke and reading one? How does humor function in different cultures? Are there topics which can be uniquely broached through humor — or are there some points which cannot be made any other way? Major texts include Cervantes' Don Quixote (selections), Heller's Catch-22, Kesse's One Flew Over the Cuckoo's Nest, and poetry and folktales from a spectrum of cultures. Modes of assessment include critical essays, oral presentations, group projects, seminar presentations, and a final exam essay.

Creative Nonfiction*  German  1549  Sem 1  1/2  12

Creative nonfiction might seem like a contradiction in terms. How creative can a writer be with true events? Writers in this genre of literature use many of the same techniques as fiction writers. They develop characters, advance the plot, define conflicts, and make allusions. The only difference is that the events in their stories really happened. The end result can take many forms: memoir, biography, travelogue, or essay. Creative nonfiction can be deeply personal, carefully researched, or both. Major texts in this course include In Cold Blood by Truman Capote, a true-crime story; Into the Wild by Jon Krakauer, which retraces the final months of a troubled young man; Wild by Cheryl Strayed, a memoir about both hiking and young adulthood; and I'll Never Do Again, a collection of cerebral and funny essays by David Foster Wallace. We also read selections from the journal Creative Nonfiction. Assessments include reflection / critique essays, online blog participation, group projects, seminar presentations, and a final exam essay.

Shakespeare*  Dunn  1551  Sem 1  1/2  12

The course aspires to cultivate a genuine enthusiasm and appreciation for Shakespeare. It exposes students to some of his best-known plays and sonnets using a range of approaches, from reading and discussing his plays to watching and comparing modern adaptations; from directing and performing short scenes to reciting favorite lines, speeches, and sonnets. Students also learn about Shakespeare's life and times and travel to local productions when possible. While the reading list varies from year to year, it typically includes a comedy, a tragedy, and a romance or history play, along with a selection of sonnets. (Frequent titles: Hamlet, The Merchant of Venice, Twelfth Night, The Tempest, As You Like It, Much Ado About Nothing, King Henry IV, Part I). Assessment includes a variety of critical writing assignments along with more creative projects, such as a director's diary and online presentations and portfolios.
The Artist's Journey: Capturing the Creative Process*  Rainwater  1654  Sem 2  1/2  12
Writers, chefs, musicians, and other artists often link their artistic visions to their journeys. This course examines profiles of artists across media and identifies common themes in stories about how and where creatives come from, and how they express their creative visions. Representative texts may include James Joyce’s Portrait of the Artist as a Young Man, Gabrielle Hamilton’s Blood, Bones, and Butter, Michael Ruhlman’s The Soul of a Chef, Bill Buford’s Heat, Anne Lamont’s Bird by Bird, and Stephen King’s On Writing. Assessments include student-led discussion, critical essays, personal narratives, short written responses, and a collaborative, interdisciplinary final project.

Imigration, Race, and Identity*  Kang  1658  Sem 2  1/2  12
In the eighteenth century, Hector St. John De Crevecoeur wrote exuberantly about the ways in which America would act as a nurturing parent for the immigrant, who “becomes an American by being received in the broad lap of our great Alma Mater [dear mother].” This course explores the elusive nature of that Alma Mater, as it is depicted in contemporary American fiction. Through the voices of diverse authors, we examine the tension of simultaneously existing within and apart from multiple cultures, as well as the challenges of negotiating a sense of belonging in America while maintaining a connection to the countries that characters once considered “home.” Major texts may include The Namesake by Jhumpa Lahiri, Who’s Irish? by Gish Jen, The Brief Wondrous Life of Oscar Wao by Junot Diaz, and Woman Hollering Creek and Other Stories by Sandra Cisneros. Assessments include critical essays, class discussions, seminar-leading assignments, and a final paper.

Imagined Spaces: Architecture in Fiction*  Green  1662  Sem 2  1/2  12
From the moment students arrive at Cranbrook, they are invited to appreciate the architectural and aesthetic beauty that surrounds them; they are asked to recognize the impact of physical spaces on educational process. Students begin the semester by considering the ways that Cranbrook architecturally enables and disables specific types of social interaction (possible encounters with archival materials). Students then move to encounter literary representations of architecture, examining the consequences of these architectures, and ultimately, recognizing that the built environment can both reinforce and challenge existing social structures. Loosely organized around types of architectures—the single-family home, the apartment building, the skyscraper, and the city streets—this course begins with the writing of Virginia Woolf in order to consider the home’s role in reinforcing patriarchal family structures and domestic roles for women. Later, we consider the ways in which apartment buildings begin to challenge the neat separation of spaces—male/female, upper/lower class, interior/exterior. Students can expect to complete at least one critical essay but may also be asked to use architectural modeling to envision and interrogate the significance of literary spaces.

Creative Writing Workshop*  Thompson  1606  Sem 2  1/2  12
This course is designed for students with a serious interest in writing fiction, poetry, drama, or essays (the argumentative, philosophical, or reflective essay—not the critical essay). Most days the class consists of reviewing a student’s own work. From time to time, however, the work of current published writers is also studied. Each student must produce at least one substantial piece in three of the four genres mentioned above; after meeting this requirement, students may choose to concentrate on one genre. Regular submissions from each student are required, and each must be substantial in quality and quantity. Students must be willing to help produce a class atmosphere that is frank but also compassionate and encouraging. Assessment is based almost exclusively on creative writing assignments and revisions of same.

The Power of Story in Children’s Literature  Young  1628  Sem 2  1/2  12
This survey course explores various genres of children’s literature: oral tradition, fantasy, realistic and historical fiction, poetry, and picture book. Mostly found in Norton’s The Classic Fairytales, these diverse works probe the spirit of civilization and the nature of humankind in ways that appeal to readers of all ages. The stories masterfully emphasizes the moral, romantic, satirical, and sometimes tragic core beneath the landscapes they create. Guided by Perry Nodelman and Mavis Reimer’s The Pleasures of Children’s Literature, students will discover how to read Children’s Literature differently; engage in their own memories about reading as children; challenge common assumptions about childhood; look closely at gender dynamics, critical race theory, and cultural perspectives; consider children’s literature in the marketplace; and confront arguments about censorship. Creative writing and collaboration with Brookside students are elements of this course. Aside from blog and journal work, there are weekly writings and a final publication.

Sports in American Literature*  Pistner  1648  Sem 2  1/2  12
Some of the best American prose writing of the twentieth and twenty-first centuries is about sports. Writers not normally thought of as sports writers—Ernest Hemingway, David Foster Wallace, John Updike, and Bernard Malamud—have contributed to the literature of sport. This course traces sports writing as an art form that developed at a great pace in the twentieth century through the work of canonical sports writers such as Red Smith, Gay Talese, and David Halberstam. The main focus of the course is on literary figures like Wallace and Malamud who use sports as a platform to pursue meaningful topics about life, nature, character, and society. Jon Krakauer’s sensational story of a group of climbers, including himself, on Mount Everest is an important work in the course. Finally, the class looks at current articles on a variety of sports, often on line. Assessments include class discussion, short response papers, short presentations, and an end-of-semester paper or exam.

Literary Landscapes*  German  1652  Sem 2  1/2  12
Where do you want to live someday? Do you dream of living in a bustling big city, a quiet suburban neighborhood, a small town, a rustic farmhouse, or a cabin in the mountains? All of these choices involve landscape. The study of landscape in literature encompasses both natural and built environments, as well as the people who inhabit the land. Writers use the landscape to provide social and psychological depth to their characters and stories. Many of the writers considered in this course have recorded or created a distinct regional character. This course takes us to Willa Cather’s Nebraska prairie in O Pioneers!, Ernest Hemingway’s Michigan in The Nick Adams Stories, William Faulkner’s Mississippi hunting land in “The Bear,” Raymond Carver’s working-class Pacific Northwest in Where I’m Calling From, and Gloria Naylor’s inner-city in The Women of Brewster Place. Students write critical essays and lead the discussion of a short story. Other assessments include reading quizzes and in-class essays.
The math department places all students in their math class for the following year. Most students will follow one of five paths, depending upon their math course in grade 8.
Mathematics

Craig Miller, Department Head

The Mathematics Department offers courses designed for students of varying degrees of ability and varying levels of prior mastery; and thus it is possible to tailor a course of study to the needs of each student. The graduation requirement in mathematics is four years and successful completion of the Algebra I/Geometry/Algebra II sequence. The Department assumes responsibility for placing students according to their ability, particular level of preparation and student interest. In general, one should maintain grades in the “C” range (or better) to stay in the sequence (Algebra I/Geometry/Algebra II), and one should maintain grades in the “B” range (or better) to stay in the advanced sequence [Geometry II, Algebra III, AP Calculus AB, AP Calculus BC, Advanced]. Students enrolled in an Advanced Placement course are expected to take the Advanced Placement examination in May. Each of the Department’s courses aims for student mastery of the concepts and techniques particular to that course. In addition, all courses stress the development of “studentship” (so that students might discover how best to engage their subject), and all aim at engendering interest in mathematics and related areas of intellectual endeavor.

All students are afforded the opportunity and encouraged to participate in the annual American Math and Michigan Math Competitions (AMC and MMPC, respectively). The Cranbrook Kingswood Upper School Math Club offers participation in several other activities such as MML, ASMA, Interstellar Math Madness, ARML, and University of Michigan Math Field Day.

Cranbrook Kingswood Schools is a founding member of the Global Online Academy (GOA). GOA offers semester courses in math such as Content Mathematics, Linear Algebra, and Game Theory. GOA courses require department and academic dean approval.

The TI-84 or TI-83 graphing calculator is required in all courses.

Algebra I

2110 Full Year 1 9-10

This first-year course in algebra, in addition to including some work with numerical expressions, covers axioms, simple equations, inequalities, absolute values, word problems, functions, graphing linear equations, systems, exponents and radicals, operations with polynomials, and radical expressions.

Geometry B

2200 Full Year 1 9-11

This course covers all of the fundamental topics studied in Geometry but at a more accessible pace and appropriate depth of concepts for the students who need to have basic skills reinforced. The essentials of Euclidean geometry are studied at length, with less emphasis being placed upon the development of proofs. The subsequent course path would be Algebra II B followed by Algebra III / Trigonometry B.

Geometry

2210 Full Year 1 9-11

Algebra I

This is a basic course in Euclidean plane geometry with an emphasis on deductive reasoning and proof. The topics covered include parallel and perpendicular lines, congruence, similarity, right triangles and trigonometry, polygons, circles, area and volume formulas. Concepts and techniques from algebra are reviewed throughout the year to prepare the student for subsequent algebra-based mathematics courses.

Geometry H

2220 Full Year 1 9-11

Algebra I or Dept. Rec.

This honors geometry course challenges students in topics such as similar triangles, congruent triangles, quadrilaterals, polygons, circles, funky areas, power of a point, three-dimensional geometry, transformations, introductory trigonometry and more. The course is structured to inspire the student to explore and develop new ideas through collaborative efforts in problem-solving while learning and applying new geometric techniques. Important facts and powerful problem-solving approaches are highlighted throughout the course. Homework consists of students reading the textbook which walks them through several problems, followed by a set of homework problems. In class, students present their solutions along with alternate ways of doing the problems.

Algebra IIB

2300 Full Year 1 10, 11

Geometry or Geometry B

This course covers all of the fundamental topics studied in Algebra II but at a more accessible pace and appropriate depth of concepts for the students who may need to have basic skills reinforced. Emphasis is on developing self-confidence in students and improving their ability to understand the structure in problem-solving with algebra. The subsequent course is Algebra III / Trigonometry B.

Algebra II

2310 Full Year 1 10, 11

Geometry

Students in Algebra II re-examine in detail the major topics from Algebra I, and are subsequently introduced to more advanced topics and techniques. Ideas covered in depth from both the graphical and the algebraic perspectives include linear functions, equations, and inequalities; absolute value functions, equations, and inequalities; systems of linear equations and inequalities; rational exponents; radical expressions and equations; and quadratic equations and functions. The refinement of problem-solving techniques and the algebraic process are emphasized in order to facilitate their work with complex numbers; higher order polynomial functions, equations, and inequalities; and rational functions, equations, and inequalities. Familiarity with these algebraic concepts leads to the introduction of exponential and logarithmic functions and equations.

Algebra III

2320 Full Year 1 9-11 Dept. Rec.

This course covers all of the topics studied in Algebra II in greater depth and at a faster pace, leaving the fourth quarter for a thorough study of Pre-Calculus level trigonometry. The additional topics studied include right, circular and inverse trigonometric functions and their graphs, as well as analytic trigonometry. Students who demonstrate exceptional work in this class may be recommended for Calculus AB with some additional work. The instructor and department head will make the recommendation.

Algebra III/Trigonometry B

2400 Full Year 1 11, 12

This course is designed to help students acquire a solid foundation in algebra and trigonometry, preparing them for the continued study of mathematics in college. A fundamental goal is to enable students to develop problem-solving skills, while fostering critical thinking, within an engaging setting. During the first semester critical algebra skills are further developed from an algebraic and graphing calculator perspective. Topics include a wide variety of equations, inequalities, functions and their graphs. Second semester introduces the basic concepts of trigonometry including right triangle and circular trigonometry, basic graphs and identities.

Pre-Calculus Essentials

2500 Full Year 1 11, 12

Algebra II

This course is designed for students who have completed the core sequence in the Mathematics Department (Algebra I, Geometry, Algebra II). Pre-Calculus Essentials provides students with an opportunity to strengthen and expand their ability to analyze functions, and use their mathematical abilities to solve real-life applications. Topics studied include exponential, linear, logarithmic, polynomial, rational, and radical functions. Trigonometry is the focus of the second semester. Possible additional topics include conic sections, sequences, and series. The graphing calculator is employed to assist students in the study of these topics.

Pre-Calculus

2510 Full Year 1 11, 12

Algebra II or Geometry H

Pre-Calculus is intended for students whose work in Algebra II demonstrated a high level of mastery. Course topics include an in-depth study of functions (polynomial, rational, exponential, logarithmic and trigonometric), series and sequences, vectors, graphing techniques and limits. We emphasize developing functions and models that first-year calculus students typically encounter.
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### Pre-Calculus H
Pre-Calculus H is intended for those students who have completed the core math courses by the end of their freshman year and are anticipating taking Advanced Calculus as seniors. These students will take a more rigorous approach to the topics studied in Pre-Calculus. In addition, topics from two- and three-dimension analytic geometry will be examined.

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### Advanced Placement Statistics
Students enrolled in this class are expected to take the AP Examination in May. Additional topics not included on AP BC exam are presented after the examination. Students enrolled in this class are expected to take the AP Examination in May.

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### AP Calculus AB
This course covers the topics of the differential and integral calculus as described in the AB syllabus of the Advanced Placement Program and prepares students for the Calculus AB examination, given in May. Additional topics are presented after the examination. Students enrolled in this class are expected to take the AP Examination in May.

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### AP Calculus BC/Advanced
In addition to reviewing topics from Calculus AB, with heavier emphasis on theory, this course covers the topics delineated in the BC syllabus of the Advanced Placement Program and prepares students for the Calculus BC examination, given in May. Additional topics not included on AP BC exam are discussed throughout the year, with emphasis on multiple integrals after the exam. Students enrolled in this class are expected to take the AP Examination in May.

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### Statistics
Statistics acquaints students with the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will occasionally be working with projects that involved hands-on gathering and analysis of real-world data. Ideas and computations presented in this course have immediate links and connections with actual events. The class utilizes ALEKS integrated learning software, Excel programs, and calculators along with a blended learning approach to focus deeply on the concepts involved in statistics.

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### Directed Studies
This course is designed for the exceptional student who has completed BC Calculus, and wishes to pursue a special area of interest in mathematics. Students work independently on an advanced project under the guidance of a faculty sponsor. The course is intended for students in Algebra II Honors who are recommended by the instructor and approved by the Math Department. Students work independently on an advanced project under the guidance of a faculty sponsor. The course is intended for students in Algebra II Honors who are recommended by the instructor and approved by the Math Department. Students work independently on an advanced project under the guidance of a faculty sponsor. The course is intended for students in Algebra II Honors who are recommended by the instructor and approved by the Math Department. Students work independently on an advanced project under the guidance of a faculty sponsor.
World Languages

Latin
- Latin I 9-11
- Latin II 9-12
- Latin III: Language and Literature 9-12
- Latin IV: Literature 10-12
  - AP Latin: Caesar & Vergil 11-12

French
- French I 9-11
- French II 9-12
- French III 9-12
  - French IV 10-12
    - French VH 10-12
      - AP French Lang. 11-12

Spanish
- Spanish I 9-11
- Spanish II 9-12
- Spanish III 9-12
  - Spanish IV 10-12
    - Spanish VH 10-12
      - AP Spanish Lang. 11-12

Chinese
- Chinese I 9-11
- Chinese II 9-12
- Chinese III 9-12
  - Chinese IV 10-12
    - AP Chinese Lang. 11-12

Chinese
- Chinese I 9-11
- Chinese II 9-12
- Chinese III 9-12
  - Chinese IV 10-12
    - AP Chinese Lang. 11-12
Competence in more than one language and culture opens doors to social, academic, and business opportunities. At Cranbrook Kingswood, the World Language Department equips students to engage in a globally interconnected world through strong programming, excellent instruction, and travel opportunities. Students can choose Mandarin Chinese, French, Latin, or Spanish. Except for Latin, classes are taught almost exclusively in the target language, and are geared toward the level of the language students in any particular class. Lessons integrate listening, speaking, reading, and writing skills with culture as a backdrop. For example, a lesson might start with an audio, video, or reading excerpt on the French elections, followed by guided small group discussions, and finally a writing assignment. Vocabulary and grammar play a role in this holistic process, however communication is the main goal. Students are assessed based on their reading and writing aptitude, as well as their oral and aural competence.

Two consecutive years of single-language study are required for graduation; although the World Language Department encourages a minimum of three years of study. Most students pursue a language through the fourth and fifth level; the latter take the College Board’s Advanced Placement Examination. New students take a placement test to determine their proficiency level, while returning students are promoted by the World Language Department based on the strength of their prior achievement.

The World Language faculty is a cohesive and collaborative group of educators dedicated to building strong relationships with students. Teachers research, share, and maintain best practices in language and culture instruction. We possess native or superior proficiency, and engage in languages and cultures we teach through constant interaction with each other, and frequent travel and workshop opportunities. For our students, we organize and promote school-sponsored trips abroad for authentic language and cultural experiences.

Language and culture learning offers social, academic, and workplace benefits that serve students throughout their lives. Cranbrook Kingswood World Language teachers understand this, and take it to heart. We are proud of the progress our students make toward language and culture competency during their time with us, and we are confident that when they graduate they are ready to embrace their global citizenship by understanding and being understood in a language and culture other than their own.

Latin I

This course uses stories set in ancient Pompei and Egypt to teach basic concepts of Latin grammar and to introduce students to the history, culture, and mythology of the Roman Empire. In addition to learning to analyze the word and sentence structure of Latin prose, the course also teaches students to recognize the Latin origins and meanings of English words. Daily assignments, quizzes, tests, semester and final examinations.

Latin II

This course continues to develop reading skills and knowledge of grammar and vocabulary through the study of stories covering the Roman conquest of Britain as well as the political intrigue surrounding the emperor in ancient Rome itself. Students gain a deeper understanding of Roman history, culture and mythology, and continue to build their knowledge of English vocabulary derived from Latin. Daily assignments, quizzes, tests, semester and final examinations.

Latin III: Language and Literature

The first half of this course completes the study of Latin grammar and forms while continuing to improve students’ ability to read and translate Latin in preparation for both the Latin SAT Achievement Test and continuation to the AP level of Latin. The second half of the course introduces students to ancient literature through Cicero’s speeches and letters and the poetry of Ovid. Daily assignments, quizzes, tests, semester and final examinations.

Latin IV: Literature

Students in this fourth-level course use their grammar and vocabulary skills from Latin I through Cicero and Ovid (Level III) to read and analyze new topics in Latin literature. Readings for the course include prose and poetry by Catullus, Horace, and other authors. The course helps students strengthen their reading and writing skills in preparation for AP Latin: Caesar and Vergil. Student performance is assessed through compositions, quizzes, tests, a midterm, and a final examination.

AP Latin: Caesar & Vergil

This course prepares students for the Advanced Placement Examination, which includes Caesar’s De Bello Gallico and Vergil’s Aeneid. As designated by the AP curriculum, thorough study of passages in Latin from both complete texts is required along with a familiarity of their historical contexts. Students must be able to read dactylic hexameter and to understand the rhetorical and poetic devices that characterize Latin literature and epic poetry. Assessments include recitations, discussions, quizzes and exams. Students are expected to take the AP examination in May.

French I

In this beginning course, which is taught mostly in French, students practice the fundamentals of the language through listening, repetition, speaking, reading, and writing activities. They are introduced to simple vocabulary, elementary grammatical structures, and the present and past tenses of common verbs. An understanding of Francophone culture is initiated. Projects, oral and written tests, semester and final examinations.

French II

This course is taught in French and involves a review and extension of the principles and material presented in French I. Students develop and strengthen their ability to think and express ideas and opinions in French. They refine their reading and listening comprehension skills and further develop their speaking and written expression. In addition, key aspects of Francophone culture are discussed. Projects, oral and written tests, semester and final examinations.
French III 3140  Full Year  1  9-12  Dept. Rec.
This course further develops the speaking, listening, reading, writing, and culture proficiencies acquired in French I and II. Major emphasis is placed on increasing comprehension and comprehensibility by refining writing skills, reviewing grammatical concepts, and introducing more complex structures and a wider variety of vocabulary. Students' knowledge of Francophone cultures and civilizations is further expanded. Classes are taught in French, and students participate actively in role-playing activities, oral presentations, and frequent written and pronunciation exercises. Projects, oral and written tests, semester and final examination.

French IV 3160  Full Year  1  10-12  Dept. Rec.
French IV is a continuation of the first three years of French language and cultural study. It provides a thorough review of material from French I – III while exposing students to more detailed vocabulary and more complex sentence structures. In addition, it engages students in more sophisticated discussions of Francophone culture. The students improve their oral and written proficiency skills through frequent in-class interactions, presentations, and cultural projects. In order to enhance their communicative skills, students become familiar with a wide range of authentic French materials including Internet sites, news reports and broadcasts, music, and film. Speaking, reading, and listening-comprehension assessments, grammar review exams, projects, oral and written tests, semester and final examination.

French V 3170  Full Year  1  10-12  Dept. Rec.
This class is conducted exclusively in the target language to provide students with maximum exposure to French. The course is designed for students intending to take the Advanced Placement French Language and Culture class. Culturally authentic materials, texts, video clips, songs, articles on current issues, and Internet sources are presented and lead to an in-depth study of Francophone culture. Class discussions followed by student-to-student interaction and conversation increase oral proficiency as well as cultural awareness. Basic grammatical structures are reviewed while new and complex concepts are introduced to broaden students' oral and written expression. Performance in the language is regularly assessed using a variety of tools: compositions, projects, online oral and written responses to prompts, presentations, quizzes, tests and semester exams. Enrollment in this class is by departmental recommendation only.

AP French Language and Culture 3180  Full year  11-12  Dept. Rec.
This course is conducted entirely in French and is designed to prepare students for the College Board Advanced Placement French Language and Culture examination. By this level, students have acquired a good command of French grammar and a considerable competence in listening, speaking, reading and writing as well as a broad cultural awareness of Francophone culture. Students will increase their ability to understand how French is spoken in different parts of the world in both formal and informal conversational situations. They will develop a knowledge of idioms, sophisticated vocabulary, and discourse techniques. Multimedia resources will be analyzed and discussed. Students will comfortably express opinions and ideas about current events, internet articles, videos, documentaries, film excerpts, and commercials. Emphasis is placed on becoming fluent speakers, readers, and writers of French while absorbing relevant thematic information from the Francophone world. Enrollment in this course is by departmental recommendation. All students take the AP exam in May.

Spanish I 3300  Full Year  1  9-11  Dept. Rec.
The objective of this course is to establish a foundation in elementary Spanish in the four language skills (listening, speaking, reading and writing). Students learn to use the language meaningfully and begin to develop the facility to communicate in the context of the Spanish-speaking world. Grammar and vocabulary are taught in terms of function and application to real-life situations. Very little English is used in class and students are encouraged to use Spanish as much as possible. Students listen to audio recordings by native speakers, participate in daily speaking and listening activities, and write simple, guided compositions. All four skills are tested regularly during the year.

Spanish II 3320  Full year  1  9-12  Dept. Rec.
This course involves a review and extension of the principles and material taught in Spanish I. Emphasis is placed on the refinement of reading and listening skills, greater development of writing skills, and a continued study of key aspects of Hispanic life and cultures. Students are introduced to new grammatical concepts and verb tenses, with a focus on the preterit and imperfect past tenses. Classes are taught almost exclusively in Spanish and an on-going effort is made to develop students' ability to express ideas in Spanish and to think in the target language. As in Spanish I, all four skills are tested regularly during the year.

Spanish III 3340  Full Year  1  9-12  Dept. Rec.
This course further develops the listening, speaking, reading and writing skills acquired in Spanish I and II. Major emphasis is placed upon developing comprehension and comprehensibility by refining writing skills, reviewing previously acquired grammatical concepts, and introducing more complex structures. Particular focus is given to the subjunctive and the imperative moods. Readings include excerpts from Spanish literature as well as current online journalism. Classes are taught in Spanish and students participate in daily speaking and listening activities. As in the previous Spanish courses, all four skills are tested regularly during the year.

Spanish IV 3360  Full Year  1  9-12  Dept. Rec.
This course, conducted in Spanish, provides a comprehensive review of the material presented in the first three years while introducing students to more advanced verbal and grammatical structures. Students read and respond to texts in a variety of genres, including fiction, drama, poetry, journalism, as well as readings on Hispanic culture and history, popular and folk music, and Spanish-language films. They develop active vocabulary and proficiency in listening, speaking, and writing through class conversations, oral presentations, impromptu writing, and speaking exercises. Students use Spanish Internet sites, radio broadcasts, and online journalism. All four skills are tested regularly throughout the year.
This advanced course is conducted entirely in Spanish and is designed for students intending to take the Advanced Placement Spanish Language and Culture course. It provides a thorough study of the more complex aspects of Spanish grammar and is based on reading in a variety of genres, including fiction, poetry, journalism, readings on Hispanic culture and history, popular and folk music. Students develop active vocabulary and proficiency in listening, speaking and writing through class discussions, oral presentations, impromptu writing, and speaking exercises. Students become familiar with the AP exam format and work with a range of authentic materials, including Spanish Internet sites, radio broadcasts, online journalism, and contemporary Spanish-language cinema. All four skills are tested regularly throughout the year. Enrollment in this class is by departmental recommendation.

AP Spanish Language and Culture

This advanced course is conducted exclusively in Spanish and is designed to prepare students for the College Board Advanced Placement Spanish Language and Culture Examination. Students develop language proficiency across the three modes of communications—interpretive, interpersonal, and presentational—and learn about culture through the use of authentic materials that are relevant to the Spanish-speaking world. The main focus is to refine and integrate all four skills through informal conversations and impromptu dialogues, as well as through formal written and oral presentations. Reading and listening include a variety of resources, including journalistic and literary works, podcasts, interviews, charts, music and film. Enrollment in this class is by departmental recommendation. All students take the AP exam in May.

Chinese III

This course is conducted mostly in Chinese and further develops the skills acquired in Chinese II. This course is designed to increase the students' proficiency in all four skill areas through class discussions, role-play activities, oral presentations, and frequent written exercises. Students are introduced to a broader and more complex range of textual material in order to expand their reading and writing skills. Students make use of both pinyin and Chinese characters in order to write about their daily activities, as well as those common to contemporary Chinese culture. Students improve their listening skills through the use of audio-visual material, Internet sites, and contemporary Chinese cinema. All four skills are tested throughout the year.

Chinese IV

This course expands upon Chinese III and challenges the students to continue to strengthen their spoken skills while developing their reading and writing proficiency. This course will enable students 1) to increase the fluency, complexity, and range of their conversational Chinese; 2) to increase reading and writing proficiency using Chinese characters; and 3) to acquire a better understanding of Chinese social issues and an appreciation of Chinese culture and philosophy. The course is taught almost entirely in Chinese and makes use of such authentic Chinese materials as short stories, proverbs, plays, and songs, as well as contemporary Chinese cinema. All four skills – reading, writing, speaking and listening – are tested throughout the year.

Chinese II

This course builds upon the foundation of Chinese I and asks students to go beyond the basic level in each of the four language skills. Students participate in conversations in a variety of everyday contexts and increase their listening skills through class discussions and a variety of audio-visual materials and exercises. Students read and write sentences, both in pinyin and Chinese characters, using broader vocabulary and more complex sentence structure. Students also learn more about popular beliefs and customs in traditional and contemporary Chinese culture. As in Chinese I, all four skills are tested throughout the year.
## Typical Course Sequences

<table>
<thead>
<tr>
<th>9</th>
<th>Introduction to Physics and Engineering</th>
<th>Biology IH</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Biology I or Biology IH</td>
<td>Chemistry IH</td>
</tr>
<tr>
<td>11</td>
<td>Conceptual Chemistry or Chemistry I or Chemistry IH or Semester Electives</td>
<td>AP Biology or AP Chemistry</td>
</tr>
<tr>
<td>12</td>
<td>Physics I or Physics IH or AP Biology or AP Chemistry Semester Electives</td>
<td>AP Physics: C</td>
</tr>
</tbody>
</table>

**NOTE:** The sequences are listed from most frequently traveled to least. However, many other variations are possible, especially in grades 11 and 12.

### 11/12 Semester Electives

<table>
<thead>
<tr>
<th>Anatomy</th>
<th>Physiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Science: Systems</td>
<td>Environmental Science: The Human Element</td>
</tr>
<tr>
<td>Planetary Astronomy</td>
<td>Stellar Astronomy</td>
</tr>
<tr>
<td>The Chemistry of Food</td>
<td>The Chemistry of Food</td>
</tr>
</tbody>
</table>
Gregory C. Miller, Department Head

The Cranbrook Kingswood Upper School Science Department seeks to provide a challenging and comprehensive education in the core sciences of physics, chemistry and biology (required). Students are motivated to engage in scientific thought, develop evaluative skills and exercise a scientific approach in the classroom, laboratory and to the larger world. As such, the department encourages students to pursue a breadth of study which once satisfied may be followed by in-depth study through Advanced Placement (AP®) for elective courses. NOTE: students taking AP® courses are required to take the relevant AP® Exam in May.

The Department believes that the sciences are better understood through an integrated class-lab approach, while learning to use the tools appropriate for the problem at hand. Students should expect classes to be process-oriented and lab activities to take a significant portion of scheduled time. All AP courses will have one double block laboratory session each week.

**Introduction to Physics and Engineering**  
Staff  
4030 Full Year  1  Boys 9, 10  
4040 Full Year  1  Girls 9, 10  
A student notices something interesting and a question comes to mind. From that question, observations are made, data is collected, organized, and interpreted. The process and tools that lead to the next question is Science. Throughout this course, students learn to think scientifically, and as opportunities to use their knowledge and skills for innovation, invention, improvement and understanding systems are exercised they will practice Engineering. This course begins with a review of fundamental scientific tools and methods followed by an exploration of electricity through circuit building using breadboards, LED's, transistors, Arduino microcontrollers, and more. Computer programming is introduced to ready students for both the study of light and the construction of autonomously controlled robots. Robot construction is integrated with the study of the physics of motion.

**Biology I**  
Staff  
4110 Full Year  1  10, 11  
Biology I introduces the structures and functions of living systems at the cellular, organismal and ecosystem levels. Topics include cell biology, genetics, plants, human anatomy and physiology, ecology, and evolution. Lectures and laboratory investigations provide the student with exposure to fundamental principles and methods used in the field of biology.

**Biology IH**  
Greene  
4120 Full Year  1  9, 10  
Dept. Rec.  
Biology IH is an accelerated first-year biology course in which cells, organisms and ecosystems are examined, primarily on a biochemical level. Major components of the course include cellular anatomy and physiology, plant and animal structure and physiology, genetics, and evolution. Lectures and laboratory investigations provide the student with exposure to fundamental principles and methods used in the field of biology.

**AP Biology**  
Comer  
4180 Full Year  1  11, 12  
Chemistry I and Dept. Rec.  
AP Biology adheres to the AP curriculum and as such, students enrolled in this course are expected to take the Advanced Placement Exam in May. In addition to rigorous review of all concepts presented in the previous Biology course, the following topics are covered in greater depth: cell structure and function, energetics, diversity of life, plant structure and function, animal structure and function, ecology, evolution and behavior.

**Conceptual Chemistry**  
Staff  
4200 Full Year  1  11, 12  
Algebra IIB and Dept. Rec.  
Ozone depletion, energy demands, climate change, water supply, plastics, and genetic engineering are real world issues that will be viewed through the lens of chemistry and examined in a framework intended to engage student thinking. Classroom lecture and activities as well as lab experiences will illustrate how conflicting answers to these big questions might arise from similar experimental results.

**Chemistry I**  
Staff  
4210 Full Year  1  10-12  
Biology I and Dept. Rec.  
This course concerns itself with the chemical and physical properties of matter, both qualitatively and quantitatively. In the classroom, problem solving and visualization of abstract chemical concepts are emphasized. In the laboratory, careful measurement and observation is practiced through methods of work and lab report writing.

**Chemistry III**  
Staff  
4220 Full Year  1  10-12  
Algebra II concurrently and Dept. Rec.  
Placement is based on previous grades in science and mathematics, standardized test scores, and teacher recommendations. The course will cover all the topics of Chemistry I, but in greater depth and at a faster pace. It will also include an introduction to Organic Chemistry.

**AP Chemistry**  
Staff  
4280 Full Year  1  11, 12  
Chemistry I "A", Chem IH "B" and Pre-Calculus or greater  
This course is designed to be the equivalent of the general chemistry course usually taken during the first college year. Fundamental topics are covered in greater depth, with more emphasis on chemical calculations and the mathematical formulation of principles. Laboratory work is more independent with frequent use of instrumentation and equipment, and organic laboratory techniques are introduced. Students enrolled in this course are expected to take the Advanced Placement Examination in May.

**Physics I**  
Staff  
4310 Full Year  1  12  
Dept. Rec.  
Physics I is a course in classical physics, intended to develop the student’s inductive, deductive, and abstract reasoning. The course considers primarily Newtonian Mechanics. In the classroom this is accomplished thorough qualitative understanding of the concepts followed by rigorous, quantitative problem solving. In the laboratory this is accomplished through many college level laboratory experiments, which serve to test the relationships postulated in class. The entering student should be at ease with algebra and basic trigonometry.

**Physics I, Physics IH and AP Physics are parallel courses. Therefore, enrollment in one precludes enrollment in the other.**

**Physics IH**  
Staff  
4320 Full Year  1  12  
Pre-Calculus concurrently and Dept. Rec.  
Physics I Honors is an algebra-based rigorous introduction to the concepts and methods of physics. In addition to mechanics and electromagnetism, this course incorporates topics from astrophysics, optics, particle physics or solid-state physics. Frequent laboratory experiences will enhance the curriculum including projects that encourage exploration of topics in greater depth. The workload in this course is substantial and the ability to work both independently and in teams is assumed. Physics I, Physics IH and AP Physics are parallel courses. Therefore, enrollment in one precludes enrollment in the other.

**AP Physics: C - Mechanics**  
Staff  
4380 Full Year  1  12  
AP Calculus AB or above concurrently and Dept. Rec.  
This course is intended for the highly motivated student with a strong mathematical background and interest in science. Primary activities are problem solving and lab investigations. The homework load is substantial and the ability to work independently is assumed. Basic calculus will be introduced and used as students become familiar with both the science and the math. Students enrolled in this course are expected to take the AP C Mechanics Examination in May. AP Physics Physics IH and Physics I are parallel, not sequential courses. Therefore, enrollment in one precludes enrollment in the other.
<table>
<thead>
<tr>
<th>Course</th>
<th>Instructor</th>
<th>Credits</th>
<th>Semesters</th>
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</thead>
<tbody>
<tr>
<td>Environmental Science: Systems*</td>
<td>Staff</td>
<td>1/2</td>
<td>Sem 1 11,12</td>
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<tr>
<td>Biology I pre-req, Chem concurrent</td>
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<tr>
<td>The Earth’s biosphere, atmosphere, hydrosphere, and geosphere operate as complex, linked systems. When left to their own devices, these systems would establish unchanging equilibriums persisting throughout time. The reality is that various system components are exchanged and change over greatly varying time scales. This course introduces students to environmental, earth, living, and energy systems and their relationship to the biosphere. Environmental Science: Systems includes a significant laboratory and field investigation component. Assessments also include lab reports, presentations, group work, homework, tests, and a semester exam.</td>
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<tr>
<td>Planetary Astronomy*</td>
<td>Higgins</td>
<td>1/2</td>
<td>Sem 1 11,12</td>
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<tr>
<td>This course is dedicated to the study of objects within the solar system, including the Sun, planets, moons, minor planets and comets. Students will be introduced to the observational basis for our understanding of the movements of solar system objects. Regular observations of the night sky will be required. Current data from space probes will be used to understand the surface and interior conditions of solar system objects. Weekly lab exercises will reinforce lecture material. A final project has the students creating and presenting a plausible planetary system.</td>
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<tr>
<td>Anatomy*</td>
<td>Twedt</td>
<td>1/2</td>
<td>Sem 1 11,12</td>
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<tr>
<td>The scope of this course extends beyond the human anatomy and physiology studied in Biology I. Classroom lectures and discussions concentrate on the systems of the human body. In the twice-weekly laboratory exercises, students primarily study comparative anatomy. By means of dissection, students examine the evolutionary paths taken by different animals and acquire an appreciation for the diversity of life forms.</td>
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<tr>
<td>Physiology*</td>
<td>Twedt</td>
<td>1/2</td>
<td>Sem 1 11,12</td>
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<tr>
<td>This course extends both the breadth and depth of physiology studied in first year Biology. Classroom lectures and discussions concentrate on the nervous, respiratory, digestive and reproductive systems with a focus on the physical and chemical processes of each system. Laboratory work will be primary experimental focus in the course with three major dissections. Field trips to Beaumont Hospital and regular visits to the VR lab will be used to enhance the study of each system.</td>
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<tr>
<td>Environmental Science: The Human Element*</td>
<td>Staff</td>
<td>1/2</td>
<td>Sem 1 11,12</td>
</tr>
<tr>
<td>Biology I pre-req, Chem concurrent</td>
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<tr>
<td>The earth is a biosphere of abundance that at one time was seen as a resource for all human needs. A soaring human population, however, has reduced the earth’s size, making it smaller than anyone ever anticipated. How do humans interact with and affect the atmosphere, biosphere, hydrosphere, and lithosphere? To be good stewards of this planet, the next generation of scientists and policy makers must have an understanding of population, land and water use, pollution, and global change. Environmental Science: The Human Element includes significant laboratory and field investigation components. Assessments also include lab reports, presentations, group work, homework, tests, and a semester exam.</td>
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<tr>
<td>Stellar Astronomy*</td>
<td>Higgins</td>
<td>1/2</td>
<td>Sem 1 11,12</td>
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<tr>
<td>This course offers an understanding of Astronomy from the standpoint of stars, systems of stars, and the environment between stars. Stellar evolution is studied in detail, as is the Milky Way galaxy, other galaxies and the universe as a whole. Weekly lab exercises reinforce lecture material. This course is not necessarily intended to be a continuation of Planetary Astronomy and may be taken independently.</td>
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<tr>
<td>The Chemistry of Food*</td>
<td>Moss</td>
<td>1/2</td>
<td>Sem 1 11,12</td>
</tr>
<tr>
<td>Imagine taking a bite of a delicious Honey Crisp Apple. Did you know that the chemistry behind changing the red, moist, fragrant, and sweet fruit from food to fuel begins in your mouth while chewing? Imagine placing a slice of whole wheat bread into a toaster – did you consider that the breads’ color change while becoming toast is a chemical reaction? These ideas and more will be considered through cooking, tasting, and learning the role that carbohydrates, lipids, proteins, and more play in the creation of food dishes and as well as their role and effect on our bodies. The course applies basic scientific principles to food systems and practical applications. Reactions, conditions, and processes that affect color, flavor, texture, nutrition, and safety of food are emphasized. Classroom work and significant lab work will comprise the method learning the chemistry of food.</td>
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<tr>
<td>AP Physics: C - E/M w vPython*</td>
<td>Lorts</td>
<td>1/2</td>
<td>Sem 1 11,12</td>
</tr>
<tr>
<td>Understanding electromagnetic forces permits understanding the internal properties of everyday objects which in turn is critical to understanding the forces that act between objects; it is also one of nature’s four fundamental forces. As the name suggests, an understanding of Electricity and Magnetism themselves are necessary to know how they behave together. Electricity and magnetism are core topics in any physics experience. This course is a one-semester course, offered only in the 2nd semester, adhering to College Board’s requirements for AP credit in their AP Physics C Electricity and Magnetism (E&amp;M) course. VPython programming will be included for process animation (now done in progressive AP Physics courses, and in typical college Introductory Physics courses). Students must be recommended for AP Physics C Mechanics and must be concurrently enrolled in either Physics 1 or AP Physics Mechanics. No prior programming experience is required.</td>
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<tr>
<td>Directed Studies</td>
<td>Staff</td>
<td>1/4 or 1/2</td>
<td>1/4 or 1/2</td>
</tr>
<tr>
<td>Biology, Chemistry, or Physics Sponsor</td>
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<td>and Dept. Rec.</td>
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<tr>
<td>Students who have a special interest in a specific scientific area and want to pursue it in depth should consider a directed study. The student must first write a proposal detailing the goals of the project, and then find a faculty sponsor to supervise the project. The results of the research are detailed in a final report. The credit to be awarded, 1/4 or 1/2, must be agreed upon prior to taking the course by the student, faculty sponsor, department head and Academic Dean. The 1/4 credit course does not count for distributional requirements and will be graded pass/fail.</td>
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<tr>
<td>Health</td>
<td>Uhl</td>
<td>1/4</td>
<td>Girls 9</td>
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<tr>
<td>9801 Sem 1 1/4 or 1/2</td>
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<tr>
<td>This required course for freshmen provides the opportunity to acquire the insights and information that can help form sound choices and the development of personal values on matters of mind and body. Relevant topics include physical health assessment, the importance of exercise, sleep and nutrition, maintaining emotional balance, strengthening interpersonal relationships and understanding behaviors such as smoking, drinking, drugs and sexual activity will be explored as they pertain to the teenager emerging into young adulthood. Offered in single-gender settings, the instructional format will allow for interactive discussions, presentations by knowledgeable speakers and the support of appropriate audio-visual and printed materials. Occasional short readings and surveys of opinion will occur. Students are evaluated on three major projects; participating in a lifetime fitness activity done outside of class, presenting a group project, and arranging a guest speaker for the class. Students are also expected to prepare and participate in physical activity days and in class discussions. Quizzes are also occasionally administered on the material learned in class.</td>
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<tr>
<td>9802 Sem 1 1/4 or 1/2</td>
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<td>Boys 9</td>
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</tbody>
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Mark Karinen, Department Head

Courses are designed for students to nurture habits of critical thought, to take pleasure in history’s narrative, to explore the sources of creativity, to understand the causes of conflict that arise from human intention, to learn facts systematically but also to appreciate that the study of history is interpretive, and to apply ideas from history to similar current issues.

Classes are arranged to engage students’ values and interests. Students are encouraged to respond to and make their own judgment about the people, ideas, and events from the past. The success of the class depends, therefore, on students presenting their own ideas and listening to others, recognizing that many interpretations, properly supported, may be valid. Activities, whether accomplished individually or in partnership, assure that learning comes with earnest involvement.

Activities are designed to strengthen the skills of selective reading and retention of important information, interpretation, synthesis, and clear expression in discussion and writing. Students are expected to organize materials for tests and research papers through the study of interpretive, as well as primary source materials. Geography, multimedia, and group projects are also used in most courses.

The 9th grade course provides students with a basis for observing the pattern of human social development, which in turn is expanded upon in the 10th grade world history course. The additional requirement, a course familiarizing students with America’s traditions and present society, is completed in the junior year, or senior year under extenuating circumstances. The elective program includes varied offerings in the social sciences and area studies, and may be sampled in the 11th and 12th grades. The Advanced Placement courses in American history, European history, and world history provide selected students with a thorough, rigorous preparation for the College Board Advanced Placement Examinations in May.

Worldviews and Civilizations
5110 Full Year 1 Boys 9
5120 Full Year 1 Girls 9

This course, drawing on the strengths and interests of the departments of History/ Social Science and Religion & Philosophy, provides a concrete and conceptual foundation for the study of human societies. Through an interdisciplinary study of several of the most significant world-shaping civilizations across time, students learn to ask, and to begin to answer, fundamental questions of humanity. From the Ancient Near East and the Indus Valley to China, Greece, Rome, and the legacies of Hinduism, Buddhism, Judaism, Christianity, and Islam, students study and discuss the systems of government, culture, and faith which continue to provide humanity with its view of its place in the world. Assessment is made through quizzes, tests, essays, research projects, and semester examinations.

World History: Intersections Past and Present
5210 Full year 1 Boys 10
5220 Full year 1 Girls 10

Knowledge of the past allows students to understand the present, examine their own beliefs and to develop understanding of those different from themselves. Four key themes guide this course: power, poverty, population and progress. Students examine these themes through a number of historical periods: Byzantium, the rise of Islam, the Mongol Empire, the Meso-American Empires, the Mughal Dynasty, the emergence of Europe and Western intellectual and political movements, through the World Wars, to globalization. While training students in critical reading, speaking, and writing, this curriculum provides a historical perspective on the problems of the contemporary world, including conflict resolution, population explosion, extreme poverty, genocide and the environment. Students will write historical research papers and develop test-taking skills, and engage in collaborative and digital projects, experiential learning and media literacy.

American History and Government (AS) Staff
5310 Full Year 1 11, 12

American History and Government focuses on the American experience from first contacts to the present in order to provide students with an understanding of the development of society, government, and America's place in the world. Various units highlight the multicultural colonial experience, evolution of republican forms of government, foundations of racial relations, industrialization, immigration and urbanization, the 20th Century, the Cold War, and beyond. Students learn to read, analyze, and critique historical material. They are introduced to different methodologies and learn to weigh historical evidence. Various assessments are utilized including quizzes, oral presentations and classroom projects, multiple choice and essay tests, and research projects.

AP United States History (AS) Staff
5380 Full Year 1 11, 12

Equivalent to an introductory college course, this course analyzes a variety of political, economic, social, cultural, and international themes. It provides students with a thorough background in factual material, but proceeds to an examination of context, cause, result, and significance. Students learn to read historical material analytically and critically and are able to weigh historical evidence soundly. A college text is used, as well as a wide variety of materials. Students take the College Board Advanced Placement Examination in May for advanced college standing.

AP European History Staff
5480 Full Year 1 11, 12

This course surveys the development of Europe from the early Renaissance to the early twenty-first century, c. 1450 to the present. In accordance with the College Board’s Course Description in European History, the course instruction emphasizes seven core themes of this period: the interaction of Europe and the world; poverty and prosperity; objective knowledge and subjective visions; states and other institutions of power; the individual and society; technological and scientific innovation; and national and European identity. Varying interpretations of historical events are examined at every stage. In addition to a college-level core text, students analyze a wide array of written and audio-visual resources such as primary source readings, music, works of art, maps, charts, and graphs. Daily guided discussion focuses on major themes and questions, emphasizing consistent preparation and direct student participation. Written work consists of papers and essays, both free-response and document-based, closely fashioned and scored on the model of the AP Exam. These assessments prepare students for the Advanced Placement Examination in May, which students in the course are expected to take for advanced college credit.

AP World History: Modern Staff
5470 Full Year 1 11, 12

In AP World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 C.E. to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places; humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation.
### HISTORY/SOCIAL SCIENCE

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<th>Course</th>
<th>Instructor</th>
<th>Sem 1</th>
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<tbody>
<tr>
<td><strong>Principles of Economics</strong>*</td>
<td>Staff</td>
<td>1/2</td>
<td>11, 12</td>
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<tr>
<td>5505 Sem 1</td>
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<td>5606 Sem 2</td>
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<tr>
<td>Pre-Calculus concurrently</td>
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<td>Do you think like an economist? This course challenges you to consider the economic way of thinking and begin to recognize the ways in which individuals use economics in their daily lives. In this survey course, you will gain wide exposure to a myriad of topics: microeconomics; macroeconomics and fiscal policy; money, banking, and monetary policy; and the international economy. Further, this course exposes students to the terminology of economists and enables them to identify key institutional and historical facts that characterize the U.S. and other principal economies, and understand the basic methods and analytical tools that economists use to study economic problems. Evaluation consists of quizzes, papers, examinations and class project.</td>
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<td><strong>Civil Rights and Race in America</strong>*</td>
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<td>5527 Sem 1</td>
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<td>5628 Sem 2</td>
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<td>In Civil Rights and Race in America, students develop a multifaceted perspective of the historical struggle for civil rights and racial equality of the 1950s and 60s, and pursue an in-depth consideration of some of the most contemporary debates on race in the United States. Primary source documents, critical analyses, and documentary material are used to investigate the ways in which the dynamics of the civil rights struggle illuminate some of the most essential questions surrounding American politics and society. Students have the opportunity not only to acquire a deeper familiarity with the civil rights movement and its implications, but they are also given the chance to explore and define their own positions on current dilemmas concerning race and justice in America. Assessment is based on papers, periodic quizzes and tests, and oral presentations, in addition to daily involvement in class discussion.</td>
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<tr>
<td><strong>The Rise of Nazi Germany and the Holocaust</strong>*</td>
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<td>5634 Sem 2</td>
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<td>How could Hitler and the Nazi Party achieve power in such a highly advanced country at the heart of Western civilization? How could the Nazis, in such a short span of time, establish a racially-based totalitarian regime, and plunge the world into a war that consumed millions of lives while leaving the devastating legacy of the Holocaust in its wake? Students will understand the historical foundations of German unification, and the outcomes of World Wars I and II. Students will also learn of the long-term implications on the modern state of Germany. We will use primary and secondary sources to provide deeper insights into the mindset that created and perpetrated the Holocaust. Textbooks, supplemental readings, film documentaries, novels, a visit to the local Holocaust Memorial Museum, and outreach to local survivors help answer these questions. Tests, papers, and quizzes will assess student understanding of the material.</td>
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<td><strong>History of Feminist Thought in the Modern World</strong>*</td>
<td>Ryan</td>
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<td>History of Feminist Thought in the Modern World traces the development of the global women’s liberation movement and expansion of feminist thinking since the Enlightenment. The course focuses on four major stages: Roots of Feminist Thought (pre-19th century), First Wave Feminism (1830s-1920s), Second Wave Feminism (1950s-1980s), and Third Wave Feminism (1990s-present). While much of the ideology and literature framing international women’s liberation developed in the West, the course also weaves non-Western histories into the narrative. Examples from Communist China, Catholic Latin America, post-Colonial Africa, and the Middle East will help highlight the ways in which feminists have struggled for gender equality under a variety of political, social, and religious structures.</td>
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<td><strong>Modern Global Issues</strong>*</td>
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<td>Modern Global Issues will challenge students to investigate the world beyond their immediate environment. The course is designed to promote global citizenship and competency of the twenty-first century while providing students opportunities to understand world issues from multiple perspectives. The curriculum for the course would be lecture/discussion with an emphasis on student inquiry, problem-solving, research, collaboration, and the ability to communicate, learning in multiple formats. Students will develop global communication skills and practical applications in dealing with different points of view. The course strives to deepen students’ understanding of varied global regions, the historical context of modern issues, and the implications of decision-making.</td>
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<td><strong>Directed Studies</strong></td>
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<td>To encourage the student to pursue a topic or discipline in history or the social sciences outside those offered in the course catalogue, students are invited to organize a course of study in consultation with a member of the Department. Requirements and evaluation are established by mutual agreement.</td>
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NOTE: All elective courses are one semester.
RELIGION AND PHILOSOPHY

Eric R. Lorey, Department Head
At Cranbrook Kingswood, we believe that a key element of success in the today’s world is a true and deep understanding of the beliefs and philosophies which inspire both nations and individuals. The growth of a well-informed and culturally-sensitive global citizen is often dependent upon how these subjects are taught in school. To that end, Cranbrook Kingswood Upper School employs scholars specifically trained in world religion and philosophy to provide expert instruction to students.

The faculty of the Department of Religion and Philosophy affirm that there are valuable lessons to learn in all of the world’s religious traditions, and no religion is taught as being inherently “right” or “wrong.” By helping our students grow in the understanding of the great traditions of thought and belief, our students become better able to understand the billions who live their lives by their precepts as well as to continue their own development as human beings.

All ninth-grade students will engage in a study of the basic tenets of the great religions of the world, an investigation curated by the Department of Religion and Philosophy. Before graduation, all seniors are required to complete one of the Department’s six elective courses which explore the religious and philosophical traditions of the world in greater depth.

Worldviews and Civilizations
5110 Full Year 1 Boys 9
5120 Full Year 1 Girls 9
This course, drawing on the strengths and interests of the departments of History/Social Science and Religion & Philosophy, provides a concrete and conceptual foundation for the study of human societies. Through an interdisciplinary study of several of the most significant world-shaping civilizations across time, students learn to ask, and to begin to answer, fundamental questions of humanity. From the Ancient Near East and the Indus Valley to China, Greece, Rome, and the legacies of Hinduism, Buddhism, Judaism, Christianity, and Islam, students study and discuss the systems of government, culture, and faith which continue to provide humanity with its view of its place in the world. Assessment is made through quizzes, tests, essays, research projects, and semester examinations.

Western Religions: Moses, Jesus, Muhammad*
6501 Sem 1 1/2 11, 12
This course covers the history and theology of Judaism, Christianity, and Islam. It examines the distinctiveness and overlapping of these faith traditions through sacred texts. After an exploration of the religious experience, students study different ways it is expressed in the three major Western traditions. Lectures, discussions, tests, short papers, and semester examination are the forms of assessment.

Ethics: Philosophical Perspectives*
6503 Sem 1 1/2 11, 12
What is important? What is real? What is good? In today’s pluralistic world is any consensus possible? This course tackles these questions as well as addressing how we make choices. We will apply ethical theories to perennial moral questions and to our daily personal decisions, conduct, and identity. Our core study will include major figures in philosophy such as Kierkegaard, Heidegger, Camus, de Beauvoir, and Baudrillard. Unit tests, quizzes, in-class writings, and a final research presentation are factored into the semester grade.

Eastern Religions: Paths to Enlightenment*
6511 Sem 1 1/2 11, 12
6602 Sem 2 1/2 11, 12
The religious and philosophical traditions of India, Southeast Asia, China, Korea, and Japan are the oldest in the world. Now and in the future it is and will be incumbent upon thoughtful people living in western culture to obtain at least a broad outline of the spiritual and intellectual Eastern traditions and at best a working knowledge of texts like the Bhagavad Gita, the Lotus Sutra, the Dao-De Ching, and the koans of the Zen masters. Evaluation by traditional methods of quizzes, tests, an individual project and a semester examination.

Aesthetics: Philosophy of Art*
6616 Sem 2 1/2 11, 12
George Booth believed that “a life without beauty is only half lived.” The philosophical study of art poses many questions including art’s definition, function, meaning, importance, and relation to beauty. This course examines these questions through the eyes of Plato, Aristotle, Kant, Hegel, Nietzsche, Foucault and others. This class meets on a regular basis at the Cranbrook Art Museum. The museum collection and the culture of Cranbrook serve as primary resources. In addition to studying theory, students analyze works of art using the aesthetic theories learned in class. Required text is Ross, Art and its Significance. Assessments include tests, in-class writings, critical essays, and a presentation.

Ethics: Philosophy as a Way of Life*
6618 Sem 2 1/2 11, 12
Many people think of philosophy as a set of abstract beliefs. For much of human history, however, philosophy was a way of life that included questions, practices, and living in the world in concrete ways. Philosophers also sought to change the world through philosophical reflection and practice. This course explores how philosophy can be a way of living in our world. Logic and argument evaluation are taught using contemporary news and marketing. Historical examples of how philosophy informed the way people lived are studied, including philosophers such as Pythagoras, Socrates, Marcus Aurelius, and Ludwig Wittgenstein. Specific issues in economics, language, politics, and morality are also addressed. Assessments include a weekly journal for philosophical reflection, tests, quizzes, papers, and a semester examination. Pierre Hadot’s Philosophy as a Way of Life is the textbook.
Performing Arts

Dance
- Movement and Conditioning 9-12
- Intermediate Dance 9-12
- Advanced Dance 10-12

Vocal Music
- Concert Choir 9-12
- Madrigals (Girls) 9-12

Instrumental Music
- Concert Band 9-12
- MasterSingers (Boys) 9-12
- Orchestra 9-12
- Symphony Band 9-12

Theater
- Acting 9-11
- Advanced Theatre and Performance 10-12
- Speech 9-12
- Introduction to Theatre: Stagecraft 9-12
- Video Production 9-12

Co-Curricular
- String Quartet
- Jazz Band
- Pit Orchestra
- Fall Play
- Studio
- Musical
PERFORMING ARTS

Mark Hourigan, Department Head
The Performing Arts program offers students opportunities to perform and develop skills in dance, music, and theatre. Students are grouped by ability level, and auditions with instructors may be necessary for entrance at some levels. Classroom work focuses on skills that enable students to develop their artistic potential, culminating in full length public presentations on and off-campus.

In DANCE, the students present selections at the Winter Concert and in a fully produced Evening of Dance concert in the spring. Throughout the entire school year, dance ensembles perform in concerts and recitals. Students are given the opportunity to choreograph pieces for adjudication at the Annual Strickland Choreography Competition. Classes focus on technique in the modern/contemporary style, with units in ballet, jazz, and creative exploration.

In MUSIC, instrumental and vocal ensembles present winter and spring concerts. Students are encouraged to participate in festivals both as soloists and in small ensembles. The String Quartets and Jazz Band are co-curricular opportunities available to students in the Orchestra and the Symphony Band classes by audition or by instructor’s assignment.

In THEATRE, three productions are presented each year, including the fall play, the musical, and the One-Act Festival. Musicals are a combined production of the Department. Auditions are open to all students. Two levels of Acting classes are offered, as well as Stagecraft and Speech.

All students enrolled in Performing Arts classes are expected to participate actively in classroom rehearsals and perform the dance, music, and theatrical selections chosen by the faculty. Plays, vocal and instrumental music and musical accompaniments for dances are selected primarily for the quality of the literature. Our interest in the appreciation of diversity encourages us to read stories of all races, religions, nationalities, and sing their songs, play their music, and dance their dances.

Concert Choir
7100 Full Year 1 9-12
No audition necessary
The purpose of this course is to give all interested students the experience of singing in a large mixed-voice ensemble. Students will explore and sing a variety of choral literature from classical to contemporary.

Madrigals
7120 Full Year 1 Girls 9-12 Audition
This ensemble is for the experienced female singer who wishes to study, sing and perform a wide range of difficult female-chorus literature. The Madrigals perform throughout the community as well as for the Department’s scheduled concerts. In addition, this ensemble presents its own concerts twice a year and participates in the Michigan Schools Vocal Music Association solo and ensemble festival.

MasterSingers
7140 Full Year 1 Boys 9-12 Audition
This ensemble is for the experienced male singer who wishes to study, sing and perform a wide range of difficult male-chorus literature. The MasterSingers perform throughout the community as well as for the Department’s scheduled concerts. In addition, this ensemble presents its own concerts twice a year and participates in the Michigan Schools Vocal Music Association solo and ensemble festival.

Concert Band
7200 Full Year 1 9-12
1 yr. playing experience or Instr.
This class is the intermediate band in the Upper School. Most students from the Middle School Band who want to continue in our program will elect this class as ninth graders. It is designed to provide exposure to a variety of musical styles. Tone quality, technique, and sight-reading of instrumental repertoire are all stressed. Students have the opportunity to perform in the district and state solo and ensemble festivals, spring concert and other events.

Symphony Band
7220 Full Year 1 9-12 Instr.
This ensemble is designed for the advanced wind or percussion instrumentalist. Selected members perform in Jazz Band, Orchestra and Pit Orchestra for the musical. Students have the opportunity to perform in the district and state solo and ensemble festivals, spring concert and other events.

Orchestra
7320 Full Year 1 9-12 Instr.
The Orchestra consists of advanced string players in grades 9 through 12 who have at least four years of experience. Educational emphasis is placed on advancement of string techniques, independent musicianship and an understanding of ensemble playing. The Orchestra performs both chamber music and full orchestral works with the top members of the band. Select string members perform in one of three string quartets. Participation opportunities are offered for the Musical Pit Orchestra and the Solo and Ensemble Festivals. The Orchestra performs in two or three major concerts in December and April each year.

Intermediate Dance
7440 Full Year 1 9-12 Audition
This course focuses on the development of technical and creative dance skills. Expectations require the student's willingness to strive for achievement in the areas of technique, improvisation, composition and performance. Technique studies will include ballet, contemporary and jazz dance. Choreographic elements will be explored. Scheduled performances require participation in some afternoon and evening rehearsals. Basic dance experience or instructor approval required.

Advanced Dance
7460 Full Year 1 10-12 Audition
This is a comprehensive course for the highly motivated student who has achieved proficiency in technical skills through the intermediate level, and who exhibits creativity and expressiveness in composition and performance. In addition to class work, students are expected to assume a strong sense of leadership and initiative for participation in after-school performances and choreographic showcases. Scheduled performances require participation in some afternoon and evening rehearsals.

Mark Hourigan, Department Head
The Performing Arts program offers students opportunities to perform and develop skills in dance, music, and theatre. Students are grouped by ability level, and auditions with instructors may be necessary for entrance at some levels. Classroom work focuses on skills that enable students to develop their artistic potential, culminating in full length public presentations on and off-campus.

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1 yr. playing experience or Instr.
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Intermediate Dance
7440 Full Year 1 9-12 Audition
This course focuses on the development of technical and creative dance skills. Expectations require the student's willingness to strive for achievement in the areas of technique, improvisation, composition and performance. Technique studies will include ballet, contemporary and jazz dance. Choreographic elements will be explored. Scheduled performances require participation in some afternoon and evening rehearsals. Basic dance experience or instructor approval required.

Advanced Dance
7460 Full Year 1 10-12 Audition
This is a comprehensive course for the highly motivated student who has achieved proficiency in technical skills through the intermediate level, and who exhibits creativity and expressiveness in composition and performance. In addition to class work, students are expected to assume a strong sense of leadership and initiative for participation in after-school performances and choreographic showcases. Scheduled performances require participation in some afternoon and evening rehearsals.

Mark Hourigan, Department Head
The Performing Arts program offers students opportunities to perform and develop skills in dance, music, and theatre. Students are grouped by ability level, and auditions with instructors may be necessary for entrance at some levels. Classroom work focuses on skills that enable students to develop their artistic potential, culminating in full length public presentations on and off-campus.

In DANCE, the students present selections at the Winter Concert and in a fully produced Evening of Dance concert in the spring. Throughout the entire school year, dance ensembles perform in concerts and recitals. Students are given the opportunity to choreograph pieces for adjudication at the Annual Strickland Choreography Competition. Classes focus on technique in the modern/contemporary style, with units in ballet, jazz, and creative exploration.

In MUSIC, instrumental and vocal ensembles present winter and spring concerts. Students are encouraged to participate in festivals both as soloists and in small ensembles. The String Quartets and Jazz Band are co-curricular opportunities available to students in the Orchestra and the Symphony Band classes by audition or by instructor’s assignment.

In THEATRE, three productions are presented each year, including the fall play, the musical, and the One-Act Festival. Musicals are a combined production of the Department. Auditions are open to all students. Two levels of Acting classes are offered, as well as Stagecraft and Speech.

All students enrolled in Performing Arts classes are expected to participate actively in classroom rehearsals and perform the dance, music, and theatrical selections chosen by the faculty. Plays, vocal and instrumental music and musical accompaniments for dances are selected primarily for the quality of the literature. Our interest in the appreciation of diversity encourages us to read stories of all races, religions, nationalities, and sing their songs, play their music, and dance their dances.

Concert Choir
7100 Full Year 1 9-12
No audition necessary
The purpose of this course is to give all interested students the experience of singing in a large mixed-voice ensemble. Students will explore and sing a variety of choral literature from classical to contemporary.

Madrigals
7120 Full Year 1 Girls 9-12 Audition
This ensemble is for the experienced female singer who wishes to study, sing and perform a wide range of difficult female-chorus literature. The Madrigals perform throughout the community as well as for the Department’s scheduled concerts. In addition, this ensemble presents its own concerts twice a year and participates in the Michigan Schools Vocal Music Association solo and ensemble festival.

MasterSingers
7140 Full Year 1 Boys 9-12 Audition
This ensemble is for the experienced male singer who wishes to study, sing and perform a wide range of difficult male-chorus literature. The MasterSingers perform throughout the community as well as for the Department’s scheduled concerts. In addition, this ensemble presents its own concerts twice a year and participates in the Michigan Schools Vocal Music Association solo and ensemble festival.
<table>
<thead>
<tr>
<th>Course</th>
<th>Instructor</th>
<th>Semester</th>
<th>Credits</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Movement and Conditioning*</td>
<td>Rediers</td>
<td>Sem 1</td>
<td>3/wk</td>
<td>1/4</td>
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<td></td>
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<td>Sem 2</td>
<td>3/wk</td>
<td>1/4</td>
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<tr>
<td>This class is designed for the student who is interested in building core strength and body awareness. A physical regimen drawn from Pilates, yoga, and dance will enhance coordination, flexibility and abdominal strength. No rehearsals or performances are required.</td>
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<tr>
<td>Introduction to Popular Dance Styles*</td>
<td>Rediers</td>
<td>Sem 1</td>
<td>3/wk</td>
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<td>Sem 2</td>
<td>3/wk</td>
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<td>This introductory course is for the male and female student with little or no formal dance training. Students will develop skills in basic dance technique and vocabulary, and gain a comprehensive knowledge of dance as artistic expression. Students will study dance styles such as contemporary, theatrical jazz, hip-hop, and world dance. Classes will consist of warm-up exercises which will develop strength, flexibility with a strong sense of body awareness and alignment. Students will learn choreographed movement combinations. There will be no outside-of-class rehearsals or public performance requirement.</td>
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<td>Speech*</td>
<td>Dobrovich</td>
<td>Sem 1</td>
<td>1/2</td>
<td>9-12</td>
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<td>Sem 2</td>
<td>1/2</td>
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<td>This course is designed to provide the fundamentals of speech preparation and delivery based on the five canons of rhetorical composition. A minimum of eight graded speeches (2-10 min. in length) is required. The main emphasis is on informative speaking. Assignments include demonstration, visual-aid, reporting and special occasion speeches. Impromptu delivery techniques, reading from a manuscript, and memorizing are included. Extensive bibliography for research, listening projects, final speech for exam. <strong>This course can only be taken once.</strong></td>
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<tr>
<td>Acting*</td>
<td>Dobrovich</td>
<td>Sem 1</td>
<td>1/2</td>
<td>9-11</td>
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<td>Sem 2</td>
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<td>This course introduces students to the art of theatrical performance with an emphasis on the interpretive art of acting. Course content includes the study of theatre history, contemporary theories of acting, and in-class performances. The course develops vocal, physical and intellectual skills through improvisation, textual analysis, observation, discussion, memorization, stage directions, theatre games, monologues and scene work. Focus of the course is directed toward areas of performance that enhance and support the student's imagination, creativity, and self-confidence. 12th grade students can take this course with instructor approval.</td>
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<tr>
<td>Advanced Theatre and Performance*</td>
<td>Dobrovich</td>
<td>Sem 1</td>
<td>1/2</td>
<td>10-12</td>
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<td>Sem 2</td>
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<td>Instructor Recommendation Only</td>
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<td>This course is designed to extend and deepen the student’s growing knowledge of performance. It will develop and expand upon the techniques introduced in the beginning acting classes, continuing the exploration of character development through textual analysis, physical characterization, and emotional exploration. This will be accomplished by providing a wide variety of advanced acting exercises, monologues, and scene study to broaden the student’s imagination and creative subconscious, deepening their understanding of text, motivation, and characterization. Student performers are encouraged to audition for the main stage productions and will be required to participate in a monologue or scene study showcase at the end of the semester.</td>
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<tr>
<td>Introduction to Theatre: Stagecraft*</td>
<td>Dobrovich</td>
<td>Sem 1</td>
<td>1/2</td>
<td>9-12</td>
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<td>Sem 2</td>
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<td>This course is for students interested in the various elements of theatre production &quot;behind the scenes.&quot; Students explore the creation of a theatre production from design to installation to the final performance. Topics include the examination of the technical elements of sets, lighting and sound from a historical point-of-view as well as experiencing hands-on construction of these elements for the fall and winter productions. A final design project is required of each student.</td>
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<td>Video Production*</td>
<td>Staff</td>
<td>Sem 1</td>
<td>1/2</td>
<td>9-12</td>
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<td>Sem 2</td>
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<td>This project-oriented class introduces students to the entire production process from scripting and storyboarding, to filming and acting, and editing to create a finished product. For each production, students learn and apply a range of acting, filming, and editing techniques and tools including green screens, color correction, and jib arm shots. Throughout this process, students also learn about digital citizenship, copyright, and privacy/permission in the context of professional practice. Final films will be collected and screened as part of a showcase, with question and answer sessions with each production team.</td>
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Fine Arts

- Design 9-12
- Drawing 9-12
- Weaving/Fibers 9-12
- Fashion Design 9-12
- Ceramics 9-12
- Metalsmithing/Creative Jewelry 9-12
- Sculpture 9-12

- Digital Photography 9-12
- Painting 9-12
- Digital Fabrication and Design Studio Honors 11-12

All art courses can be repeated for credit indefinitely.

- Digital Photography requires one semester of either Design or Drawing.
- Painting requires one semester of Drawing.

Studio Honors Courses

- Receive Honors grade point credit, operate at the most advanced studio level, and require four hours of additional studio work per week.
- Requires two semesters in the studio course earning an A− or higher each semester.
- Requires instructor recommendation and department head approval.
- Open to Juniors and Seniors only.
Painting used is acrylic.

Students may repeat any level if they are not placed in the next level. With each new level of any class, the studio work is expected to be more advanced. Students may, with instructor’s approval, go on to work in Studio Honors. This course is a studio concentration, under the guidance of the instructor; setting pertinent assignments and helping the student set qualitative and quantitative goals. Students are expected to have attained expertise with skills and must have a complete understanding of principles and elements of design. Honors level students are encouraged to think creatively and critically, developing a portfolio that reflects increased artistic and personal vision.

Foundations in Design*

**Gary Kulak, Department Head**

The Fine Arts Department encourages creative engagement, both intellectual and practical, with traditional media of the fine arts. The School enjoys a rich and unique artistic heritage. Making students aware of, responsive to and skilled in employing the various forms of artistic expression is the Department’s primary objective. All courses examine art history, aesthetics and criticism as they relate to each unique studio situation. Students entering in the 9th grade are strongly advised to take Foundations in Design. All art classes may be repeated for credit. Classes that are repeated may be assigned a higher designation, from intermediate to advanced, by the instructor.

Students may, with instructor’s approval, go on to work in Studio Honors. This course is a studio concentration, under the guidance of the instructor; setting pertinent assignments and helping the student set qualitative and quantitative goals. Students are expected to have attained expertise with skills and must have a complete understanding of principles and elements of design. Honors level students are encouraged to think creatively and critically, developing a portfolio that reflects increased artistic and personal vision.

**Foundations in Design***

Mosley

- **8501** Sem 1 3/wk 1/4 9-12
- **8602** Sem 2 3/wk 1/4

This beginning level course cultivates creative thinking through challenging assignments that explore visual elements and design principles that underpin art, design and architecture. In the studio, students practice skills of inquiry to enjoy experiential learning and are encouraged to make connections while asking the questions, how and what if. Two-dimensional and three-dimensional spatial ideas are investigated in making processes that use varied media, materials and technologies.

**Design Studio H**

- **8503** Sem 1 3/wk 1/2 11, 12
- **8604** Sem 2 3/wk 1/2

This course provides the advanced student time to research an area of design and with the guidance of the instructor, develop creatively, both conceptual and material aspects of a selected project. Students are expected to accomplish at a high level, working with greater independence, taking risks and documenting progress. Students engage in critical analysis of their work and other artists, designers and cultural styles to develop a unique point of view.

**Drawing***

- **8505** Sem 1 3/wk 1/4 9-12
- **8606** Sem 2 3/wk 1/4

This course is concerned with developing visual, aesthetic, and technical skills. Through a variety of drawing media, students learn to solve the traditional and contemporary problems of pictorial composition.

**Drawing Studio H**

- **8507** Sem 1 3/wk 1/2 11, 12
- **8608** Sem 2 3/wk 1/2

Drawing and Instr.

This class is for students who are skilled at drawing and who want to expand their ideas about the meaning of art. We explore a wide range of materials and techniques, as well as art history and criticism. Students are strongly encouraged to create their own unique imagery with weekly assignments and active participation in the weekly critique is expected. By semester’s end each student will have produced a substantial and varied portfolio of drawings. Students will meet regularly in the Seminar Room at the Art Academy.

**Painting***

- **8551** Sem 1 3/wk 1/4 9-12
- **8666** Sem 2 3/wk 1/2 Drawing

After an introduction to the materials and subject possibilities of painting, the emphasis of this course is on construction, composition, paint handling and color. Students study a number of contemporary painters in order to understand their problems and the solutions they developed. Students then attempt to confront the same problems and find their own unique solutions. The only paint used is acrylic.

**Painting Studio H***

Reid

- **8567** Sem 1 3/wk 1/2
- **8668** Sem 2 3/wk 1/2

Painting and Instr.

This course provides students with an intensive experience in the aesthetics, conceptual development and media of painting. Students extend their range of painting techniques and their study of art history and criticism. Students are expected to work inside and outside of the classroom on conceptual assignments, develop their portfolio, assist in the studio, and take active part in weekly critiques. Each student works with the instructor to develop a plan for the semester. Evaluation is based on criteria established to encourage students to meet exceptional standards, to grow in freedom and originality of expression, and to demonstrate conceptual and technical ability. Students are expected to work an additional 4-6 hours outside of the classroom each week. This course requires instructor approval.

**Digital Photography***

Kulak

- **8555** Sem 1 3/wk 1/4 9-12
- **8656** Sem 2 3/wk 1/4

Digital Photography and Instr.

This course introduces students to the techniques for capturing photographic images using a digital camera and manipulating those images using photo-editing software, such as Photoshop Elements, accessible on computers in the labs and libraries. Students explore digital photography as a vehicle for self-expression, creativity, and critical thinking through the development of camera technique combined with artistic elements and principle and design. Students engage in critiques with time reserved for discussion of historical and contemporary photography. In addition to classroom work, students are expected to take photographs outside of class. The portfolios created by students may be thematic in content or represent a carefully considered sequence of experimental work. Students will need to provide a personal point-and-shoot or DSLR camera.

**Digital Photography Studio H***

Kulak

- **8557** Sem 1 3/wk 1/2 11, 12
- **8658** Sem 2 3/wk 1/2

Digital Photography and Instr.

This course provides students with an intensive experience in the aesthetics, conceptual development and media of digital photography. Students explore a wide range of techniques, as well as art history and criticism. Students are expected to work out of the classroom on conceptual assignments, develop their portfolio, assist in the studio and actively take part in weekly critiques. The individual student will work with the instructor to develop a plan for the semester. Evaluation is based on criteria established to meet exceptional standards, with growth in freedom and originality of expression, and on demonstration of conceptual and technical ability. The student is expected to work an additional 4 hours outside of the classroom each week. This course requires instructor approval.

**Ceramics***

Smith

- **8511** Sem 1 3/wk 1/4 9-12
- **8612** Sem 2 3/wk 1/4

Ceramics and Instr.

In this course, ceramic students begin a study of three-dimensional form and process by exploring the material qualities of clay. Students use traditional hand-building methods of slab construction, coiling and pinching and then progress to basic wheel throwing technology. Learning how to wedge, center, shape, finish, glaze and fire, complete the semester’s production. This beginning level emphasizes a set of skills for working in the studio and builds a foundation for critical thinking necessary to evaluate ceramic works, explore artistic intent and better understand the design of functional objects.

**Ceramics Studio H***

Smith

- **8512** Sem 1 3/wk 1/4 9-12
- **8613** Sem 2 3/wk 1/4

Ceramics and Instr.

In this course, ceramic students begin a study of three-dimensional form and process by exploring the material qualities of clay. Students use traditional hand-building methods of slab construction, coiling and pinching and then progress to basic wheel throwing technology. Learning how to wedge, center, shape, finish, glaze and fire, complete the semester’s production. This beginning level emphasizes a set of skills for working in the studio and builds a foundation for critical thinking necessary to evaluate ceramic works, explore artistic intent and better understand the design of functional objects.
The Studio Honors Fiber student engages more deeply in the medium and sophisticated projects that are designed by the student with the instructor. Weaving and Fiber Arts Studio Honors involves the advanced student in Weaving and Instr.

8537 Sem 1  3/wk  1/2  11, 12
8618 Sem 2  3/wk  1/2

Ceramics and Instr.

This course provides the student who excels in ceramics the opportunity for advanced research and deeper understanding of historical reference, leading to a more critical and personal expression of form. Students are expected to extend their knowledge of ceramic processes and work towards expertise in one area. Students work toward a high level of accomplishment in skill development and learning to take creative risks. Students work with the instructor in setting goals. All students participate in loading and firing the kiln and learning proper care of studio equipment.

Sculpture*

8521 Sem 1  3/wk  1/4  9-12
8622 Sem 2  3/wk  1/4

Kulak

The purpose of this course is to introduce the student to three-dimensional form through the concepts, materials, tools and techniques of sculpture. Students are required to conceive and produce at least two sculptures. Principles of design and art history are presented. Advanced students may explore software and film as a method for understanding space. Evaluation is based on personal growth in idea, commitment, and quality of work produced. Media used include plaster, wood, steel, bronze, and found objects.

Sculpture Studio H

8527 Sem 1  3/wk  1/2  11, 12
8628 Sem 2  3/wk  1/2

Kulak

This course provides students an intensive experience in the aesthetics, conceptual development and media of sculpture. Students explore a wide range of materials and techniques, as well as art history and criticism. Students are expected to work out of the classroom on conceptual assignments, develop their project in the studio and take part in weekly critiques. Students work with the instructor to develop a plan. Evaluation is based on meeting exceptional standards, with growth in freedom and originality of expression, and demonstration of conceptual and technical ability.

Weaving and Fiber Arts*

8531 Sem 1  3/wk  1/4  9-12
8632 Sem 2  3/wk  1/4

Bennett-Carpenter

Students in Weaving and Fiber Arts concentrate on floor loom weaving as it relates to the contemporary field of Fiber Arts. They explore various materials and techniques including collage, tapestry, weaving, digital photography, embroidery, computerized weaving, fashion, and product design. All activities of the weaving studio use thread as the basic material for creative and individual expression. Beginning weavers gain a familiarity with the entire process of weaving. Intermediate and advanced weavers take on more creative challenges to further their understanding of the loom's capabilities. They manipulate the cloth once it is off the loom in unexpected ways. Inspiration for all projects comes from students' personal experiences and ideas, the cultural and historical use of textiles from around the world, from fashion, the decorative and fine arts, and the materials and techniques themselves.

Weaving and Fiber Arts Studio H

8537 Sem 1  3/wk  1/2  11, 12
8638 Sem 2  3/wk  1/2

Bennett-Carpenter

Weaving and Instr.

Weaving and Fiber Arts Studio Honors involves the advanced student in sophisticated projects that are designed by the student with the instructor. Students bring to the table their own project ideas, research, and motivation. The Studio Honors Fiber student engages more deeply in the medium and creates finely finished projects.
NOTE: The above “Paths” serve as suggestions. It is possible, for example, to elect a Computer Science course or to do a Directed Study before taking AP Computer Science A or AP Computer Science Principles. Student placement is based upon assessed ability and knowledge rather than grade level. Questions about a particular placement or a suggested sequence should be directed to a member of the Upper School Computer Department.
Kieren Reynolds, Department Head

The Computer Department offers courses for students at all levels of ability and interest. Course placement is based on ability rather than by grade level.

The facilities at the Upper School include two computer centers with PC-compatible computers connected to the community-wide network. An account with Internet access and Email is available to every student in the school whether or not he/she is enrolled in a computer course. The computer centers are available on weekdays for the use of all students during the academic day, as well as weekday evenings.

All courses in the Department require “hands on” work with the network-based computers. The upper level courses require more computer time than do the introductory courses. Students considering Computer Science/Computer Science I are encouraged to take this course as soon as possible, ideally in the freshman or sophomore year, as course requirements and scheduling problems may present difficulties in grades 11-12.

The Department recognizes that a well-rounded computer curriculum includes courses other than programming. Currently this is accomplished by the Directed Study. Recent choices have included work in creating web pages, video editing, robotics, as well as traditional programming in different languages. Also, the AP Computer Principles course explores computer applications as well as beginning levels of programming.

Introduction to Computer Science*

Staff
9507  Sem 1  3/wk  1/4  9-12
9608  Sem 2  3/wk  1/4

Introduction to Computer Science introduces students to the field of computer science and the fundamentals of computer programming. This course is specifically designed for students with no prior programming experience, and touches upon a variety of fundamental topics. This course uses programming language to demonstrate those topics. This course begins with a brief introduction to coding and then engages students in projects that teach a broad variety of CS concepts such as Cryptography, Virtual reality construction, and Networking. By the end of the course, students understand the basics of computer science. The principles learned here form a foundation for further progress through the computer science discipline. A project replaces the final examination. The course meets three days per week, with an extra “drop day”.

Computer Science I*

Staff
9509  Sem 1  1/2  10-12
9612  Sem 2  1/2

Introduction to Computer Science I is the same course as Introduction to Computer Science, but awards full credit for the semester. The course meets concurrently with the Introduction to Computer Science course. In addition the class meets all scheduled periods, and students have additional assignments to be completed as homework outside of class time. This course provides sufficient preparation for the AP Computer Science A course. A project replaces the final examination.

AP Computer Science A

Staff
9780  Full Year  1  10-12
Instr.

This advanced level course is designed for the student with a strong interest and ability in computer science. The language Java™ is used exclusively, although a student need not know the language to enroll. Emphasis is placed on programming theory rather than on the language. Topics covered include searching and sorting routines, data structures, and simulations. In addition to the regular text, students use online interactive software to study and create programs. Students are expected to take the Advanced Placement Examination in May. Tests, quizzes.

AP Computer Science Principles

Staff
9790  Full Year  1  10-12

Enrollment in Algebra 2 or higher Math class and departmental permission

AP Computer Science Principles introduces students to the central ideas of Computer Science and computational thinking. The course is oriented around seven core learning objectives: creativity, abstraction, data and information, algorithms, programming, the internet, and global impact. Students employ computational tools to analyze data, solve real-world problems, and create original digital artifacts. The course is designed for students who are looking for a real-world, open-ended, creative, and project-based introduction to the principles of Computer Science. Students need to have a significant level of self-direction, initiative, and resourcefulness in order to design and finish projects independently. This course is independent from AP Computer Science A (APCSA); students can take it either before or after the other AP class. It is neither harder nor easier than APCS. It is simply more open-ended and project-based than structured and analytical.

Cyber Engineering*

Staff
9511  Sem 1  1/2

Cyber engineers apply probability, statistics and cryptographic topics, along with specialized math and engineering topics, in order to analyze and design complex devices and systems. Cyber engineers who design systems, and the information managers who monitor and protect the information, frequently work together to maintain the security of operations and business continuity. Cyber security threats may come in the form of malware, ransomware, viruses or simply in the form of stolen information. This 1st semester course is not a prerequisite for the 2nd semester Cyber Engineering course. Each course covers a different branch of software security principles. However, taken together, the complementary learning goals blend to provide a firm foundation in software security principles.

Cyber Security*

Staff
9614  Sem 2  1/2

Cyber engineers apply probability, statistics and cryptographic topics, along with specialized math and engineering topics, in order to analyze and design complex devices and systems. Cyber engineers who design systems, and the information managers who monitor and protect the information, frequently work together to maintain the security of operations and business continuity. Cyber security threats may come in the form of malware, ransomware, viruses or simply in the form of stolen information. The 1st semester course in Cyber Engineering (Linux Networks and Data Security) is not a prerequisite for this 2nd semester course. Each course covers a different branch of software security principles. However, taken together, the complementary learning goals blend to provide a firm foundation in software security principles. In the first half of this course, students dive into the history of cryptography systems, the motivation behind using encryption systems, and basic cryptography systems. Additionally, topics include using cryptography, cryptology, and cryptanalysis to decode a message without the use of a key and more advanced cryptographic topics like public key cryptography and hash functions. In the second half of this course, students learn what happens when running a web application and how to look inside web apps using developer tools, source code, and more. Students are introduced to basic SQL in order to learn about common attacks like SQLi and XSS and recommend solutions for flawed security systems.

Directed Studies

Staff
Sem 1  1/4 or 1/2  9-12
Sem 2  1/4 or 1/2

Faculty Sponsor
Students who have a special interest in a particular area of computers and want to pursue it in depth should consider a Directed Study. The student must first write a proposal detailing the goals of the project, and then find a faculty sponsor to supervise the project. The results of the research are then detailed in a final report. The credit to be awarded, 1/4 or 1/2, must be agreed upon prior to taking the course by the student, Faculty Sponsor, Department Head and Academic Dean.
International Student Programs

Anna Bryant, International Student Life Coordinator
The purpose of the International Student Program is to provide academic and personal support to students who come from different cultures and whose native language is not English. The program also recognizes the special contributions of international students.

At the beginning of the academic year, the new international students attend an orientation program designed to help them adapt to the academic and social expectations of Cranbrook Kingswood School. Arriving a few days before the other students allows new international students an opportunity to recover from extensive travel and begin to adjust to American culture.

Recognizing that the presence of international students broadens the entire school community, various activities throughout the year provide an opportunity for the students representing various countries to share their cultures with the rest of the school. The World Club, a student organization for both international and American students, sponsors all-school and club events for this purpose.

The School provides some assistance with visas, special registrations, and travel planning. Departing early or returning late from vacations is highly discouraged.

English for Speakers of Other Languages (ESOL)

Anna Bryant, Academic Coordinator
As part of the International Student Program, classes are available for students who need English language support. These classes promote English skills as well as multicultural thinking and an understanding of American culture. They are required for students whose Test of English as a Foreign Language (TOEFL) scores, previous academic record, previous experience in English and personal interview with the coordinator indicate a need to further develop academic English proficiency.

Placement into classes is determined by grade level, test scores, English Department recommendation and the coordinator’s assessment.

English for Speakers of Other Languages (ESOL) Bryant
1010 Full Year 1 9-11
This is a course for entering international students who place at a high-intermediate English proficiency level. The class emphasizes reading, writing and vocabulary development. It also practices using spoken English in academic and social settings. Activities include journal writings, extensive use of new vocabulary, formal and informal speech presentations, sentence and paragraph generation and the organization and revision of essays. Writing activities build upon life experience, content courses, interviews and class presentations. Students practice active reading strategies and employ a variety of skills to improve reading comprehension. Selected readings reflect American culture as well as life in a multicultural world.

Writing and Vocabulary Development for Non-Native Speakers of English Bryan
1020 Full Year 1 10-12
This class is for entering and returning 10th, 11th and 12th grade international students. Class activities emphasize advanced development of vocabulary and writing skills yet also require improvement in the range, frequency and quality of classroom participation. Activities include extensive use of new words to create increasingly complex sentences and cohesive paragraphs, application of library research skills, presentations and peer reviews of student writings. Students work on writing and revising papers assigned in this and other courses. Writing tasks range from the informal journal to the formal essay.
This department offers multi-dimensional courses that cross the boundaries of traditional disciplines.

Research Seminar in the Humanities H
9300  Full Year  12
Dept.  Rec.
This course introduces students to collegiate level learning in the humanities. With the help of the instructor, students learn to create, develop, and execute their own major project over the course of the year. Depending on the student’s interests and academic plans, projects can range from an art and/or performance-based project to more traditional research projects. With projects given by student, each requires a substantial written component. The project culminates in an oral defense to the class and instructor. With the assistance of the instructor, each student finds and utilizes an expert consultant to consult on their specific project. In addition to the oral defense, assessment consists of quizzes, tests, and papers, aimed at completing the student’s project. The required texts are Rebecca Moore Howard’s Writing Matters and Cal Newport’s Deep Work.

Start-up Entrepreneurship*
9401  Sem 1  1/2
Arida
What does it take to launch a social impact initiative or for-profit business? This course answers this question and teaches students the principles of entrepreneurship. Students learn to be flexible and collaborative problem solvers, whether they wish to launch a new business venture or apply entrepreneurial strategies to an existing enterprise. Hands-on action-oriented activities, based on IDEO design thinking and the Lean LaunchPad-Business Model Canvas, provide the structure for students to incubate their own business ideas or help a local startup tackle a real-world problem. Students also study the foundations and definitions of entrepreneurship including types of entrepreneurship, profiles of entrepreneurs, and myths associated with entrepreneurship. Students are assessed on projects that involve creating or identifying an opportunity, building a team, and acquiring the resources to create something of economic or social value. For the final grade, teams select one of their prototypes to develop into a professional business plan and pitch deck to be judged by a panel of local entrepreneurs. This course interacts with the vibrant startup culture in the Greater Detroit area. Students will be expected to attend occasional field trips after school to visit startups and incubators in the Greater Detroit area.

The Human Question: Defining Humanity in a Digital Age*
9411  Sem 1  1/2
Reed
9412  Sem 2  1/2
Dept. Rec.
“What does it mean to be human?” This class gives students the opportunity to ask, and answer, this question through a multi-disciplinary investigation. We begin by creating our own conception of what it means to be “human” by collaboratively exploring conceptions of humanity through a variety of lenses. From this understanding, we then bridge into an investigation of technology, and the ways in which it has been pushed to seem “human,” especially with “A.I.” In doing so, we investigate how this overlap alters the ideas we've already established about our humanity and where this trend could take us in the future. The final segment of the course gives each student an opportunity to further investigate an area or topic of interest through an independent research project. Materials for the class are digital texts or media (articles, films-clips, studies, stories etc.) that are chosen and distributed by the instructor. Assessments throughout the course will include, but may not be limited to, quizzes, tests, short writing assignments, and an independent research project and presentation. This final project constitutes the exam for the class.
Athletic Programs and Co-Curricular Activities
Participation in the Upper School’s athletic program is an integral part of each student’s day at Cranbrook Kingswood. Students’ growth and development are enhanced through involvement in activities which promote teamwork, self-discipline, commitment, and physical fitness. The program is varied to accommodate a wide range of student interests and abilities.

Interscholastic sports occur over three seasons each school year (fall, winter, and spring) and encourage the student-athlete to develop their skills as they participate at a high level of competition. Interscholastic student-athletes learn the importance of commitment to teamwork and team play through team practices that meet daily for approximately two hours. NOTE: team travel and competitions require an additional significant time commitment.

Intramural sports occur over four, seven week sessions each school year (fall, winter I, winter II, and spring) and allow the student to develop skills while playing in a less competitive atmosphere meeting for four hours each week.

Co-curricular Activities occur over four, seven week sessions each school year (fall, winter I, winter II, and spring) and allow the student to participate in a non-athletic activity for four hours each week.

When students enroll at Cranbrook Kingswood Upper School, they are committing themselves to the full school program. Therefore, it is the School’s expectation that students will complete their credits obligation.

Graduation Requirement: Cranbrook Kingswood Upper School students are required to earn a number of athletic credits. Each season or session earns one credit. The total number of credits required for graduation and the suggested number of credits to be earned in a particular school year are listed below. For the student entering Cranbrook Kingswood in the:

Ninth grade: eight credits total, three completed during this school year
Tenth grade: five credits total, three completed during this school year
Eleventh grade: two credits total, both completed during this school year
Twelfth grade: none

Although credits may be earned during the senior year, it is recommended that this graduation requirement be completed by the end of the student’s junior year.

Credits: Although it is possible for the student to participate in four sessions, the student can only earn a maximum of three credits in any given school year. Intramural and Co-curricular session credit is based on 75% attendance and completion of the session. Interscholastic season credit is determined by the head coach of each sport.

Waivers: A student may apply for an athletic waiver for off-campus activities (ex: off-season club sports, martial arts, equestrian, etc.) or for extenuating circumstances that prevent participation (medical restrictions/injury. NOTE: must be accompanied by a medical physician’s note). The waiver form must be completed and approved by the athletic department before the session begins. Waiver activity requirements are the same as that for Intramural or Co-Curricular Activities and must be supervised. Waivers for competitive sports teams (club) will not be granted during an interscholastic sport season where Cranbrook Kingswood fields that sport.

Co-curricular Activities
Listed below are the approved activities that may be substituted for interscholastic or after-school credit each year. Credit is based upon the time committed to the activity.

Drama (3 possible per year), Speech and Debate, Michigan Youth in Government, Model UN, Newspaper Associate Editors and Editors-in-Chief, Robotics (two possible per year), Wilderness Prep, Yearbook Editors-in-Chief.

After-School Activities
Activities meet three or four days per week for seven weeks for at least four hours per week. The following sports and activities are options that are frequently offered.

Athletics

Interscholastic Sports

Boys
Cross Country, Varsity, J.V.
Figure Skating, Varsity
Football, Varsity, J.V.
Soccer, Varsity, J.V., J.V.B.
Skiing, Varsity, J.V.
Swimming, Varsity

Girls
Cross Country, Varsity, J.V.
Field Hockey, Varsity, J.V.
Golf, Varsity, J.V.
Swimming, Varsity
Volleyball, Varsity, J.V., Fr.

Fall Season

Boys
Basketball, Varsity, J.V., Fr.
Ice Hockey, Varsity, J.V.

Girls
Basketball, Varsity, J.V.
Figure Skating, Varsity
Ice Hockey, Varsity
Skiing, Varsity, J.V.

Winter Season

Boys
Crew, Varsity, J.V.
Baseball, Varsity, J.V.
Golf, Varsity, J.V.
Lacrosse, Varsity, J.V.
Sailing, Varsity

Girls
Crew, Varsity, J.V.
Lacrosse, Varsity, J.V.
Sailing, Varsity
Softball, Varsity
Tennis, Varsity, J.V.
Track & Field, Varsity, J.V.

Spring Season

Boys
Crew, Varsity, J.V.
Baseball, Varsity, J.V.

Girls
Crew, Varsity, J.V.
Lacrosse, Varsity, J.V.
Sailing, Varsity
Softball, Varsity
Tennis, Varsity, J.V.
Track & Field, Varsity, J.V.
**LIBRARY**

The Cranbrook Kingswood Upper School Library has major spaces and collections on both the Kingswood and Cranbrook campuses. The Library provides students, faculty, and staff with rich resources for the pursuit of curricular and academic interests, a Makerspace in which to create, invent, and learn, as well as beautiful areas to encourage collaborative work, and for quiet study, reading, and reflection.

The library program focuses on the introduction and instruction of new technology tools and the use of library resources in support of each department’s research assignments. Emphasis is placed on teaching the methods of successful research strategies using a multitude of resources available for student use, as well as teaching new technology media to create and present research outcomes. Research instruction, assistance, and production is emphasized in the Kingswood Campus Library and technology media instruction and experimentation is emphasized in the Cranbrook Campus Library.

In collaboration with the faculty, the library supports the curriculum through a rich collection of print and online resources and instruction of skills and media to enhance a variety of research projects. The library adheres to a strong commitment of supporting diversity through the collections, displays, and programming.

In addition to the print and ebook collections accessed through the online library catalog, the following online resources are available through CranNet: *CQ Researcher* and *CQ Researcher Plus Archive; Culture Grams; Gale Virtual Reference Library; Heritage Quest; JSTOR; Literature Resource Center; Michigan eLibrary; ProQuest Current and Historical Newspapers; Oxford African-American Studies Center; Oxford English Dictionary; Oxford Art Online; World Book Encyclopedia, Global Issues in Context and the ABC-CLIO databases on American and World History.

**OFF-CAMPUS PROGRAMS**

**Wilderness Expedition**

The Wilderness Expedition is an 11-day backpacking and wilderness camping trip for sophomores that takes place in the rugged Smoky Mountains in the Nantahala and Cherokee National Forests along the North Carolina-Tennessee border. Participants are organized into crews of 7 students and accompanied by two adult leaders and a student leader. During the Expedition, each crew is introduced to an exciting and rugged wilderness environment through activities such as wilderness travel and back country camping. The emphasis is on developing in the student positive attitudes towards challenging situations while teaching specific outdoor skills. In this environment students are challenged to learn necessary basic skills, to accomplish collective tasks, and to meet the physical demands made on them by the environment.

Since 1970 the Schools have encouraged sophomores to become members of the “Tennessee Trip,” an important and valuable part of the 10th grade year. The cost of the expedition depends on the number of participants.

The Wilderness Expedition takes place during the second and third weeks of March. Students who take part in the program are expected to participate in Wilderness Prep during the winter sports season, unless involved in interscholastic sports.

Since the Wilderness Expedition takes place during the academic year and classes will continue as usual, those participating in Wilderness can expect to make up missed work at the discretion of the instructor.

**Senior May Project**

The Senior May Project allows qualified Senior students to participate in experiential projects outside the School community, during the last weeks of the academic year. In-depth development of long-standing skills and interests, serious exploration of possible career choices, or the acquisition of technical proficiency in a new field are encouraged. Interested Seniors must submit a written proposal to the Senior May Project Committee by a specified time in. All school work must be completed before the student starts the project in mid-May. Guidelines and description of the program and forms for application are made available on CranNet.

All Seniors are eligible to pursue a May Project, with the following qualifications and expectations:

**Academic Standing:** No student may do a Project who has a final grade lower than a C-. This applies to senior full-year courses and to senior second semester electives.

**Athletic Requirements:** Players in spring varsity sports are expected to complete the season.

**Performing Arts Requirements:** Students are expected to meet rehearsal and attendance obligations for spring concerts.

**Conduct Probation:** Seniors who have been placed on probation for a time period that extends into the Project time must submit a written petition to the Senior Administration Team for approval to pursue a Senior May Project. The petition should include a copy of their Final Project Proposal.

**Disciplinary Action,** after Project approval, will result in possible forfeiture of the opportunity to do the Project. The Campus Deans, in conjunction with the Head of the Upper School, will determine if the School’s discipline action would disallow a student from pursuing or continuing a Project.

**Suspended Students** will not be allowed to pursue their Project. They will return to their full class schedule following the suspension to complete requirements for their diploma.

**A Grade of Pass/Fail** will be assigned to each Project and will be recorded on the Senior’s final transcript. The final grade will be based on these five components: attendance in accordance with school requirements, evaluation by the Project supervisor, quality of the Abstract, the Senior’s Blog, and Summary Paper, and meeting all contractual deadlines, including daily updates to the Senior’s Blog.

If for any reason a Project is canceled, the student is expected to return to his/her second semester schedule.

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**Wilderness Expedition**

The Wilderness Expedition is an 11-day backpacking and wilderness camping trip for sophomores that takes place in the rugged Smoky Mountains in the Nantahala and Cherokee National Forests along the North Carolina-Tennessee border. Participants are organized into crews of 7 students and accompanied by two adult leaders and a student leader. During the Expedition, each crew is introduced to an exciting and rugged wilderness environment through activities such as wilderness travel and back country camping. The emphasis is on developing in the student positive attitudes towards challenging situations while teaching specific outdoor skills. In this environment students are challenged to learn necessary basic skills, to accomplish collective tasks, and to meet the physical demands made on them by the environment.

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<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Position/Field</th>
<th>Alma Mater</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vickie Abbott</td>
<td>2018</td>
<td>Cranbrook Campus Nurse</td>
<td>Oakland Community College, A.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delta Community College, A.S.</td>
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<tr>
<td>Rachel Applebaum</td>
<td>2013</td>
<td>English</td>
<td>University of Michigan, B.A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University of Michigan - Dearborn, M.A.</td>
<td></td>
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<tr>
<td>Sarah Appleton Pine</td>
<td>2016</td>
<td>English</td>
<td>University of California, Santa Barbara, B.A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western Washington University, M.F.A.</td>
<td></td>
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<tr>
<td>Julio Aravena</td>
<td>1995</td>
<td>World Languages</td>
<td>Catholic University of Chile, B.S.</td>
</tr>
<tr>
<td>Holly Arida</td>
<td>2002</td>
<td>Global Programs Coordinator</td>
<td>University of Michigan, B.A., M.A.</td>
</tr>
<tr>
<td></td>
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<td>History/Social Science</td>
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<tr>
<td>Audrey Armoudlian ('86)</td>
<td>2002</td>
<td>Science</td>
<td>Tufts University, B.S., M.S.</td>
</tr>
<tr>
<td>Sheila Bailey</td>
<td>2012</td>
<td>Associate Dean, College Counseling</td>
<td>Eastern Michigan University, B.S.</td>
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<tr>
<td>Amy Barker</td>
<td>2018</td>
<td>World Languages</td>
<td>University of Michigan, B.A., M.A.</td>
</tr>
<tr>
<td>Lynn Bennett-Carpenter</td>
<td>2003</td>
<td>Fine Arts</td>
<td>Wheaton College, B.A.</td>
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<td></td>
<td>University of Colorado, B.F.A.</td>
<td>Cranbrook Academy of Art, M.F.A.</td>
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<tr>
<td>Katie Bis</td>
<td>2017</td>
<td>Robotics Program Manager</td>
<td>University of Michigan, B.A., B.S.</td>
</tr>
<tr>
<td>Richard Bowdy</td>
<td>1984</td>
<td>World Languages</td>
<td>Western Michigan University, B.A.</td>
</tr>
<tr>
<td></td>
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<td>Wayne State University, M.A.</td>
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<tr>
<td>Anna Bryant</td>
<td>2017</td>
<td>University of Illinois, B.A.</td>
<td>Concordia University, M.A.</td>
</tr>
<tr>
<td>Christopher Bryant</td>
<td>2011</td>
<td>History/Social Science</td>
<td>University of Chicago, B.A.</td>
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<tr>
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<td></td>
<td>University of Wisconsin, M.S.T.</td>
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<td>Angelita Castaño</td>
<td>2019</td>
<td>Dean of Girls</td>
<td>Grand Valley State University, B.A.</td>
</tr>
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<td></td>
<td></td>
<td>Grand Valley State University, M. Ed.</td>
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<tr>
<td>Gail Chun</td>
<td>1999</td>
<td>Academic Dean, Grades 11 and 12</td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GMII Engineering &amp; Management Institute, B.S.</td>
<td>Oakland University, M.S.</td>
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<tr>
<td>David Cohen ('90)</td>
<td>2005</td>
<td>Mathematics</td>
<td>University of Michigan, B.S.E.</td>
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<tr>
<td></td>
<td></td>
<td>Northwestern University, Ph.D.</td>
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<tr>
<td>Allwyn Cole</td>
<td>2004</td>
<td>Science</td>
<td>Grand Valley State University, B.A.</td>
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<td></td>
<td></td>
<td>University of Michigan, Ph.D.</td>
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<tr>
<td>Russell E. Conner</td>
<td>1970</td>
<td>Science</td>
<td>Michigan State University, B.S., M.S.</td>
</tr>
<tr>
<td>Miranda Crowl</td>
<td>2009</td>
<td>English</td>
<td>Hamilton College, B.A.</td>
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<td></td>
<td></td>
<td>University of Maryland, M.A.</td>
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<tr>
<td>Thomas DeCraene</td>
<td>1986</td>
<td>Assistant Director of Schools</td>
<td>University of Wisconsin, B.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lawrence Technological University, M.E.T.</td>
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<tr>
<td>Daniel E. Dobrovich</td>
<td>2012</td>
<td>Performing Arts</td>
<td>Eastern Michigan University, B.A.</td>
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<tr>
<td>Troy Dostert</td>
<td>2005</td>
<td>History/Social Science</td>
<td>University of California – San Diego, B.A.</td>
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<tr>
<td></td>
<td></td>
<td>Duke University, M.A., Ph.D.</td>
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<td>Noël Dougherty</td>
<td>2016</td>
<td>Upper School Head</td>
<td>Boston College, B.A.</td>
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<td></td>
<td></td>
<td>Northeastern University, M.Ed.</td>
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<tr>
<td>Leah Duncan</td>
<td>2018</td>
<td>World Languages</td>
<td>Wayne State University, B.A.</td>
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<tr>
<td>Hunter Dunn</td>
<td>2010</td>
<td>Department Head - English</td>
<td>Swarthmore College, B.A.</td>
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<tr>
<td></td>
<td></td>
<td>St. John's College, M.A.</td>
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<tr>
<td>Neda Ebrahimimi</td>
<td>2018</td>
<td>Lead Counselor/Learning Consultant</td>
<td>Hunter College, B.A.</td>
</tr>
<tr>
<td>Farah El Barake</td>
<td>2017</td>
<td>Lebanese University, B.A.</td>
<td>Saint-Joseph University, M.A.</td>
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<tr>
<td>Carolyn Esquivel</td>
<td>2001</td>
<td>World Languages</td>
<td>Indiana University, B.A.</td>
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<td></td>
<td></td>
<td>Southern Oregon University, M.A.</td>
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<tr>
<td>Shane Finney</td>
<td>1996</td>
<td>Assistant Athletic Director</td>
<td>Eastern Michigan University, B.S.</td>
</tr>
</tbody>
</table>
Corrie Furry  
Learning Support Services  
Huntington University, B.S.  
University of Dayton, M.A.  
2019

Tim Furry  
Chaplain  
Religion and Philosophy  
Huntington University, B.S.  
Asbury Theological Seminary, M.A.  
University of Dayton, Ph.D.  
2012

James Gabriel  
Performing Arts  
Youngstown State University, B.A.  
University of Notre Dame, M.A.  
2010

Michael German  
English  
Marietta College, B.A.  
University of Michigan – Flint, M.A  
2008

Pamela German  
History/Social Science  
St. Mary’s College, B.A.  
Eastern Michigan University, M.S  
2016

Karen Gomez  
Director of Wellness  
Wayne State University, BSW, MSW, MSA  
2019

Stephen Graf  
Athletic Director  
California Lutheran College, B.A.  
West Texas A&M University, M.S.  
2009

Anna Green  
English  
University of Michigan, B.A.  
Michigan State University, M.A.  
2016

Robert Greene  
Science  
University of New Hampshire, B.S.  
University of Bridgeport, M.S.  
1982

Matt Gump  
Science  
Hope College, B.A.  
Grand Valley State, M.Ed.  
1997

William Hancock  
Associate Dean, College Counseling  
Union College, B.A.  
Edinboro University of Pennsylvania, M.A.  
1998

Erika Hansinger  
Academic Dean, Grades 9 & 10  
History/Social Science  
Grand Valley State University, B.A.  
Wayne State University, M.A.  
1998

Jacob Hazard  
Dean of Faculty  
Computer Science  
Northwestern University, B.A.  
Teachers College Columbia University, M.A.  
2013

Brent Heard  
World Languages  
Head House Advisor, Cranbrook Campus  
University of Richmond, B.A.  
University of Wisconsin, M.A.  
2005

Tracie Hightower  
Library Instructional Technologist  
Fisk University, B.A.  
Wilkes University, M.S.  
2013

Frederick Higgins  
Science  
Eastern Michigan University, B.S., M.S.  
1988

Colin Hinde  
Mathematics  
Carnegie Mellon University, B.S.  
University of California, Los Angeles, Ph.D.  
2015

Mark Hourigan  
Department Head - Performing Arts  
Western Michigan University, B.M., M.M.  
2019

Kristen Hurd  
Performing Arts  
Michigan State University, B.M.  
Southern Oregon University, M.M.  
2016

Harrison Hwang  
Mathematics  
The Chinese University of Hong Kong, B.S., M.A.  
Michigan State University, M.A.  
2016

Renee Jenuwine  
Registrar  
University of Michigan, B.A.  
George Washington University, M.P.A.  
2014

Julie Kang  
English  
Pomona College, B.A.  
University of Chicago, M.A.  
2008

Mark Karinen  
Department Head - History/Social Science  
Eastern Michigan University, B.S.  
Wayne State University, M.Ed.  
2011

Kelly Katz  
Mathematics  
Purdue University, B.A.  
2016

Bruce Kohl  
Science  
University of Michigan, B.S.E.  
Michigan State University, M.A.  
1998

Stephanie Kokoszka  
Science  
Lake Superior State University, B.A.  
Wayne State University, PhD.  
2016

Gary Kulak  
Department Head – Fine Arts  
Cranbrook Academy of Art, B.F.A.  
Hunter College, M.F.A.  
2005
### FACULTY AND ADMINISTRATION

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Department</th>
<th>Institution 1</th>
<th>Institution 2</th>
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<tr>
<td>James Ladd</td>
<td>1983</td>
<td>Mathematics</td>
<td>Alma College, B.A.</td>
<td>University of Detroit, M.A.</td>
<td></td>
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<tr>
<td>Eric R. Lorey</td>
<td>2000</td>
<td>Department Head – Religion and Philosophy</td>
<td>Kalamazoo College, B.A.</td>
<td>Université de Clermont-Ferrand, D.S.F.</td>
<td>University of Michigan, M.A.</td>
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<tr>
<td>Jo Jo Macey</td>
<td>1981</td>
<td>Fine Arts</td>
<td>Indiana University of Pennsylvania, B.S., Art Ed.</td>
<td>Cranbrook Academy of Art, M.F.A.</td>
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<tr>
<td>Katherine Lorts</td>
<td>1980</td>
<td>Performing Arts</td>
<td>Michigan State University, B.M.Ed.</td>
<td>Wayne State University, M.M.Ed.</td>
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<tr>
<td>Daniel Lorts</td>
<td>2013</td>
<td>Science</td>
<td>University of Michigan, B.A.</td>
<td>Oakland University, M.A.</td>
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<tr>
<td>Joanne Parker</td>
<td>2004</td>
<td>History/Social Science</td>
<td>Marquette University, B.A.</td>
<td>Universite de Paris – Sorbonne, D.E.A.</td>
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<tr>
<td>William Pistner</td>
<td>2009</td>
<td>English</td>
<td>University of Virginia, B.A.</td>
<td>Yale University, M.A.R.</td>
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<td>Patrick O’Connor</td>
<td>2012</td>
<td>Associate Dean, College Counseling</td>
<td>Michigan State University, B.A., B.S., M.A., Ph.D.</td>
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<td>Joann Robenerger</td>
<td>2018</td>
<td>Dean of Boys</td>
<td>Minnesota State University, B.A.</td>
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<td>Karl Mathieu</td>
<td>2003</td>
<td>Mathematics</td>
<td>University of Michigan, B.A.</td>
<td>Eastern Michigan University, M.A.</td>
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<tr>
<td>Laurie Pullen</td>
<td>2004</td>
<td>Coordinator of Connected Learning</td>
<td>University of Michigan, B.A.</td>
<td>M.L.S.</td>
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<tr>
<td>Jeremy Rahn</td>
<td>2011</td>
<td>Instructional Technology Coordinator/ Theatre Technical Director</td>
<td>Michigan Technological University, B.S.</td>
<td></td>
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<td>Chris Rainwater</td>
<td>2006</td>
<td>English</td>
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