COURSE CATALOG
2017-2018
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Introduction

Whenever minimum enrollment requirements are satisfied and Academy resources allow, the courses described in this catalog are offered. Information contained in course descriptions is subject to change in accord with the procedures for curriculum revision outlined in Curriculum and Academic Policies and Procedures of the Indiana Academy for Science, Mathematics, and Humanities.

Definitions

Course Title Codes  Refers to the type of course:

- **CL** College Level – Uses a college textbook and syllabus
- **CP** College Prep – Uses a high school textbook and syllabus
- **DC** Dual Credit – available for Ball State University credit (see page ii)
- **XC** Exploratory Course – studies a specific topic and is a mixture of high school and college levels

Prerequisite  refers to a course or demonstrated knowledge that is required prior to course enrollment.

Co-requisite  refers to courses that are required concurrently.

Credit  refers to the successful completion of a one-semester course that meets as a class a minimum of one hundred and fifty minutes per week.

Permission of Instructor  refers to enrollment after review of transcripts and other relevant information by the course instructor.

Placement  refers to enrollment after review of transcripts and other relevant information by the Director of Academic Affairs, the appropriate academic division chair, or their designees.
Dual Credit Courses (designated as “DC” in the course catalog descriptions) are Indiana Academy courses taught by Academy instructors and have been recognized as equivalent to a Ball State University course. Students who enroll for dual credit may request a transcript from Ball State University which can be transferred to any college or university that accepts BSU credits. Students are responsible for the special dual credit tuition fee. The tuition fee for dual credit varies according to the course. In the list on page iii, all courses underlined will cost $25 per college credit hour. These courses are on the state core library list for automatic transfer between Indiana Universities and colleges. The tuition for all courses listed in italics is $250.00 per course. All tuition fees are waived for students who are on free and reduced lunch. Applications, directions for enrollment, and other information on dual credit courses can be obtained from the Guidance Office.

**Important items to keep in mind**

1. Fall semester enrollment will take place during the first two weeks of the semester. Enrollment for spring dual credit courses will take place in late January. You must enroll during these times if you wish to receive dual credit.

2. Dual credit courses indicated with an asterisk ( * ) are the second course in a two semester sequence. Students must enroll in the fall in the first course of the sequence in order to qualify for dual credit in the spring semester. Students must enroll and pay another tuition fee for the second course in the sequence at the start of the spring semester.

3. Courses labeled “enroll in spring only” have two semesters of the Academy classes to equal one semester of the BSU class. Enrollment is done in the second semester of the Academy class. Final dual credit grade is an average between the two semesters of the Academy class.

4. Actual courses available for dual credit are subject to change. Check with the Guidance Office for the most current list of courses.
<table>
<thead>
<tr>
<th>Academy course number and title</th>
<th>Ball State University course</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRN101/102 French I</td>
<td>4 cr. hrs. per semester in FR 101 and 102*</td>
</tr>
<tr>
<td>FRN201/202 French II</td>
<td>3 cr. hrs. in FR 201 (enroll spring only)</td>
</tr>
<tr>
<td>FRN301/302 French III</td>
<td>3 cr. hrs. in FR 202 (enroll spring only)</td>
</tr>
<tr>
<td>GER101/102 German I</td>
<td>4 cr. hrs. per semester in GER 101 and 102*</td>
</tr>
<tr>
<td>GER201/202 German II</td>
<td>3 cr. hrs. in GER 201 (enroll spring only)</td>
</tr>
<tr>
<td>JAP101/102 Japanese I</td>
<td>4 cr. hrs. in JP 101 (enroll spring only)</td>
</tr>
<tr>
<td>SPN102A/B Spanish I</td>
<td>4 cr. hrs. in SPN 102 (enroll spring only)</td>
</tr>
<tr>
<td>SPN201/202 Spanish II</td>
<td>3 cr. hrs. in SPN 201 (enroll spring only)</td>
</tr>
<tr>
<td>SPN301/302 Spanish III</td>
<td>3 cr. hrs. in SPN 202 (enroll spring only)</td>
</tr>
<tr>
<td>SOC201 American History I</td>
<td>3 cr. hrs. in HIST 201: US 1492-1876</td>
</tr>
<tr>
<td>SOC202 American History II</td>
<td>3 cr. hrs. in HIST 202: US 1877-Present</td>
</tr>
<tr>
<td>SOC05130 West in the World</td>
<td>3 cr. hrs. in HIST 150 (spring only)</td>
</tr>
<tr>
<td>MAT04005 Calculus</td>
<td>3 cr. hrs. in MATH 132 (fall only)</td>
</tr>
<tr>
<td>MAT04123/04124 AP Calculus AB</td>
<td>4 cr. hrs. in MATH 165 (enroll spring only)</td>
</tr>
<tr>
<td>MAT04133/04134 AP Calculus BC</td>
<td>4 cr. hrs. per semester in MATH 165 and 166*</td>
</tr>
<tr>
<td>MAT04514 Statistics</td>
<td>3 cr. hrs. in MATH 181 (available fall &amp; spring)</td>
</tr>
<tr>
<td>MAT04515 Quantitative Reasoning</td>
<td>3 cr. hrs. in MATH 125 (available fall &amp; spring)</td>
</tr>
<tr>
<td>MAT04825 AP Statistics</td>
<td>3 cr. hrs. in MATH 181 (spring only)</td>
</tr>
<tr>
<td>MAT04832 Linear Algebra</td>
<td>4 cr. hrs. in MATH 217 (fall only)</td>
</tr>
<tr>
<td>MAT04833 Multivariable Calculus</td>
<td>4 cr. hrs. in MATH 267 (fall only)</td>
</tr>
<tr>
<td>MAT04834 Differential Equations</td>
<td>3 cr. hrs. in MATH 374 (spring only)</td>
</tr>
<tr>
<td>CMP04202 Visual Programming</td>
<td>4 cr. hrs. in CS 120 (spring only)</td>
</tr>
<tr>
<td>CMP04501/4502 AP Computer Sci. A 1, 2</td>
<td>4 cr. hrs. in CS 121 (enroll spring only)</td>
</tr>
<tr>
<td>BUS0110 Personal Finance</td>
<td>3 cr. hrs. in FIN 110 (available fall &amp; spring)</td>
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<td>SCI03201/03202 General Chemistry 1, 2</td>
<td>3 cr. hrs. in CHEM 100 (enroll in spring only)</td>
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<tr>
<td>SCI04204/04205 AP Chemistry</td>
<td>4 cr. hrs. per semester in CHEM 111 and 112*</td>
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<tr>
<td>SCI04209 Intro to Organic &amp; Biochem.</td>
<td>5 cr. hrs. in CHEM 101 (spring only)</td>
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<tr>
<td>SCI04301/04302 AP Biology</td>
<td>4 cr. hrs. per semester in BIO 111 and 112*</td>
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<tr>
<td>SCI04304 Microbiology</td>
<td>5 cr. hrs. in BIO 113 (spring only)</td>
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<tr>
<td>SCI04328 AP Environmental Science</td>
<td>3 cr. hrs. in NREM 101 (enroll in spring only)</td>
</tr>
<tr>
<td>SCI03101/03102 General Physics 1, 2</td>
<td>3 cr. hrs. in PHYC 100 (enroll in spring only)</td>
</tr>
<tr>
<td>SCI03111/03112 AP Physics I</td>
<td>4 cr. hrs. in PHYC 110 (enroll in spring only)</td>
</tr>
<tr>
<td>SCI04102/04103 AP Physics C</td>
<td>5 cr. hrs. per semester in PHYC 120 and 122*</td>
</tr>
<tr>
<td>SCI04406 The Solar System</td>
<td>3 cr. hrs. in ASTR 100 (fall only)</td>
</tr>
<tr>
<td>SCI04407 Galactic Astronomy</td>
<td>3 cr. hrs. in ASTR 120 (spring only)</td>
</tr>
</tbody>
</table>

* Enrollment in the first course is a prerequisite for enrollment in the second course.
What is an AP Class?
A number of Indiana Academy classes have been approved through an audit process by The College Board to use the label AP or Advanced Placement. These courses are designated as “AP” in the course catalog descriptions. The Academy offers all available AP Science and AP Math courses. Further information about the AP Program can be obtained at http://apcentral.collegeboard.com.

AP and College Credit
Starting with the 2011 Advanced Placement (AP) exams, students who earn a score of 3 or higher shall receive college credit toward their degree if they attend any Indiana public institution of higher education; this includes all two- and four-year schools and any accompanying satellites.

Ball State University Courses
Substitutions
Students are expected to complete their graduation requirements by enrollment in Academy classes whenever possible. When an Academy class for a graduation requirement cannot be scheduled due to a conflict, the student may request permission to substitute the credit by auditing an appropriate Ball State University course. All BSU course substitutions must be approved through the Guidance Office and the Director of Academic Affairs. The audit fee will be covered by the Academy.

Electives
Indiana Academy students are also provided an opportunity to apply for enrollment in elective Ball State University classes. The student may enroll for college credit at the full BSU tuition rate, or they may audit the course for high school credit. The student is responsible for all fees and course expenses for BSU elective courses. See the Student Handbook for more detailed information about taking Ball State University courses.

Questions concerning enrolling in Ball State University classes or Audit Fee procedures should be directed to the Guidance Office.

Credit
The following conversion rates will be used for the purpose of converting college level credit to Indiana Academy credit:

<table>
<thead>
<tr>
<th>University Credit Hours</th>
<th>Academy Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.50</td>
</tr>
<tr>
<td>2</td>
<td>0.75</td>
</tr>
<tr>
<td>3 (3 days/week)</td>
<td>1.00</td>
</tr>
<tr>
<td>3 (4 days/week)</td>
<td>1.25</td>
</tr>
<tr>
<td>4</td>
<td>1.25</td>
</tr>
<tr>
<td>5</td>
<td>1.50</td>
</tr>
</tbody>
</table>

Audit Credit to BSU Credit
Indiana Academy students who matriculate to Ball State University for the Freshman year after graduation have the ability to convert all BSU courses taken for audit while a student at the Indiana Academy to regular BSU credit. The grade received for the course on the Indiana Academy transcript will be used as the BSU course grade. Appropriate fees may apply.
GRADUATION REQUIREMENTS

Graduating Classes of 2018 and 2019 (26.5 Academy Credits required)

High School Substitutions
Courses that are not taught at the Indiana Academy which would have traditionally been taken by students as 9th or 10th graders may be taken during summer school or through other arrangements. These classes include but are not limited to: PE, Health, Fine Arts, Geometry, Algebra II, and World Civilization/World History. Approval for these substitutions should be arranged with the Academy Guidance Office.

Science: 6 Credits Required
2 credits in each two-semester sequence of General Biology, General Chemistry, and General Physics, or equivalent college preparatory courses as determined by the Science Division Chair.
4 credits in Laboratory Sciences must be from the Academy.

Math: 8 Credits Required
4 credits must be from the Academy.

English: 8 Credits Required
4 credits must be from the Academy:
1 credit in American Literature (Fall Semester of Junior Year),
1 credit in World Literature (Spring Semester of Junior Year), and
2 elective credits from the Academy.

Social Science: 6 Credits Required
4 credits must be from the Academy:
Must have 3 credits in History (Foundations of the American Experience, American History 1 and American History 2), as well as
1 elective credit from the Academy.

World Languages: 6 or 8 Credits Required
If taking 1 language, a student must successfully complete 6 credits, including the Academy 302 course, in that language. Students entering the Academy with 3 years of a language may meet this requirement by demonstrating third year proficiency on a national test.
If taking 2 languages, a student must earn a total of 8 credits with 4 credits in each language. For languages taken at the Academy to meet this requirement, the credits must include the successful completion of the Academy 202 course.

Fine Arts: 2 Credits Required
Can be obtained from home high school or Academy.

Health: 1 Credit Required
Can be obtained from home high school or Academy (BSU course).

Phys. Ed.: 2 Credits Required
Can be obtained from home high school or Academy (BSU course).

Computing: 0.5 Credit Required
Must take CMP03301 at the Academy or test out by placement.
Research: 1 Credit Required  
Must be obtained while attending the Academy.

Colloquium: 1 Credit Required  
.5 credit Junior year.  
.5 credit Senior year.  
Must be obtained while attending the Academy.

May Term: 1 Credit Required  
.5 credit Junior year.  
.5 credit Senior year.  
Must be obtained while attending the Academy.

Minimum Credits a student must carry per semester is 5.5.

Graduating Classes of 2020 and 2021 (Class of 2019 Opt-In / 26.5 Academy Credits)

High School Substitutions
Courses that are not taught at the Indiana Academy which would have traditionally been taken by students as 9th or 10th graders may be taken during summer school or through other arrangements. These classes include but are not limited to: PE, Health, Fine Arts, Geometry, Algebra II, and World Civilization/World History. Approval for these substitutions should be arranged with the Academy Guidance Office.

Science: 6 Credits Required  
2 credits in each two-semester sequence of General Biology, General Chemistry, and General Physics, or equivalent college preparatory courses as determined by the Science Division Chair.  
4 credits in Laboratory Sciences must be from the Academy.  
A student may petition to have a previous laboratory science course accepted to replace a laboratory science course that would otherwise be taken here.

Math: 8 Credits Required  
2 credits in Algebra 1, 2 credits in Geometry, 2 credits in Algebra 2, and 2 credits in courses beyond Algebra 2.  
3 credits must be from the Academy.  
At least one credit in mathematics must be earned each year.

English: 8 Credits Required  
3 credits must be from the Academy:  
1 credit in American Literature (Fall Semester of Junior Year),  
1 credit in World Literature (Spring Semester of Junior Year), and  
1 elective credit from the Academy.

Social Studies: 6 Credits Required  
3 credits must be from the Academy:  
Must have Foundations of the American Experience.  
Must have American History 1 and American History 2 at the Academy or AP US
History with a score of 4 or 5 on the AP US History exam before enrolling.
Students who satisfy this requirement with AP US History must also take US Government and Economics.

**World Languages:** 6 or 8 Credits Required

*If taking 1 language*, a student must successfully complete 6 credits in that language. If courses in that language are taken at the Academy to meet this requirement, the credits must include the successful completion of the Academy Intermediate 2b course.

*If taking 2 languages*, a student must earn a total of 8 credits with 4 credits in each language. For languages taken at the Academy to meet this requirement, the credits must include the successful completion of the Academy Intermediate 2b course.

**Fine Arts:** 2 Credits Required

Can be obtained from home high school or Academy.

**Health:** 1 Credit Required

Can be obtained from home high school or Academy (BSU course).

**Phys. Ed.:** 2 Credits Required

Can be obtained from home high school or Academy (BSU course).

**Computing:** 0.5 Credit Required

Must take CMP03301 at the Academy or test out.

**Colloquium:** 1 Credit Required

.5 credit Junior year.
.5 credit Senior year.
Must be obtained while attending the Academy.

**May Term:** 1 Credit Required

.5 credit Junior year.
.5 credit Senior year.
Must be obtained while attending the Academy.

Minimum Credits a student must carry per semester is 5.5.

**Additional Requirements for the Academic Honors Diploma**

Earn a grade of a “C” or better in courses that will count toward the diploma.

Complete one of the following:

- Earn 4 credits in 2 or more AP courses and take corresponding AP exams.
- Earn a composite score of 1250 or higher on the SAT with a minimum score of 560 on the math and a 590 on the evidence-based reading and writing section.
- Earn an ACT composite score of 26 or higher and complete writing section.
- Earn 6 verifiable transcripted college credits in dual credit courses.
- Earn a combination of 2 credits of AP courses and corresponding AP exams AND 3 verifiable transcripted college credits through dual credit courses.
REQUIRED COURSES

Every junior must take American Literature the fall semester and World Literature the spring semester or take English-Human Struggles their first three semesters. Through the integrated Human Struggles courses students earn both their required English and Social Studies credits.

ENG04201 - English-Human Struggles III (CL)

- Prerequisite: None
- Co-requisite: Civitas-Human Struggles III (SOC04201)
- Duration: 3 semesters
- Credit: 1 credit
- Offered: Fall (Open to class of 2018 only)

Through an examination of political, theological, mythological, and literary expression, students come to understand the background and contexts for contemporary and historical American dilemmas, conflicts, and solutions. The course will approach the American experience from an interdisciplinary and international perspective. Students develop a portfolio of work, which is the basis for their performance assessment in the three-semester sequence.

Students who take this course are signing up for a three-semester course and are required to take all three semesters.

ENG03101 – American Literature (CL)

- Prerequisite: None
- Credit: 1 credit
- Offered: Fall

The American Literature course begins with literature of the New World and ends with contemporary period literature. There is an emphasis on critical thinking, close reading, and the development of writing skills. The course is organized by theme, by genre, or by literary and historical period, depending on the approach of the teacher. Students will have a wide variety of writing assignments, opportunities for oral participation, and other activities connecting literature, history, and culture.

ENG04221 – World Literature (CL)

- Prerequisite: ENG03101
- Credit: 1 credit
- Offered: Spring

This course focuses on the study of poetry, drama, and prose produced by authors of various nationalities of the Western and Eastern worlds from the ancient period to the present. Students explore literary movements and intellectual trends with a continuing emphasis on critical thinking, close reading, and the development of writing skills. They also develop essays and projects that call upon the processes of analysis, synthesis, and evaluation and have opportunities for oral participation. The course is organized by theme, by genre, or by literary and historical period depending on the approach of the teacher.

ELECTIVES

Dramatic Literature

ENG05110 – Shakespearean Comedies (CL)

- Prerequisite: None
- Credit: 1 credit
- Offered: Fall

In this course, students study Shakespeare’s joyous comedies, dark comedies, farces, and romances. Through Shakespeare’s comedies, students explore drama as an oral medium, understand the importance of Shakespeare in the history of drama, and have opportunities to view and portray scenes from the plays being studied. Students engage in creative, analytical, and expository writing throughout the course. Plays such as As You Like It, Twelfth Night, Much Ado About Nothing, Taming of the Shrew, Merchant of Venice, A Midsummer Night’s Dream, Measure for Measure, A Winter’s Tale, and The Tempest are among the plays that might be selected for reading.
ENG05112 – Shakespearean Tragedies and Histories (CL)

Prerequisite: None  
Credit: 1 credit  
Offered: Spring

In this course, students study a selection of Shakespeare’s tragic and historical plays with attention to plot and character representation as well as to historical contexts and a range of critical theories. Through Shakespeare’s tragedies and histories, students explore drama as an oral medium, come to understand the importance of Shakespeare in the history of drama, and have opportunities to view and portray scenes from the plays being studied. Students engage in creative, analytical, and expository writing throughout the course. There is a rich variety of plays to choose from, including Hamlet, Macbeth, Othello, King Lear, Julius Caesar, King Henry IV, and King Henry V. The instructor can choose from a variety of didactic possibilities, including close reading, videos, creative projects, and class dramatic productions.

ENG05139 – Introduction to Theater and Dramatic Literature (CL)

Prerequisite: None  
Credit: 1 credit  
Offered: Fall

Introduction to Theater and Dramatic Literature begins with a study of ancient Greek Theater with particular stress on the nature of tragedy and the principles for tragedy (and drama) proposed by Aristotle in The Poetics. The plays Agamemnon, Antigone, and The Trojan Women represent the three major Greek playwrights. The course continues with Roman Theater, primarily the development of Farce and Senecan tragedy. Everyman is a major work of the Medieval Period, followed by Doctor Faustus as the representative work of the Renaissance. Moliere (French comedy) and English Restoration Comedy are considered. The course then takes a short leap to consider the Norwegian playwright Henrik Ibsen, the Russian playwright Anton Chekov, and two British writers, G.B Shaw and Oscar Wilde. The American triumvirate of Eugene O’Neill, Arthur Miller, and Tennessee Williams are represented, followed by works of Samuel Beckett, Athol Fugard, August Wilson, and David Mamet. In addition to studying the plays as literature, the course includes an emphasis on staging and performance practices of each era and the cultures that helped inspire the plays. Although not an acting or a production course, some acting and some attention to stage design (setting and costumes) are included.

ELECTIVES

Themes in Literature

ENG05101 – Women’s Literature (CL)

Prerequisite: None  
Credit: 1 cr.  
Offered: Spring

Students in this course study literature by and about women beginning with ancient works (Vedic Hymns, Sumerian fertility supplications and songs) and culminating with contemporary novels that explore adolescent and adult women’s struggles for voice and identity within family, community, and history. Through the theme of women’s identity, the course examines different writers and genres using written composition, oral participation, and critical thinking to engage in an ongoing investigation and inquiry into the myths and mysteries associated with the experience of being a woman.

ENG05103 – Literature of the Holocaust (CL)

Prerequisite: None  
Credit: 1 credit  
Offered: Spring

This course offers students the opportunity to investigate a selection of Holocaust literature, including the genres of non-fiction, fiction, poetry, theory and philosophy, and film. Over the course of the semester, we will discuss the question of why the Holocaust should still have relevance to those growing up in the new Millennium, despite the fact that those who witnessed and experienced it have nearly all died. Through an investigation that begins with Hitler’s rise to power, we will analyze the structures of power and subjugation that allowed over six million people to be murdered. We will discuss at length the questions of memory, forgetting, and forgiveness. We will seek to negotiate the very troubling issue of the appropriation of someone else’s experience and motivations for doing so. Group viewings and discussions of films will generate further conversation and ideally lead us to a better understanding of the Holocaust and our individual responsibilities in remembering, forgetting, and passing on the stories of its victims.
### ENG05106 – African-American Literature (CL)

- **Prerequisite:** None
- **Credit:** 1 credit
- **Offered:** Fall

This course explores the roots of African-American literature and the literary portrayal of the African-American experience in the 19th and 20th Centuries. Through the themes of the African-American struggle for voice, identity and power, the course examines various writers and genres using written composition, oral participation, and critical thinking to engage in ongoing investigation and inquiry. Students analyze folktales, slave narratives, poetry, short stories, and novels by such authors as Frederick Douglass, Harriet Jacobs, Zora Neale Hurston, Ralph Ellison, and Toni Morrison. Literary works are contextualized in sociology and politics, and themes of representation and protest are analyzed in the context of broader human, spiritual, and intellectual themes. Attention to visual arts and music may enhance understanding of African-American history and culture.

### ENG05109 – Lost Generation Literature (CL)

- **Prerequisite:** None
- **Credit:** 1 credit
- **Offered:** Fall

Gertrude Stein told Ernest Hemingway, “You are all a lost generation,” labeling the expatriate writers who came to Paris after World War I. Lost Generation Literature focuses on the theme of disenchantment brought about by the meaningless end of the world’s first total war; the resulting materialistic boom and its following national extravagances, corruptions, and decadence; the hypocrisies of prohibition; and the spiritual bankruptcy of the “Jazz Age” or the “Roaring Twenties.” Students examine novels, short stories, and poetry using written composition, oral participation, and critical thinking to engage in ongoing investigation and inquiry of such twentieth-century literary giants as Stein, Anderson, Hemingway, Fitzgerald, Pound, Joyce, Eliot, Williams, and e.e. cummings. Women writers of the Left Bank whose works were shadowed by the more popular male writers during the twenties are now anthologized and add a new dimension to this course. As their final exam, students simulate Parisian salons and become the famous writers, artists, musicians, dancers, fashion designers, and publishers who frequented them.

### ENG05117 – Critical Approaches to Literature, Freudian and Jungian (CL)

- **Prerequisite:** None
- **Credit:** 1 credit
- **Offered:** Spring

This literary criticism course uses Freudian and Jungian psychology to analyze literature that focuses on the theme of the dual personality. Students delve into what is often labeled as true self vs. the false self, the concept of the “double,” ego vs. alter ego or mirroring personalities, and id, ego, and super-ego. Through psychological and archetypal analysis, the course examines different writers and genres using written composition, oral participation, and critical thinking to engage in ongoing investigation and inquiry. The theories of Freud and Jung are employed to analyze such literary works as *Grimm’s Fairy Tales*, *Dr. Jekyll and Mr. Hyde*, *Frankenstein*, *Winesburg, Ohio*, *A Doll’s House*, *The Metamorphosis*, *Lord of the Flies*, *Heart of Darkness*, *Faust*, *The Picture of Dorian Grey*, *Demian*, and *Beloved*. Students investigate psychological motives, unconscious desires and anxieties, myths and dreams as symbolic projections of people’s hopes, fears, and aspirations as they analyze the underlying human behavior of classical literary characters.

### ENG05133 – Poetry (CL)

- **Prerequisite:** None
- **Credit:** 1 credit
- **Offered:** Spring

In this course, students read and analyze poems written in English from the seventh through the twenty-first centuries, organized around such themes as family, nature, love, death, religious experience, and the imagination. Through discussion, formal and informal writing assignments, oral presentations, and a major project, students should develop as analytic and imaginative thinkers and writers while they learn to read poetry with greater understanding and pleasure. Traditional poetic themes are used with written composition, oral participation, and critical thinking for investigation and inquiry.
ENG05134 – The Victorian Novel (CL)

Prerequisite: Completion of American Literature (ENG03101)
Credit: 1 credit
Offered: Fall

The Victorian Novel is an elective for students who wish to study the development of the novel and the evolution of literary thought in Great Britain from (approximately) 1830-1901. Students will read, among other works, influential novels by Emily and Charlotte Brontë, Thomas Hardy, Charles Dickens, and William Thackeray. Additional texts will include handbooks for understanding the context of the Victorian novel, and for writing papers on long-form works of literature. Class will consist of written and oral participation, research and creative projects, and formal and informal essays.

ELECTIVES
Other

ENG05113S1/05113S2 – Creative Writing (CL)

Prerequisite: None
Note: Students may enroll in Writing Fiction or Creative Writing at the Academy, but not both.
Credit: 1 credit
Offered: Fall or Spring

Students in this one-semester class write poetry, short stories, plays, and creative non-fiction with opportunities for oral participation. The concept of manipulation of language to convey ideas, feelings, moods, and visual images is the basis of the course. The students become familiar with the standard literary elements through the reading and study of published prose and poetry and are taught to use those elements in their own writing. They learn strategies for evaluating their own writing and the writing of others. Students who are interested in an audience for their creative work and suggestions for improvement and development of their literary styles are encouraged to sign up for this course.

ENG05123/05124 – AP English Language and Composition (CL)

Prerequisite: Permission of English Department. In keeping with College Board policy, this course is open to students who are academically prepared for it. Students prepared to benefit from this rigorous course have already shown an excellent work ethic and strong analytic and academic writing ability.
Credit: 1 credit
Offered: Fall/Spring Sequence

This year-long course, which prepares students to take the AP English Language and Composition exam, requires students to compose timed, evidence-based analytic and argumentative essays, written in response to College Board prompts, as well as to complete many informal writing exercises. Students will also conduct research, work on grammar and style, and learn to analyze the rhetorical strategies in visual texts and in non-fiction writing from many disciplines and historical periods.

ENG05130 – Great Literary Works: A Guided Independent Reading Course (CL)

Prerequisite: Completion of American Literature (ENG03101) and World Literature (ENG04220), or English-Human Struggles 1, 2 (ENG03201/ENG03202), and Instructor Permission
Credit: 1 credit
Offered: Fall

This fall guided reading course is designed for students who love to read independently. These readers are given an opportunity to select their own literary works, create their own syllabus, and discuss their works individually with the teacher. The course is also directed at students who would like to further their study of classical works. Students choose their syllabus readings from various college-bound literary reading lists compiled by the English Department. The teacher meets with the class as a group for four sessions to introduce the reading lists, guide students in the discussion process, and give directives for the required literary journal that is the writing component in the course. Students meet individually with the teacher from that point on for their conferences. The grade for this course is based primarily on the conference discussions and the journals.
**ELECTIVES**

**English Quarter Courses**

**ENG05107 – Historical/Literature Themes (CL)**

Prerequisite: None  
Credit: 5 credit  
Offered: Quarter 4

Students will read Hemingway's short stories that focus on a coming-of-age Nick Adams as he explores the fields, streams, and woods in northern Michigan and Michigan's Upper Peninsula; develops both relationships and conflicts with the Native American Odawa tribe in that area; ultimately becomes a soldier in WWI, and returns from that war psychologically troubled. Students will also read Hemingway's *For Whom the Bell Tolls*, his famous war novel set during the Spanish civil war. Considered one of the greatest war novels of all time, this masterpiece is seldom taught in a regular American Literature class because of its length.

**ENG05118 – The Short Story (CL)**

Prerequisite: None  
Credit: 5 credit  
Offered: Quarter 3

The short story is sometimes an under-appreciated art form. Within the space of a few pages, an author must weave a story that is compelling, create characters readers care about and drive the story to its ultimate conclusion. This short story quarter course will include many of the best short story writers of all time, authors who have mastered the art of the short story, turning condensed pieces into memorable works of literature. Students will read, analyze, and discuss short stories written in English or famous works that have been translated into English including major authors such as Hawthorne, Melville, Twain, Cather, Ellison, Hughes, Hemingway, Faulkner, Anderson, O’Conner, Salinger, Vonnegut, Munro, Mansfield, Erdrich, Alexie, Conrad, Joyce, Tolstoy, Chekhov, Borges, Garcia, Kafka, and many more.

**ENG05119 – John Steinbeck (CL)**

Prerequisite: None  
Credit: 5 credit  
Offered: Quarter 4

The course is an examination of John Steinbeck—the man himself; his place, primarily Monterey and Salinas, California; his influences, including ED Ricketts and Joseph Campbell; and his writing techniques, his style, and his themes. The course begins with a study of a series of his short stories, and continues with the study of two of his short novels, *Of Mice And Men* and *Cannery Row*. The second half of the course will consider his major novel, *The Grapes Of Wrath*.

**ENG05120 – Writing Fiction (CL)**

Prerequisite: None  
Note: Students may enroll in Writing Fiction or Creative Writing at the Academy, but not both.  
Credit: 5 credit  
Offered: Quarter 3

Writing Fiction is a quarter course that provides aspiring fiction writers with rigorous practice in writing fiction within a variety of contexts and genres. Students will read and write short fiction and discover strategies for producing evocative descriptions, exciting dialogue, engrossing characters, and stories worth telling. Students will write and revise their own work and discuss the work of their peers in and out of the classroom. Writing Fiction requires consistent writing, both in and out of class, and students who take the course can expect to have produced a sizeable quantity of creative fiction by the end of the quarter.
### ENG05135 – Academic Writing: Exposition (CL)

- **Prerequisite:** None
- **Credit:** 5 credit
- **Offered:** Quarter 3

Academic Writing: Exposition is designed for students who wish to concentrate on writing successful expository papers. The class stresses finding topics, organizational patterns, and developing a thesis with strong supporting materials. The major work of the course consists of four papers. The papers include: a personal narrative, an essay developed primarily by description, a paper developed by using examples, and a paper following the classification pattern of organization. Part of class time is used as workshop for instructor review of papers, peer editing, grammar review, sentence and paragraph construction, and working to eliminate common writing errors.

### ENG05136 – Academic Writing: Argumentation (CL)

- **Prerequisite:** None
- **Credit:** 5 credit
- **Offered:** Quarter 4

Argumentation is a quarter course that offers students rigorous practice in writing argumentative academic papers. Students will learn classical and modern rhetorical strategies for persuading audiences through especially thoughtful written arguments. Students will write and revise a number of argumentative papers throughout the course, and will also read and analyze effective argumentative pieces written by their peers and scholars.

**THIS COURSE IS COUNTED AS AN ACADEMY ELECTIVE COURSE.**

### HUM02999 – Writing Lab (CP)

- **Prerequisite:** Teacher Recommendation
- **Credit:** .5 credit
- **Offered:** Quarter 1 or 2

This course emphasizes essential structural and stylistic elements of composition, especially the formulation of a thesis statement, development of a theme and argument, and relevant use of logic, detail, textual illustration, and persuasive language. Issues of clarity, grammar, and form will be incorporated. **This course does not count as an English credit but may be used for elective credit.**
REQUIRED COURSES

All students must successfully complete *Foundations of the American Experience*, *American History 1*, and *American History 2* or *Civitas Human Struggles I, II, and III* and one social studies elective to meet the social studies requirements.

**SOC04201 - Civitas-Human Struggles III (CL)**

- **Prerequisite:** None
- **Co-requisite:** English-Human Struggles, III (ENG04201)
- **Duration:** 3 semesters (each semester worth 2 credits)
- **Credit:** 1 credit
- **Offered:** Fall (Open to the Class of 2018 only)

Through an examination of political, theological, mythological, and literary expression, students come to understand the background and contexts for contemporary and historical American dilemmas, conflicts, and solutions. The course will approach the American experience from an interdisciplinary and international perspective. Students develop a portfolio of work, which is the basis for their performance assessment in the three-semester sequence.

*Students who take this course are signing up for a three-semester course and are required to take all three semesters.*

**SOC200 – Foundations of the American Experience (CL)**

- **Prerequisite:** None
- **Credit:** 1 credit
- **Offered:** Fall

This course explores political and economic theory and practice from the ancient Mediterranean world into the twentieth century to prepare students for American History 1 and 2. Students will build their knowledge of key historical concepts and events, as well as their analytical abilities, to enhance their understanding of the politics and economics of the present.

**SOC201 – American History 1 (DC)  *Available for College Credit (see pg. ii)*

- **Prerequisite:** Foundations of the American Experience
- **Credit:** 1 credit
- **Offered:** Spring

This course is a survey of American historical, intellectual, literary, cultural, mythic, economic, diplomatic, theological and political experiences which builds upon concepts developed in Foundations of American Experience. Students will examine key events, ideas, personalities and movements from European exploration to the end of Reconstruction as they relate to life in Indiana and the United States.

*Ball State University offers 3 college credit hours in HIST 201 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.*

**SOC202 – American History 2 (DC)  *Available for College Credit (see pg. ii)*

- **Prerequisite:** American History 1
- **Credit:** 1 credit
- **Offered:** Fall or Spring

This survey course builds upon concepts developed in Foundations of the American Experience and of American History 1, and emphasizes national development from the late nineteenth century into the twenty-first century. Fundamental themes of a diplomatic, economic, political, intellectual, cultural, and social nature will be explored through the study of key events, personalities, groups, and movements as they relate to life in Indiana and the United States.

*Ball State University offers 3 college credit hours in HIST 202 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.*
ELECTIVES

**Topics in History**

**SOC05102 – Decades of Controversy (CL)**

*Prerequisite:* None  
*Credit:* 1 credit  
*Offered:* Fall

This course will examine the domestic, national and international policies, forces, and events, which formed a 20-year time frame of contradictions, contrasts, and progress in US History 1948-1968. Special emphasis will focus on the ideological philosophies, which were existing, developing, and being challenged in politics, economics, foreign affairs, and national culture. Overriding themes include significant social developments, cultural ideas in conflict, rival political policies, and an analysis of the influence of Pax Americana. As students explore the controversies of the decades from 1948 to 1968, they will develop historical research skills using both primary and secondary sources.

**SOC05130 – The West in the World (DC) *Available for College Credit (see pg. ii)**

*Prerequisite:* None  
*Credit:* 1 credit  
*Offered:* Spring

The West in the World is a survey of the development of Western Civilization since its origins emphasizing key problems, turning points, and recurring themes, especially in the past two centuries. The course emphasizes the civilization that emerged and developed in Europe and spread to the Americas during the past two millennia. The West in the World also focuses on the way peoples around the globe helped to shape Western Civilization and how they felt its influence. Non Western civilizations have exercised a powerful influence on Western Civilization, and the West has interacted with the rest of the world throughout its history.

*Ball State University offers 3 college credit hours in HIST 150 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.*

**SOC05132 – 1980s: The Reagan Years (CL)**

*Prerequisite:* None  
*Credit:* .5 credit  
*Offered:* Quarter 3

Following a raucous 20-year time span in American history, the 1980s seem almost placid in comparison, yet the events of this seminal decade in the American experiment significantly shape our nation’s visions, missions, economic practices and contributed to the ending of the Soviet regime as a Communist superpower. Seismic shifts in social realms, political institutions, and foreign affairs will be scrutinized through various primary and secondary sources. The election of 1988 and President Bush’s initial year in office will also be studied.


*Prerequisite:* None  
*Credit:* .5 credit  
*Offered:* Quarter 4

A leading question asked by historians studying the 20th century is how and why the Soviet Union lasted only 70 years. What factors – internal and external – led to this nation’s governing power collapse? This course will explore the ideological developments that established the Soviet Union, its struggle to establish, and then sustain itself as a significant and influential actor in the international arena, the growth of this backward industrial country into an economic giant, the Cold War struggle, and finally, how the whole system crashed into the dustbin of history by 1992. Key personalities, such as Lenin, Stalin, Sakharov, Khrushchev, Gorbachev, et al, will be examined for their contributions to economic, technological, scientific, political, and social/cultural conditions of the Soviet Union.
### SOC05140 – History of World Religions (CL)

**Prerequisite:** None  
**Credit:** 1 credit  
**Offered:** Spring

This course will explore the development of religions around the world from prehistoric to modern times. The major world religions will be studied, along with religions of the ancient world and of non-literate peoples. Primary sources will be emphasized to understand the key components of various religions. Special emphasis will also be placed on early developments, exploring the interaction between different religions, as well as the relation of religions to the historical time periods through which they develop.

### SOC05146 – Readings in Appalachian Regional History (CL)

**Prerequisite:** None  
**Credit:** .5 credit  
**Offered:** Quarter 4

This is an intensive reading course that will explore major issues and historiographical trends in Appalachian Regional History. Using selected primary and secondary sources, students will gain a working knowledge of Appalachian Regional History. The course will examine Appalachia’s three phases of development: traditional society in the 19th century, the industrialization of the region in the early 20th century, and the problems facing contemporary Appalachia, with a specific focus on migration from the region to Indiana and other Midwestern states after World War II.

### SOC05147 – The Life and Times of Abraham Lincoln (CL)

**Prerequisite:** SOC201  
**Credit:** 1 credit  
**Offered:** Spring

This course examines the life of Abraham Lincoln primarily through the lens of his own writings. Students will see how ambition and personal tragedies of his youth impacted his life and mature beliefs; how the tenets of the Whig party shaped his career in Illinois state politics and as a one-term U.S. congressman; how an autodidact established a successful law career; how a commitment to antislavery principles brought national prominence during the sectional crisis and facilitated his rise to the presidency as a Republican; and how a president committed to the preservation of the Union ended up waging a war against American slavery.

### SOC05148 – The American Civil War and Reconstruction Era, 1850-1877 (CL)

**Prerequisite:** None  
**Credit:** 1 credit  
**Offered:** Fall

The American Civil War represents the seminal event in the nation’s history, and the period of Reconstruction that followed it profoundly shaped the war’s impact and legacy. This course will give students a firm grasp of the events, people, and issues that led the nation to war. It will address how the war unfolded, explore the positive changes experienced by freedmen during the initial stages of Reconstruction, and discuss how and why the nation eventually reunified at the expense of African-American political and civil rights. The course will cover military, political, social, and economic factors in the causes of the war and Reconstruction. As students explore the topic of the American Civil War era, they will develop historical research skills using both primary and secondary sources.

### SOC05149 – Readings in American History, 1920-1945 (CL)

**Prerequisite:** None  
**Credit:** .5 credit  
**Offered:** Quarter 3

This is an intensive reading course that explores American national history from 1920 to 1945. Particular attention may be given to national political, economic, social, and cultural development during the 1920s, the Great Depression and New Deal, and the American home front in the first half of the 1940s.
SOC05150 – Themes in Ethnic Studies (CL)

Prerequisite: None
Credit: 1 credit
Offered: Spring

This course will explore the historical development, lifestyles, and cultural patterns of ethnic groups in the United States and the world. Course themes may include a focus on a particular ethnic group or groups, or may use a comparative approach to study the cultural development, political trends, and economic impact of various ethnic or cultural groups, as well as issues of immigration and assimilation. Literary works emanating from the various ethnic groups may also be subject to scrutiny and discussion.

ELECTIVES
Topics in Social Science

SOC05123 – The Living Constitution and the American Legal System (CL)

Prerequisite: None
Credit: 1 credit
Offered: Fall

The Constitution of the United States is viewed as a living document as current events, politics, and major issues facing the United States form one focus for this course. The second area of focus will be law: criminal law, Constitutional law, and due process. As students explore the Constitution and the American legal system, they will utilize methods of inquiry and develop research and thinking skills. This course will be of great interest to students with career aspirations in political science or law.

SOC05142 – History Through Art and Architecture (CL)

Prerequisite: Not open to students with credit in Social History of Art
Credit: 1 credit
Offered: Fall

An introduction to the meanings and purposes of art and architecture in human society. Subjects covered would include non-Western and pre-Modern cultures. Potential themes would include art and architecture as media of communication, tools of power, and expressions of identity. Specific topics might include: anthropological perspectives on “primitive” art; the human form in ancient Greece and Rome, connected to and compared with the human form in South Asia; Western “history painting” from the Alexander mosaic to Picasso’s Guernica; the human image and iconoclasm in medieval Western, Byzantine, and Islamic art; landscape painting and the invention of the environmentalist ethic; sacrifice, self-sacrifice and political prestige in pre-Columbian Mesoamerica; art as a luxury good in modern capitalist societies; “agitprop” and advertising in the twentieth century.
FRN101/102 – Accelerated French I (DC) *Available for College Credit (see pg. ii)
Prerequisite: None
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

This course is an introduction to the language and culture of the French-speaking world. There is an emphasis on development of listening and speaking skills with an introduction to reading, writing, and aspects of French culture. Students are minimally expected to utilize simple communication skills such as responding to and giving instructions or commands, making routine requests and suggestions, understanding and using appropriate forms of address, telling about daily routines, events, and personal activities in the present, future, and past, and asking and answering simple informational and yes/no questions. Students learn to participate in brief conversations, to read and comprehend words, phrases, and short passages in context, and to respond in writing to various stimuli.

*Ball State University offers 4 college credit hours in FR 101 and 102 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

FRN201/202 – Accelerated French II (DC) *Available for College Credit (see pg. ii)
Prerequisite: Placement or French I (FRN102)
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

As the second course in the French language series, this course represents a continuation of grammar, vocabulary, pronunciation, and listening with more emphasis upon reading than on writing. In addition, special emphasis is placed upon the language as an integral component of French culture. Students are minimally expected to be able to ask questions regarding routine activities, participate in conversations on a variety of topics, relate a simple narrative about a personal event or experience, interact in a variety of situations to meet personal needs, understand main ideas and facts from simple texts, read aloud properly, and write briefly in response to given situations and to express personal experiences and feelings.

*Ball State University offers 3 college credit hours in FR 201 to students who complete FRN201 and 202. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

FRN301/302 – Accelerated French III (DC)
Prerequisite: Placement or French II (FRN202)
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

Building upon and drawing distinctions from skills established within the grammar, vocabulary, pronunciation, listening and culture curriculum of the previous courses, this course focuses on listening (video and audio news reports), speaking (daily classroom interaction, oral presentations), reading comprehension (sight reading) and writing (essays of various length and nature). Using appropriate verb forms and tenses, students are minimally expected to respond to factual and interpretive questions and to interact in a variety of social situations, as well as to read for comprehension from short literary selections of poetry, plays, and short stories. Students will understand and be able to participate in class discussions that require knowledge of familiar and newly acquired vocabulary and previously learned grammatical structures. In the course, students are asked to focus their attention on elements of Francophone cultures from around the world.

*Ball State University offers 3 college credit hours in FR 202 to students who complete FRN301 and 302. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

**HIGHER LEVELS OF FRENCH may be taken at Ball State University. The Academy is not responsible for fees associated with these courses.**
GER101/102 – Accelerated German I (DC) *Available for College Credit (see pg. ii)

Prerequisite: None
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

The level one German course is designed to introduce students to the fundamentals of German grammar and to basic vocabulary. Emphasis is on development of both written and verbal skills. Students participate in activities pertaining to German language and culture in and outside of class. The goal is for students to accomplish the level of proficiency that enables them to communicate accurately and comfortably on a conversational basis. Students are minimally expected to utilize communication skills such as responding and giving oral directions and commands, making routine requests, understanding and using appropriate forms of address, telling about daily routines and events, asking and answering simple questions and participating in brief conversations, reading isolated words and phrases in a situational context, comprehending words and phrases in appropriate contexts and responding in writing to various stimuli.

*Ball State University offers 4 college credit hours in GER 101 and 102 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

GER201/202 – Accelerated German II (DC) *Available for College Credit (see pg. ii)

Prerequisite: Placement or German I (GER102)
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

In both semesters of second year German, students use the textbook Stationen, which focuses on major cities in Germany, Austria, and Switzerland. Each chapter highlights important historical events and characteristics of each city and famous people associated with the city. A variety of exercises help to practice the new vocabulary and grammar. Through writing, reading, speaking and listening exercises, students will greatly improve their language skills.

*Ball State University offers 3 college credit hours in GER 201 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

3rd Year German is not offered at the Academy. To fulfill their language requirement students can take 3rd year German at Ball State. The Academy is not responsible for fees associated with courses beyond 3rd year German.
HUMANITIES: WORLD LANGUAGES (Continued)

LAT101/102 – Accelerated Latin I (CL)

Prerequisite: None
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

Latin I is an introduction to the Latin language, classical culture, and Greco-Roman mythology. Language studies include pronunciation, elementary grammar, basic vocabulary, sentence structure, and the translation of simple texts. Since much of English vocabulary is derived from Latin, students have an opportunity to study word derivations. Students become familiar with classical culture through the study of various aspects of ancient life, social structure, political institutions, and literature. Students read stories, in both English and Latin, based upon Homer’s *Iliad* and Vergil’s *Aeneid*. Students are minimally expected to be able to understand and articulate directions, commands, requests, forms of address, simple questions, words and phrases in context, and written directions and information. Students are expected to be able to read orally and write simple forms of the language.

LAT201/202 – Accelerated Latin II (CL)

Prerequisite: Placement or Latin I (LAT102)
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

In Latin II, greater competence in Latin is developed through study of grammar, syntax and vocabulary, and the reading and translating of more sophisticated Latin texts. Through the Latin narratives and English background essays, students acquire a better understanding of the ancient world. Interdisciplinary aspects of the course are study of derivatives and comparing cultures. Students are minimally expected to use the Latin language to ask questions, express ideas in writing, and interact in a variety of situations; to understand the main ideas and facts from textual information in Latin; and to read aloud in Latin with appropriate intonation and pronunciation.

3rd Year Latin is not offered at the Academy. To fulfill their language requirement students can take 3rd year Latin at Ball State. The Academy is not responsible for fees associated with courses beyond 3rd year Latin.

JPN101/102 – Accelerated Japanese I (DC)

*Available for College Credit (see pg. ii)*

Prerequisite: None
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

The Japanese I course is designed for beginners to acquire basic working knowledge of spoken as well as written Japanese. Students are expected to be able to make statements, ask and answer questions about basic daily routines and events and to be able to read and write those sentences using the two sets of alphabet, called *hiragana* and *katakana*, and basic Chinese characters, called *kanji*. Elements of Japanese culture, history and geography are regularly integrated throughout the course of the semester.

*Ball State University offers 4 college credit hours in JP 101 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

JPN201/202 – Accelerated Japanese II (CL)

Prerequisite: Placement or Japanese I (JPN102)
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

The Japanese II course is designed for the fuller development of the working knowledge of spoken and written Japanese acquired in the level one course. Students are also expected to be able to ask questions regarding routine activities, participate in conversations on a variety of topics, relate a simple narrative about a personal event or experience, interact in a variety of situations to meet personal needs, understand main ideas and facts from simple texts, read aloud properly, and write briefly in response to given situations. Elements of Japanese culture are regularly integrated throughout the course.
RUS101/102 – Russian I (CL)

Prerequisite: None
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

This course focuses on the skills required for speaking, reading, writing and comprehending Russian. Special attention is given to the basic grammatical structure of Russian, together with pronunciation and intonation patterns.

In addition, students are expected to utilize communication skills such as responding to and giving oral directions and commands, making routine requests, understanding and using appropriate forms of address, telling about daily routines and events, reading and responding in writing to various stimuli.

RUS201/202 – Accelerated Russian II (CL)

Prerequisite: Placement or Russian I (RUS102)
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

This course presumes facility in the basic skills and knowledge developed in Russian I, and begins with a review of those items. Increased attention is paid to the syntax of the language; students continue to learn about Russian culture, history, and geography. Students are also expected to be able to ask questions regarding routine activities, participate in conversations on a variety of topics, relate a simple narrative about a personal event or experience, interact in a variety of situations to meet personal needs, understand main ideas and facts from simple texts, read aloud properly, and write briefly in response to given situations.

SPN102A/102B – Accelerated Spanish I (DC) *Available for College Credit (see pg. ii)

Prerequisite: At least 1 year of Spanish prior to coming to the Indiana Academy
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

This course builds upon the basic oral and written skills developed in their previous Spanish course(s), and expands understanding of the cultures of the Spanish-speaking world. SP102 requires a review of the grammatical structures learned in their “home schools,” develops new constructions and idioms, and applies this information to an analysis, integration, and interpretation of language and culture that result in the acquisition of knowledge. Instructional methods are based primarily on learned-centered pedagogies such as: communicative language teaching, cross-cultural analysis, modified lectures, authentic language materials and sources, productive and receptive instructional exercises, and individual and cooperative in-class activities.

*Ball State University offers 4 college credit hours in SPN 102 to students who complete SPN102A and 102B. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

SPN201/202 – Accelerated Spanish II (DC) *Available for College Credit (see pg. ii)

Prerequisite: Placement or Spanish I (SPN102)
Credit: 1.25 credits per semester
Offered: Fall/Spring Sequence

The second course in the Spanish language series, this course represents a continuation of grammar, vocabulary, pronunciation and listening with emphasis on both reading and writing. In addition, special emphasis is placed upon the language as an integral component of Spanish culture.

Students are minimally expected to be able to ask questions regarding routine activities, participate in conversations on a variety of topics, relate a simple narrative about a personal event or experience, interact in a variety of situations to meet personal needs, understand main ideas and facts from simple texts, read aloud properly, and write briefly in response to given situations.

*Ball State University offers 3 college credit hours in SPN 201 to students who complete SPN201 and 202. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.
SPN301/302 – Accelerated Spanish III (DC)  
*Available for College Credit (see pg. ii)

**Prerequisite:** Placement or Spanish II (SPN202)

**Credit:** 1.25 credits per semester

**Offered:** Fall/Spring Sequence

Building upon and drawing distinctions from skills established within the grammar, vocabulary, pronunciation, listening and culture curriculum of the previous courses, this course focuses on listening (Spanish film, news broadcasts, etc.), speaking (oral presentations), reading comprehension and writing (summarization of reading passages, essays). Students are minimally expected to respond to factual and interpretive questions and interact in a variety of social situations, read for comprehension, read short literary selections of poetry, plays, and short stories, complete authentic forms and documents and take notes that require familiar vocabulary and structures, write paraphrases, summaries, and brief compositions, describe different aspects of the culture, and participate appropriately.

*Ball State University offers 3 college credit hours in SPN 202 to students who complete SPN301 and 302. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

SPN401/402 – AP Spanish (CL)

**Prerequisite:** 3, 4, 5 years of Spanish and placement test

**Credit:** 1.25 credits per semester

**Offered:** Fall/Spring Sequence

AP Spanish Language is designed for students who wish to develop proficiency and integrate their language skills, using authentic materials and sources. Students who enroll should already have a basic knowledge of the language and cultures of Spanish-speaking peoples and should have attained a reasonable proficiency in using the language. This course will help prepare students to demonstrate their level of Spanish proficiency across three communicative modes (Interpersonal, Interpretive, and Presentational) and the five goal areas of Communication, Cultures, Connections, Comparisons, and Communities. AP Spanish is meant to be comparable to fifth and sixth semester college and university courses that focus on speaking and writing in the target language at an advanced level. At the completion of the two-semester sequence, students are encouraged to take the AP Spanish language exam.
MAT02999/03000 – Geometry (CP)

Prerequisite: Placement
Credit: 1 credit per semester
Offered: Fall/Spring Sequence

The mathematics requirement for graduation from the Indiana Academy is eight credits in mathematics with four taken at the Academy including 2 credits in Algebra 1, 2 credits in Geometry, 2 credits in Algebra 2, and 2 credits in courses beyond Algebra 2. The Academy will arrange for a student who comes to the Indiana Academy without Geometry to take it while here, usually at the Burris Laboratory School. This course will meet 5 days a week and be worth 1 credit per semester.

MAT03001/03002 – Advanced Algebra/Trigonometry 1, 2 (CP)

Prerequisite: Placement
Credit: 1 credit per semester
Offered: Fall/Spring Sequence

This course covers topics that include solutions of systems of equations and inequalities, simplifying algebraic expressions, radicals, polynomial, exponential and logarithmic functions, circular and trigonometric functions including trigonometric identities and the trigonometry of right triangles. This course serves as preparation for Precalculus.

MAT03101/03102 – Precalculus 1, 2 (CP)

Prerequisite: Placement
Credit: 1 credit per semester
Offered: Fall/Spring Sequence

This course provides a thorough, careful study of basic precalculus topics. Topics include linear and quadratic functions, polynomial functions, inequalities, graphs of functions, exponential and logarithmic functions, trigonometric functions and equations, and triangle trigonometry.

Students completing this course will generally choose two courses from among Calculus, Statistics, and Finite Mathematics for the senior year. Exceptional students may be allowed to enroll in Advanced Placement Calculus AB.

MAT03311/03312 – Precalculus for Advanced Placement 1, 2 (CP)

Prerequisite: Placement
Credit: 1 credit per semester
Offered: Fall/Spring Sequence

This course provides the rigorous development of precalculus topics necessary to prepare students for studying Advanced Placement Calculus. The first semester will include the study of polynomial, exponential, logarithmic and trigonometric functions and their graphs. Topics for the second semester include triangle trigonometry, polar coordinates, vectors, sequences and series, analytic geometry, parametric equations, and limits. Elementary proof techniques will be employed throughout the course.

Successful completion of this course will generally result in enrollment in Advanced Placement Calculus AB or BC the senior year.

MAT04005 – Calculus (DC)

*Available for College Credit (see pg. ii)

Prerequisite: Precalculus 2 (MAT03102) or Precalculus for AP 2 (MAT03312)
Credit: 1 credit
Offered: Fall

This course is an introduction to differential and integral calculus. Topics include limits, continuity, derivatives and definite integrals. The emphasis will be on applications and writing, rather than on theory.

Not open to students with credit in Advanced Placement Calculus.

*Ball State University offers 3 college credit hours in MATH 132 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.
MATHEMATICS (Continued)

MAT04123/04124 – AP Calculus AB 1, 2 (DC)  
*Available for College Credit (see pg. ii)

Prerequisite:  Precalculus for AP 2 (MAT03312) or Precalculus 2 (MAT03102) with teacher recommendation, or placement
Credit:  1 credit per semester
Offered:  Fall/Spring Sequence

This course covers the College Entrance Examination Board’s AB syllabus in Advanced Placement Calculus. Students are encouraged to register for the AP exam and may find that their college grants them credit equivalent to one semester of college calculus. Topics covered include properties of functions, limits, differential calculus and its applications, and integral calculus and its applications. Treatment of these topics involves both theory and its implementation on graphing calculators.

Not open to students with credit in AP Calculus BC.

*Ball State University offers 4 college credit hours in MATH 165 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

MAT04133/04134 – AP Calculus BC 1, 2 (DC)  
*Available for College Credit (see pg. ii)

Prerequisite:  Precalculus for AP 2 (MAT03312) with teacher recommendation, or placement
Credit:  1.25 credits per semester
Offered:  Fall/Spring Sequence

This course meets four days a week and covers the College Entrance Examination Board’s BC syllabus in Advanced Placement Calculus. Students are encouraged to register for the AP exam and may find that their college grants them credit for up to two semesters of calculus. Topics covered include limits, derivatives, integrals, series, vectors, and parametric equations, as well as their application in numerous real-world problems. Treatment of these topics involves both theory and its implementation on graphing calculators.

AP Calculus BC 1 is not open to students with credit in AP Calculus AB 2.

*Ball State University offers 4 college credit hours per semester in MATH 165 and MATH 166 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

MAT04514 – Statistics (DC)  
*Available for College Credit (see pg. ii)

Prerequisite:  Algebra II
Credit:  1 credit
Offered:  Fall or Spring

In this course, students do activities that guide them to discover statistical concepts, explore statistical principles, and apply statistical techniques. The course focuses on developing statistical reasoning through analysis of genuine data. The students will learn to describe the distribution of a variable, compare the distributions of two or more variables, and describe the relationship between two variables. The course introduces the issues of sampling, surveys, and experiments. Probability is introduced through simulations and these simulations build an understanding of the Central Limit Theorem. Inferences from data include confidence intervals and significance tests for a proportion, a mean, the difference between two proportions, and the difference between two means, both for matched pair designs and independent samples. Exploratory data analysis, data production issues and interpretation of results by the students are emphasized throughout.

*Ball State University offers 3 college credit hours in MATH 181 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

MAT04515 – Quantitative Reasoning (DC)  
*Available for College Credit (see pg. ii)

Prerequisite:  Algebra II (Not open to students who have credit in or are taking BSU MATH 125)
Credit:  1 credit
Offered:  Fall or Spring

This course exposes students to a variety of practical applications in order to further develop problem-solving skills and other fundamental mathematics skills. Elementary probability theory and basic statistics are core topics of the course. Additional topics are selected from linear programming, mathematics of finance, voting methods, and graph theory.

*Ball State University offers 3 college credit hours in MATH 125 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.
MAT04831 – Probability Theory (CL)
Prerequisite: AP Calculus AB 1 (MAT04123) or AP Calculus BC 1 (MAT04133)
Credit: 1 credit
Offered: Fall
This course is a calculus-based introduction to the theory of probability. It includes topics such as expectations, conditional probability, discrete and continuous random variables, probability distributions, empirical probabilities, and formulation of mathematical models.

ADVANCED ELECTIVES

MAT04825 – AP Statistics (DC) *Available for College Credit (see pg. ii)
Corequisite: Precalculus for AP 2 (MAT03312) or permission of Division Chair
Credit: 1.25 credits
Offered: Spring
This course meets four days a week and covers the College Entrance Examination Board’s syllabus in Advanced Placement Statistics. It is organized around the four broad conceptual themes of exploring data, planning a study, producing models using probability and simulation, and statistical inference. Exploratory analysis of data uses graphical and numerical techniques. An appropriate graphing calculator, such as the TI-84, and appropriate statistical software, such as Minitab or SAS, are used. The variety of associations among variables permeates most of statistics. Exploring these types of associations will engage critical thinking, problem solving, and creative abilities.
*Ball State University offers 3 college credit hours in MATH 181 to students who complete this course. Students who received dual credit for MATH 181 from Statistics (MAT04514) are not eligible to also receive dual credit for MATH 181 from AP Statistics. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

MAT04832 – Linear Algebra (DC) *Available for College Credit (see pg. ii)
Prerequisite: AP Calculus AB 2 (MAT04124) or AP Calculus BC 1 (MAT04134)
Credit: 1.25 credits
Offered: Fall
This course meets four days a week and includes the solution of linear systems, vector equations, linear transformations in two- and three-dimensional space, matrices and determinants, vector spaces, inner product spaces, eigenvalues and eigenvectors and related topics. There are some computational projects.
*Ball State University offers 4 college credit hours in MATH 217 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

MAT04833 – Multivariable Calculus (DC) *Available for College Credit (see pg. ii)
Prerequisite: AP Calculus BC 2 (MAT04134)
Credit: 1.25 credits
Offered: Fall
This course meets four days a week and covers multidimensional calculus with applications. The topics include higher dimensional analytic geometry, vector-valued functions, motion, curvature and torsion, partial differentiation, directional derivatives, optimization, multiple integration in rectangular, cylindrical and spherical coordinates, vector fields, divergence, curl, line and surface integrals, work, flux, flow, Green’s theorem, the divergence theorem, Stokes’s theorem, and the fundamental theorem for line integrals. Students work with graphing calculators and a computer algebra package.
*Ball State University offers 4 college credit hours in MATH 267 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.
<table>
<thead>
<tr>
<th>Course Code: MAT04834 – Differential Equations (DC)</th>
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<tbody>
<tr>
<td><strong>Prerequisite:</strong> Multivariable Calculus (MAT04833)</td>
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<td><strong>Credit:</strong> 1 credit</td>
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<td><strong>Offered:</strong> Spring</td>
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This course is an introduction to ordinary differential equations and boundary value problems. The topics include first order linear, separable, exact, and homogeneous equations with applications in biology, chemistry, physics, and finance; numerical methods for first order equations; second order linear homogeneous and non-homogeneous equations, including the methods based on reduction of order; undetermined coefficients and variation of parameters with applications in physics; n-th-order linear equations and systems of first order linear equations including use of eigenvectors and eigenvalues.

*Ball State University offers 3 college credit hours in MATH 374 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.*

*Available for College Credit (see pg. ii)*
### CMP03301 – Computer Applications (CP)

**Prerequisite:** Placement  
**Credit:** .5 credit  
**Offered:** Quarter 1 and 2 - Open only to Juniors

This online course is a brief introduction to currently popular and useful elementary software applications.

### CMP04101 – Web Page Development (XC)

**Prerequisite:** None  
**Credit:** 1 credit  
**Offered:** Fall

This course is the study of multimedia computer concepts. The student will learn the current version of HTML, DHTML, XHTML and other software packages to develop Web Pages that could be placed on the Internet. The student will use multimedia computer equipment (scanner, digital camera, etc.), multimedia computer files, and software.

### CMP04112 – Multimedia Production (XC)

**Prerequisite:** Web Page Development (CMP04101) or permission of instructor  
**Credit:** 1 credit  
**Offered:** Spring

This course will familiarize students with basic techniques using hardware and software tools to create various media for multimedia productions. The course is divided into four sections: graphic creation, audio capture, video capture, and animation. Students will complete three projects and a Final Project.

### CMP04201 – Introduction to Programming (CL)

**Prerequisite:** None  
**Credit:** 1 credit  
**Offered:** Fall and Spring

This course is an introduction to computer programming (C++) and is designed for students with little or no previous programming experience. Students will learn to program using a top-down design, structured, and object-oriented approach. Topics will include using basic variables, loops, strings, arrays, functions, and basic input/output files.

### CMP04202 – Visual Programming (DC) *Available for College Credit (see pg. ii)*

**Prerequisite:** Introduction to Programming (CMP04201) suggested or experience in structured programming language or permission of instructor  
**Credit:** 1.25 credit  
**Offered:** Fall

This course is an introduction to visual programming using a high-level language (Python) and an established programming paradigm. Developing problem solving skills and programming techniques will be emphasized. Skills learned in this course will be applied to computer gaming and software development.

*Ball State University offers 4 college credits in CS 120 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.*
**CMP04501/04502 – AP Computer Science A 1, 2 (DC)**  
*Available for College Credit (see pg. ii)*

**Prerequisite:**  
- Fall: Introduction to Programming (CMP04201) or experience in structured programming language and permission of instructor  
- Spring: Successful completion of first semester AP Computer Science A.

**Credit:** 1.25 credits

**Offered:** Fall/Spring Sequence

This course uses a high level, object oriented programming language (Java). Students will learn syntax and the development of algorithms. The emphasis is on developing problem-solving skills and programming techniques. This course is designed for students with a computer programming background who desire a more challenging programming course. Semester 1 topics will include defining variables, primitive types vs. objects, methods, strings, if/else conditionals, loops, one and two dimensional arrays, array lists, inheritance, interfaces, abstract classes, basic input/output files and using applets, error handling, testing and debugging. Semester 2 topics will include using data structures such as linked lists, stacks, queues, binary trees, sequential and binary searching, sorting, traversing trees, and hashing. Laboratory activities include the required AP Computer Science A lab exercises.

Successful completion of this course will prepare the student for the Advanced Placement Computer Science A exam.

*Ball State University offers 4 college credit hours in CS 121 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.*

**CMP04605 – Introduction to Virtual Reality (CL)**

**Prerequisite:** Introduction to Programming (CMP04201) or permission of instructor

**Credit:** 1 credit

**Offered:** Spring

This course will provide an introduction to the study of virtual reality. Students will explore the basics of virtual reality, 3D graphics, and programming in the world of virtual reality.
Students will be placed in the appropriate physics level based on their math enrollment. Juniors may wish to delay taking physics until their senior year in order to build their math abilities.

For students who have no credits in General Physics, a comprehensive physics test, covering the subject matter of the two semesters of General Physics at the Academy, will be given to those students attempting to place out of the lecture portion of the course. This test will include questions to satisfy the Indiana physics standards and additional questions to satisfy the higher expectations of the Academy. The test will be given before classes start in the fall and may be taken only once.

There are two possible outcomes of this test:

- The student does not pass the exam, and thus is assigned to a physics course as the Academy math placement test dictates.
- The student does pass the exam, and thus can –
  - elect to not place out and thus take the General Physics course and that earned grade will appear on the transcript
  - use the spare credit to take another academy course. If this path is chosen, they will be required to take and pass both semesters of the lab portion of the General Physics course
  - take AP Physics I
  - take AP Physics C (if the student is concurrently enrolled in Calculus BC)

Passing this comprehensive physics placement test (upon completion of the laboratory requirement), or a higher level class, will satisfy a student’s survey physics course requirement for their Indiana Academy diploma.

**SCI03101/03102 – Physics I: General Physics (DC)**

*Available for College Credit (see pg. ii)*

**Prerequisite:**
Fall: Algebra II
Spring: Successful completion of first semester General Physics or permission of Science Division Chair.

**Co-requisite:**
Precalculus 1, 2 (MAT03101/03102) or higher and Physics I: General Physics Lab (SCI3101L/3102L)

**Credit:**
1.5 credits per semester

**Offered:**
Fall/Spring Sequence

General Physics I-II is a high school level course which provides an introduction to the basic principles of physics. Topics include motion, force, energy, heat and thermodynamics, wave motion, sound, light, electricity and magnetism and, as time allows, topics in modern physics. A basic knowledge of algebra and geometry is required for this course. Mathematics in the course serves as a tool to define and describe physical relationships and the logical progression of ideas. The lab portion of the course models the scientific process, and gives students hands on experience in dealing with many of the concepts covered in the course.

*Ball State University offers 3 college credit hours in PHYC 100 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

**SCI03111/03112 – AP Physics I (DC)**

*Available for College Credit (see pg. ii)*

**Prerequisite:**
Precalculus and math placement test score or permission of instructor or co-requisite enrollment in Academy

**Credit:**
1.5 credits per semester

**Co-requisite:**
AP Physics I Lab (SCI3111L/3112L)

**Offered:**
Fall/Spring Sequence

AP Physics I proceeds at an accelerated pace and provides a physical introduction to the main principles of physics, which include Newtonian mechanics, oscillations and sound, electricity and magnetism, kinetic theory and thermodynamics, fluids, optics and modern physics. Emphasis will be given to linear and rotational applications to kinematics, forces, and momentum, as well as energy and power, gravitation, harmonic motion, and introductory electric circuits. Knowledge of geometry, algebra and some trigonometry is required for this course. Laboratory investigations emphasize concepts and inquire in order to develop proficiency in problem solving and in the application of fundamental principles to a wide variety of situations. This course is intended for those students whose career goals include life or earth science, pre-medicine, as well as other fields not directly related to science. Students will prepare for and are encourage to take the AP Physics I exam in May.

*Ball State University offers 4 college credit hours in PHYC 110 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.
SCIENCE: PHYSICS EMPHASIS (Continued)

**SCI03113/03114 – AP Physics II (XC)**

**Prerequisite:** AP Physics I or permission of the instructor  
**Credit:** 1.5 credits per semester  
**Co-requisite:** AP Physics II Lab (SCI3113L/3114L)  
**Offered:** Fall/Spring Sequence

AP Physics II builds upon what was learned in AP Physics I, and will emphasize fluid statics and dynamics; thermodynamics and kinetic theory; PV diagrams and probability; electrostatics, electric circuits with capacitors, magnets and electromagnetism; physical and geometric optics, and various topics in modern physics. Knowledge of geometry, algebra and some trigonometry is required for this course. Laboratory investigations emphasize concepts and inquiry in order to develop proficiency in problem solving and in the application of fundamental principles to a wide variety of situations. This course is intended for those student whose career goals include life or earth science, pre-medicine, as well as other fields not directly related to science. Student will prepare for and are encouraged to take the AP Physics II exam in May.

**SCI04102/04103 – AP Physics C (DC)**  
*Available for College Credit (see pg. ii)*

**Prerequisite:**  
Fall: A General Physics Course completion and/or concurrent enrollment in a calculus course or permission of the Science Division Chair.  
Spring: Successful completion of first semester AP Physics C.  
**Co-requisite:** AP Physics C Lab (SCI4102L/4103L) or permission of instructor.  
**Credit:** 1.5 credits per semester  
**Offered:** Fall/Spring Sequence

This calculus-based physics course forms the first part of the college sequence, normally extending over two or three semesters. Physical Mechanics, Wave Motion, and Heat for the first semester, and Electricity, Magnetism, Optics and Thermodynamics for the second semester. Strong emphasis is placed on solving a variety of challenging problems with an emphasis on analysis in both the laboratory and classroom. Calculus is used freely in formulating principles and in solving problems. This course serves as the foundation for students whose career goals include the physical sciences or engineering, but has many applications to geo-physics, bio-physics and other interdisciplinary fields. Students will prepare for and are strongly encouraged to take both the College Board AP physics C: Mechanics exam and the College Board AP Physics C: Electricity & Magnetism Exam in May.

*Ball State University offers 5 college credit hours each semester in PHYC 120 and 122 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

**SCI04107 – Physics II: Modern Physics (XC)**

**Prerequisite:** A General Physics Course  
**Co-requisite:** Physics II: Modern Physics Lab (SCI4107L) and AP Calculus AB 1, 2 (MAT04123/04124) or above  
**Credit:** 1.5 credits  
**Offered:** Spring

The course includes Einstein’s theories of relativity, quantum physics, quantum mechanics, and atomic physics. Other topics covered include properties of nuclei, nuclear models, radioactivity, nuclear fission and fusion, particles and anti-particles, conservation laws, quarks, and standard model. Laboratory work will enhance the concepts learned in class. This course is intended for students interested in majoring in science, medicine, or engineering.

**SCI04116 – Physics II: Introduction to Engineering (XC)**

**Prerequisite:** None  
**Co-requisite:** Physics II: Introduction to Engineering Lab (SCI4116L)  
**Credit:** 1.5 credits  
**Offered:** Fall

This course will provide students with an introduction to engineering as a profession through case studies and hands-on projects in several areas of engineering, including robotics. In particular, students will work in teams, applying engineering principles, to build and test simple robots. Students will have the opportunity to participate in a robotics competition.
**SCIENCE: PHYSICS EMPHASIS (Continued)**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Co-requisite</th>
<th>Credit</th>
<th>Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCI04117</td>
<td>Physics II: Projects in Engineering (XC)</td>
<td>One semester of physics; Intro to Engineering or instructor permission</td>
<td>Physics II: Projects in Engineering Lab (SCI4117L)</td>
<td>1.5</td>
<td>Spring</td>
</tr>
</tbody>
</table>

Students will develop and work on engineering-related projects that have a strong community service component. The class will be divided into small groups and work on projects based upon common interest. All projects will be required to demonstrate development and application of engineering skills in addition to fulfilling an identified need in the community. The class will have a regularly assigned class period but much of the work will be completed outside of regular class time. Project groups will meet with the instructor on a regular basis.
SCIENCE: CHEMISTRY EMPHASIS

For students who have no credits in General Chemistry, a comprehensive chemistry test, covering the subject matter of the two semesters of General Chemistry at the Academy, will be given to those students attempting to place out of the lecture portion of the course. This test will include questions to satisfy the state chemistry standards and additional questions to satisfy the higher expectations of the Academy. The test will be given before classes start in the fall and may be taken only once.

There are two possible outcomes of this test:

- The student does not pass the exam, and thus takes General Chemistry
- The student does pass the exam, and thus can –
  - elect to not place out and thus take the General Chemistry course and that earned grade will appear on the transcript
  - use the spare credit to take another academy course. If this path is chosen, they will be required to take and pass both semesters of the lab portion of the General Chemistry course.
  - take AP Chemistry (if concurrently enrolled in AP Calculus/AB or higher)

Passing this comprehensive chemistry placement test (upon completion of the laboratory requirement), or a higher level class, will satisfy a student's survey chemistry course requirement for their Indiana Academy diploma.

SCI03201/03202 – Chemistry I: General Chemistry 1 & 2 (DC) *Available for College Credit (see pg. ii)

Prerequisite: Fall: Algebra I and Geometry
Spring: Successful completion of first semester General Chemistry or permission of Science Division Chair.

Co-requisite: Chemistry I: General Chemistry Lab (SCI3201L/3202L) and Advanced Algebra/Trigonometry 1, 2 (MAT03001/03002) or higher.

Credit: 1.5 credits per semester
Offered: Fall/Spring Sequence

General Chemistry examines the concepts of the structure of matter, the states of matter, chemical bonding and reaction types, stoichiometry, equilibrium, acid-base theory, kinetics, thermodynamics, oxidation-reduction, and an introduction to organic chemistry. The course emphasizes chemical calculations and the mathematical formulation of principles. Laboratory work emphasizes both qualitative and quantitative experiences and introduces the use of technology in the lab.

*Ball State University offers 3 college credit hours in CHEM 100 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

SCI04204/04205 – AP Chemistry (DC) *Available for College Credit (see pg. ii)

Prerequisite: Fall: Successful completion of two semesters (or equivalent) of General Chemistry or permission of instructor.
Spring: Successful completion of first semester AP Chemistry or permission of Science Division Chair.

Co-requisite: Juniors: AP Calculus/AB (MAT04123/04124) or higher or permission and AP Chemistry Lab (SCI4204L/4205L)
Seniors: Pre-Calculus for AP (MAT03311/03312) or any 4000 level math course or permission and AP Chemistry Lab (SCI4204L/4205L)

Credit: 1.5 credits per semester
Offered: Fall/Spring Sequence

Advanced Placement Chemistry is an accelerated course designed to review and extend the concepts introduced in General Chemistry, and it is comparable to a course for science majors in freshman college chemistry. Advanced laboratory work is emphasized. This course is designed for students who hope to advance place in college chemistry and/or whose career goals include science, engineering or the medical sciences. Students will prepare for and are encouraged to take the AP Chemistry exam in May.

*Ball State University offers 4 college credit hours in CHEM 111 and 112 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.
SCI04209 – Chemistry II: Intro to Organic & Biochemistry (DC)  *Available for College Credit (see pg. ii)

Prerequisite: General Chemistry  
Co-requisite: Chemistry II: Introduction to Organic and Biochemistry Lab (SCI4209L)  
Credit: 1.5 credits  
Offered: Spring

In this course, the traditional aspects of organic chemistry, which include nomenclature, structure, bonding, and functional groups are examined but with emphasis on reactions and reaction pathways. The goal is to educate students to think independently about organic chemistry. Students are expected to analyze problems, sort facts, reason by analogy, and look for patterns. Laboratory work is carried out at both the micro-scale and macro-scale level. Selected topics in biochemistry will be covered, and students will be exposed to biochemical techniques in the laboratory. This course is intended for students whose college goals include biology, chemistry, or the medical sciences.

*Ball State University offers 5 college credit hours in CHEM 101 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

SCI04211 – Chemistry II: Biochemistry of the Cell (CL)

Prerequisite: Chemistry II: Introduction to Organic and Biochemistry or by permission of Division Chair  
Co-requisite: Chemistry II: Biochemistry of the Cell Lab (SCI4211L)  
Credit: 1.5 credits  
Offered: Fall

This course examines the biochemical makeup of the cell and the chemical processes that promote the functioning of the living cell. The biochemical composition of the cell, enzymes, cellular metabolism, the cytoskeleton, transport, cell movement, cellular signaling, control of the cell cycle, and cancer will be among the topics covered in the course. Laboratory experiences will illustrate common techniques utilized in biochemical analysis.

SCI04250 – Chemistry II: Forensic Science (XC)

Prerequisite: 1-year course in chemistry with laboratory, trigonometry or permission of instructor  
Co-requisite: Chemistry II: Forensic Science Lab (SCI4250L)  
Credit: 1.5 credits  
Offered: Fall

Forensic Science is a first course in the forensic application of both science and technology. Topics will be taught on a case history approach to expose students to “front-page” cases of past and present. This course will place major emphasis on exposing students to biological, chemical, and physical methods of analyzing crime scene evidence. Students will use information and evidence data from case histories and case readings, as well as the compilation of information from the internet, to explore and learn about the forensic applications of science and technology. Topics in this course will include: the history and development of forensic science, security of a crime scene and collection of physical evidence, trace evidence, fire investigations and explosives, fingerprints, firearms and tool marks, document examination, and computer forensics. This course will place a major emphasis on the newest and best methods to gather, analyze, and interpret data needed to solve all types of crimes. In addition, students will explore the disciplines of forensic science and college courses and majors necessary to obtain a career in the forensic sciences.
SCI04301/04302 – AP Biology (DC)  
*Available for College Credit (see pg. ii)

Prerequisite:  
Fall: Successful completion of two semesters (or equivalent) of General Biology and General Chemistry or permission of instructor  
Spring: Successful completion of first semester AP Biology or permission of the Science Division Chair.

Co-requisite:  
AP Biology Lab (SCI4301L/4302L)

Credit:  
1.5 credits per semester

Offered:  
Fall/Spring Sequence

This Advanced Placement course provides an accelerated, comprehensive, and thorough overview of the field of biology in preparation for the AP Biology exam. AP Biology has been redesigned following the changes adopted in the national curriculum starting in 2012-13. The course covers biological chemistry, cell biology, Mendelian genetics, evolutionary theory and principles, and an overview of the diversity, structure and ecology of organisms. Laboratory activities follow the required AP Biology lab exercises and other lab activities. Students will prepare for and are encouraged to take the AP Biology exam in May.

*Ball State University offers 4 college credit hours in BIO 111 and 112 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

SCI04304 – Biology II: Microbiology (DC)  
*Available for College Credit (see pg. ii)

Prerequisite:  
One year laboratory biology

Co-requisite:  
Biology II: Microbiology Lab (SCI4304L)

Credit:  
1.5 credits

Offered:  
Spring

The history of bacterial discovery, the scope of bacterial effects, biotechnology, and the classification of micro-organisms are studied. The course includes the study of the structure, function, and ecology of microbes and viruses. Basic aseptic and sterile techniques for isolating, culturing, and identifying bacteria are discussed and practiced in the laboratory as a prelude to learning fundamental staining techniques, biochemical tests, etc. that are used in the identification of unknown bacteria. Some consideration is given to the medical concerns related to bacterial and viral pathogens.

*Ball State University offers 5 college credit hours in BIO 113 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

SCI04305/04306 – Biology II: Human Anatomy and Physiology (CL)

Prerequisite:  
Fall: One year biology  
Spring: Successful completion of first semester Biology II: Human Anatomy and Physiology or permission of Science Division Chair.

Co-requisite:  
Biology II: Human Anatomy and Physiology Lab (SCI4305L/4306L)

Credit:  
1.5 credits per semester

Offered:  
Fall/Spring Sequence

Using an integrated text, this course covers material in six parts, which include: levels of organization, support and movement, control and regulation, fluids and transport, environmental exchange, and the continuity of life. Clinical topics that relate to personal and family health concerns are interwoven with a consideration of the relationship of structure to function. The concepts of anatomical and physiological processes are explored so that not only those seeking careers in the health sciences may benefit from the course, but also those interested in the mechanics of the human body are challenged.

SCI04310 – Biology II: Zoology (CL)

Prerequisite:  
One year biology

Co-requisite:  
Biology II: Zoology Lab (SCI4310L)

Credit:  
1.5 credits

Offered:  
Spring

Zoology is a comprehensive survey of the diversity found in Kingdom Animalia. This course addresses the issue of why such diversity occurs, and what factors influence and constrain it. Laboratory explorations of live and preserved specimens allow hands-on examination of the structure and behavior of animals.
SCI04317 – Biology II: Principles of Genetics and The Human Genome (CL)

Prerequisite: One year laboratory biology
Co-requisite: Biology II: Principles of Genetics and The Human Genome Lab (SCI4317L)
Credit: 1.5 credits
Offered: Fall

Principles of Genetics and The Human Genome is an introductory genetics course that examines classical Mendelian genetics and modern examples as they relate to the human genome. Specific topics include Mendelian genetics, the inheritance patterns of genes, the Central Dogma, pedigree analysis, chromosomal aberrations, behavioral genetics, and genetic screening. Laboratory activities emphasize techniques used to detect and analyze genetic information.

SCI04320 – Biology II: Molecular Genetics (CL)

Prerequisite: One year biology
Co-requisite: Biology II: Molecular Genetics Lab (SCI4320L)
Credit: 1.5 credits
Offered: Fall

Molecular Genetics is an advanced Biology course emphasizing the structure of DNA and biotechnology techniques. Specific topics include the modular structure of DNA and proteins, the relationship between DNA mutations and cancer, and the molecular techniques used in forensics and biotechnology. Laboratory activities will provide students the opportunity to perform some commonly used techniques in molecular genetics.

SCI04321 – Biology II: Field Botany (XC)

Prerequisite: One year biology
Co-requisite: Biology II: Field Botany Lab (SCI4321L)
Credit: .75 credit
Offered: Quarter 1

This course will emphasize the diversity found within the plant kingdom at differing levels of the classification. Topics covered will include Plant Anatomy, Morphology, Systematics and Taxonomy. Both non-vascular and vascular plants will form the basis of our study. Laboratory explorations will be organized around the study of the structure and function of plants and the organs. This is a field course that will emphasize knowledge of the local flora as models for plant study.

SCI04324 – Biology II: Intro to Bioethics (XC)

Prerequisite: One year biology
Credit: .5 cr.
Offered: Quarter 4

The ethical basis for the use of scientific knowledge is explored during this course. Students will explore ethical issues resulting from the application of scientific knowledge to solve problems in today’s world. Our priority will be the promotion and development of informed citizens and leaders who can use scientific information to cope with science related issues. The focus of the course revolves around such issues as energy resource problems, sustainability, the bioethics of genetic engineering, medical practices and death and dying. We hope to expand students’ horizons and understanding of science by exposing them to a variety of issues using selected readings. This course does not satisfy the Academy lab science requirements.

SCI04325 – Biology II: Medical Microbiology (XC)

Prerequisite: One year biology
Co-requisite: Medical Microbiology Lab (SCI4325L)
Credit: .75 credit
Offered: Quarter 3

This course will introduce the students to basic information on microorganisms, the immune system, microbial diseases and their transmission. The history of the discovery, control and treatment of major microbial diseases forms the basis of the lecture material. Students will be introduced/exposed to health related issues in pharmacology, parasitological, bacteriology, virology and epidemiology through an integrated lecture/discussion/laboratory format.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Co-requisite</th>
<th>Credit</th>
<th>Offered</th>
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</thead>
<tbody>
<tr>
<td>SCI04326</td>
<td>Biology II: Genes, Germs and Geography (XC)</td>
<td>Proven proficiency with computer applications.</td>
<td>Biology II: Genes, Germs and Geography Lab (SCI4326L)</td>
<td>.75 credit</td>
<td>Quarter 4</td>
</tr>
<tr>
<td>SCI04328</td>
<td>AP Environmental Science (DC)</td>
<td>One year biology</td>
<td>AP Environmental Science Lab (SCI4328L)</td>
<td>1.5 credits</td>
<td>Spring</td>
</tr>
<tr>
<td>COL05000</td>
<td>AP Seminar I: Biochemistry, Biotechnology, and Biomedical Sciences (CL)</td>
<td>One year of laboratory Biology and permission of the Science Division Chair</td>
<td></td>
<td>1 credit in Colloquium</td>
<td>Fall</td>
</tr>
<tr>
<td>COL05100</td>
<td>AP Seminar II: Biochemistry, Biotechnology, and Biomedical Sciences (CL)</td>
<td>AP Seminar I</td>
<td></td>
<td>1 credit in Colloquium</td>
<td>Spring</td>
</tr>
<tr>
<td>RES6000/6100</td>
<td>AP Research I: Biochemistry, Biotechnology, and Biomedical Sciences (XC)</td>
<td>AP Seminar II</td>
<td></td>
<td>1 credit</td>
<td>Fall/Spring Sequence</td>
</tr>
</tbody>
</table>

There is an increasing awareness of the need to manage the world we live in; that there are finite resources and that humans exist within and as part of a diverse and complex ecological framework. Students will be introduced to innovative GIS technology and explore real life problems through the relationship of genetics, epidemiology and spatial thinking.

*Ball State University offers 3 college credit hours in NREM 101 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

AP Seminar I is a foundational course for the Institute for Biochemistry, Biotechnology, and Biomedical Sciences that engages students in conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles and research studies. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team.

AP Seminar II is a foundational course for the Institute for Biochemistry, Biotechnology, and Biomedical Sciences and continuation of the AP Seminar I course. Students identify a research question of their own based on the source material provided by the College Board in order to develop a logical, well-reasoned argument. In addition, this course focuses on honing the skills learned in Seminar I in preparation for the end-of-course examination administered by the College Board.

In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question in biochemistry, biomedical or molecular biology. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of approximately 4,000-5,000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense and poster presentation.
SCI04406 – Earth and Space Science: The Solar System (DC) *Available for College Credit (see pg. ii)

Prerequisite: None
Co-requisite: Earth and Space Science: The Solar System Lab (SCI4406L)
Credit: 1.5 credits
Offered: Fall

This course is a survey of the solar system based on modern data obtained from NASA and ESA probes. Students are introduced to the basic concepts of planetary science. These concepts include elements of geology and meteorology. The planets, their satellites, and the sun are examined in detail from a planetary science point of view. Other solar system objects such as asteroids and comets are examined as a class. In addition the general motions of bodies in the solar system are examined.

*Ball State University offers 3 college credit hours in ASTR 100 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

SCI04407 – Earth and Space Science: Galactic Astronomy (DC) *Available for College Credit (see pg. ii)

Prerequisite: Algebra I
Co-requisite: Earth and Space Science: Galactic Astronomy Lab (SCI4407L)
Credit: 1.5 credits
Offered: Spring

This course introduces students to modern astronomy, its historical roots, and its place as a branch of modern physics. Physics topics include gravitation and the motion of celestial bodies, the relation of electromagnetism to light and thermodynamics and their application to astronomy, modern telescopes and their historical roots. Other topics include the structure of the sun and stars, binary stars, the distance to stars, the birth life and death of stars, neutron stars, black holes, the Milky Way, other galaxies, cosmology and the “Big Bang” theory.

*Ball State University offers 3 college credit hours in ASTR 120 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

Ball state courses such as the following may be taken on a space available basis. The academy is not responsible for fees associated with these courses.

- GEOL 101 Introduction of Geology
- GEOL 102 Historical Geology
- GEOL 206 Oceans and Nations
- GEOL 207 Environmental Geology
- GEOL 220 Mineralogy
Enrollment into Burris classes (BUR prefix) is subject to space availability. Burris courses meet five days a week and could conflict with other Academy choices.

**FAR05110 – Social History of Art (CL)**

- **Prerequisite:** Not open to students with credit in History through Art and Architecture
- **Credit:** 1 credit in Fine Arts
- **Offered:** Fall

An introduction to the history of art and architecture, with a deliberate exposure to both pre-modern and non-Western cultures. Topics and regions covered may include prehistoric and primitive art, a survey of Western art traditions and ideas from Greco-Roman times to the present, and comparative treatments of the independent artistic perspectives of Africa, India, East Asia, and the Americas. There will be a significant independent research component, with individual students “curating” a proposed gallery show as their final project.

**BURA0101 – Introduction to Two-Dimensional Art (CP)**

- **Prerequisite:** None
- **Credit:** 1 credit in Fine Arts
- **Offered:** Fall or Spring

Students taking Introduction to Two Dimensional Art will be using a variety of different projects utilizing the different media that will be used to demonstrate the importance of proper use of the elements and principles of design. The students will be engaged in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio-quality works. Students will create works of art, analyze their experiences, learn about historical and interdisciplinary connections, write critical assignments, make presentations that require them to use the art vocabulary, and explore career options in visual art. Students will also learn to use technology to develop ideas gather information, and use for presentations.

**BURA0105 – Ceramics (CP)**

- **Prerequisite:** Introduction to Two-Dimensional Art (BURA0101)
- **Credit:** 1 credit in Fine Arts
- **Offered:** Fall

The ceramics students will be introduced to different hand-building methods of pottery, such as coil, slab, pinch, drape, plus the opportunity to throw on the potter’s wheel. They will engage in sequential learning experiences that encompass art history, art criticism, aesthetics and production and lead the creation of portfolio-quality works. Students will reflect on multicultural ceramics and historical connections, (2) write about the process and self-assessment, (3) make presentations and (4) work individually and in groups and (5) explore career opportunities. Trips to museums, galleries, studios and community resources are utilized.

**BURA0106 – Sculpture (CP)**

- **Prerequisite:** Introduction to Two- and Three-Dimensional Art
- **Credit:** 1 credit in Fine Arts
- **Offered:** Spring

The sculpture students will be introduced to different sculptural techniques, such as construction, assemblage, carving, modeling and casting. They will engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead the creation of portfolio-quality works. Students will (1) reflect on multicultural sculpture and historical connections, (2) write about the process and self-assessment, (3) make presentations, and (4) work individually and in groups and (5) explore career opportunities. Trips to museums, galleries, studios and community resources are utilized.
BURA0107 – Drawing (CP)

Prerequisite: Introduction to Two-Dimensional Art (BURA0101)
Credit: 1 credit in Fine Arts
Offered: Fall

The drawing students will be introduced to different processes such as sketching, rendering, contour, gesture, and perspective drawing. They will engage in sequential learning experiences that encompass art history, art criticism, aesthetics and production and lead the creation of portfolio-quality works. Students will reflect on multicultural and other disciplines and historical connections, (2) write about the process and self assessment (3) makes presentations and (4) work individually and in groups and (5) explore career opportunities. Trips to museums, galleries, studios and community resources are utilized.

BURA0108 – Painting (CP)

Prerequisite: None
Credit: 1 credit in Fine Arts
Offered: Fall

The painting students will be introduced to different methods of painting, such as oil, acrylic, watercolor, oil pastels and mixed media. They will engage in sequential learning experiences that encompass art history, art criticism, aesthetics and production and lead the creation of portfolio quality works. Students will reflect on historical connections, (2) write about the process and self assessment (3) make presentations and (4) work individually and in groups and (5) explore career opportunities as they create abstract and realistic paintings. Trips to museums, galleries, studios and community resources are utilized.

BURA0109 – Printmaking (CP)

Prerequisite: Drawing or Introduction to Two- and Three-Dimensional Art
Credit: 1 credit in Fine Arts
Offered: Spring

The students are introduced to different printing methods such as relief, woodcut, etchings, silkscreen, calligraphic, and embossment. They engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead the creation of portfolio quality works. Students (1) reflect on multicultural and other disciplines and historical connections, (2) write about the process and self-assessment, (3) make presentations, and (4) work individually and in groups and (5) explore career opportunities. Trips to museums, galleries, studios and community resources are utilized.

BURA0110 – Fiber Arts (CP)

Prerequisite: Drawing or Introduction to Two- and Three-Dimensional Art
Credit: 1 credit in Fine Arts
Offered: Spring

Students create fiber art works utilizing processes such as loom and off-loom construction, dyeing/tying fabric, stitchery, and batik. Students additionally: (1) reflect upon the outcome of these experiences, (2) explore historical connections, (3) write about the process, (4) make presentations about their progress at regular intervals, (5) work individually and in groups, (6) find direct correlation to other disciplines, and (7) explore career options related to jewelry design. Art museums, galleries, studios and community resources are utilized.

BURA0111 – Jewelry (CP)

Prerequisite: Completion of Introduction to Two-Dimensional Art or Drawing
Credit: 1 credit in Fine Arts
Offered: Spring

Students create works of jewelry design and fabrication techniques including, sawing, piercing, filing, soldering, bead making, macramé, papier-mâché, wire and bead, copper enameling and ceramics. Students additionally: (1) reflect upon the outcome of these experiences, (2) explore historical connections, (3) write about the process, (4) make presentations about their progress at regular intervals, (5) work individually and in groups, (6) find direct correlation to other disciplines, and (7) explore career options related to jewelry design. Art museums, galleries, studios and community resources are utilized.
BURJ0101 – Journalism (CP)

**Prerequisite:** None  
**Credit:** 1 credit in elective studies  
**Duration:** Spring

This one-semester course includes the process involved in the art of journalism and the profession of journalists. Topics covered include, but are not limited to, (1) news gathering, (2) reporting and writing news stories, (3) the legal and social responsibilities involved in newspaper publications, and (4) the ethics of accurate and fair reporting. Advertising design and sales, page layout and design and yearbook techniques will also be covered. Students will use computers and current desktop publishing software to produce journalistic products. Students enrolling must have solid English language skills.

J101 – Publications (CP)

**Prerequisite:** None  
**Credit:** 1 credit per semester in elective studies  
**Offered:** Fall and/or Spring

This course provides the study and practice in gathering and analyzing information, interviewing and note taking for the purpose of writing, editing, and publishing; the gathering, editing and preparation of digital images; and the design and preparation of page layouts for high school yearbook.

This course will also provide the study of, and practice in gathering, and analyzing information, interviewing and note taking for the purpose of: (1) writing, (2) editing, (3) publishing for high school newspaper.
ACADBAND – Advanced Band (CP)

**Prerequisite:** None  
**Offered:** Fall/Spring Sequence

This is a performing organization for woodwinds, brass, and percussion in which students develop increasing performance skills individually and in ensemble with emphasis on the stylistic characteristics of the music studied. Full year enrollment is required for those students who desire to participate in any ISSMA or other state music events.

BUSTRING – Advanced Orchestra (Strings Only) (CP)

**Prerequisite:** Middle School Orchestra or interview/audition with the instructor  
**Offered:** Fall/Spring Sequence

Advanced Orchestra is offered as a continuation for students with previous orchestral experience. Educational emphasis is placed on the advancement of instrumental technique, further development of music reading and comprehension skills, independent musicianship, style, and a deeper understanding of small group ensemble music, and orchestral literature. Literature will contain both Classical and Popular music. Students perform both in small group ensemble projects and as a large group. Participation in all scheduled concerts and performances is mandatory. Full year enrollment is required for those students wishing to participate in ISSMA events, All-State Orchestra, and youth orchestras. Students will be required to spend time outside the normal school day and on weekends to fulfill the requirements for credit for this class. Students are encouraged to take private lessons and participate in outside performing groups.

BURCHOIR – Advanced Choir (CP)

**Prerequisite:** None  
**Offered:** Fall/Spring Sequence

The purpose of the high school choir is to provide students with the opportunity to sing vocally in a group and to improve their singing ability. Emphasis is placed on correct singing techniques, vocal blend, and learning to read music. National standards are incorporated into the course to develop comprehensive musicianship. The choir performs all styles of music, from classical music to jazz, and has three or four performances a year. Students are required to participate in all concerts and performances. Full year enrollment is required for those students wishing to participate in ISSMA or other state music events.
INTERDISCIPLINARY STUDIES

BUSINESS

BUS0110 – Personal Finance (DC) *Available for College Credit (see pg. ii)
Prerequisite: None
Credit: 1 credit
Offered: Fall
The fundamental principles of general business and related economic concepts are considered from the consumer’s point of view. General fundamental principles of business, consumer buying, use of credit, banking, insurance, investments, tax concepts, and budgeting will be introduced.

*Ball State University offers 3 college credit hours in FIN 110 to students who complete this course. Refer to the Dual Credit section on the Academy Website for details on enrollment and fees.

J101 – Publications (CP)
Prerequisite: None
Credit: 1 credit per semester in elective studies
Offered: Fall and/or Spring
This course provides the study and practice in gathering and analyzing information, interviewing and note taking for the purpose of writing, editing, and publishing; the gathering, editing and preparation of digital images; and the design and preparation of page layouts for high school yearbook.
This course will also provide the study of, and practice in gathering, and analyzing information, interviewing and note taking for the purpose of: (1) writing, (2) editing, (3) publishing for high school newspaper.

COLLOQUIUM

COL03900 – Junior Colloquium (CL)
Prerequisite: None
Credit: .5 credit in Junior Colloquium
Offered: Spring
This is a discussion-oriented seminar and is required for all juniors. Students participate in a variety of experiences: small group seminars, large group lectures, large group outings, and medium group simulations as a part of this interdisciplinary series. All students will do a variety of readings on many different content areas as part of this experience.

COL04000 – Senior Colloquium (CL)
Prerequisite: Junior Colloquium (COL3900)
Credit: .5 credit in Senior Colloquium
Offered: Fall
This is a discussion-oriented seminar and is required for all seniors. Students participate in a variety of experiences: small group seminars, large group lectures, large group outings, and medium group simulations as a part of this interdisciplinary series. All students will do a variety of readings on many different content areas as part of this experience.

COL05000 – AP Seminar I: Biochemistry, Biotechnology, and Biomedical Sciences (CL)
Prerequisite: One year of laboratory Biology and permission of the Science Division Chair
Credit: 1 credit in Colloquium
Offered: Fall
AP Seminar I is a foundational course for the Institute for Biochemistry, Biotechnology, and Biomedical Sciences that engages students in conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles and research studies. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team.
INTERDISCIPLINARY STUDIES (Continued)

COL05100 – AP Seminar II: Biochemistry, Biotechnology, and Biomedical Sciences (CL)

Prerequisite: AP Seminar I
Credit: 1 credit in Colloquium
Offered: Spring

AP Seminar II is a foundational course for the Institute for Biochemistry, Biotechnology, and Biomedical Sciences and continuation of the AP Seminar I course. Students identify a research question of their own based on the source material provided by the College Board in order to develop a logical, well-reasoned argument. In addition, this course focuses on honing the skills learned in Seminar I in preparation for the end-of-course examination administered by the College Board.

RESEARCH

Students who have completed, or plan on completing an in-depth research project for a Science Fair or other purpose, may not be required to take an Academy research course. Students who have been, or are engaged in other research activities, should talk to their advisors and the Research course coordinator about the possibility of petitioning out of the Research course. Students who do enroll in research and complete a research project are encouraged to present their project at the Eastern Indiana Regional Science Fair (at Ball State) which usually is held in late February or early March.

RES03100 – General Research (XC)

Prerequisite: None
Credit: 1 credit in Academy Research
Offered: Fall or Spring-Not available to 1st semester Juniors

General Research is not available to 1st semester juniors; all other research courses are available (discussion with advisor recommended). In this course, basic principles of scientific research are covered, and the student is expected to develop and complete a research project which is presented through a written document and oral presentation. Students interested in developing an original, in-depth research idea should enroll in Research in the Sciences, in which an original research grant proposal, rather than the research project, is prepared and completed during the semester.

RES3100C – Research in Computer Science (XC)

Prerequisite: None
Credit: 1 credit in Academy Research
Offered: Fall or Spring

The students are expected to learn the principles of research as they pertain to Computer Science. The students will present their work in the form of a written report and oral presentation.

RES3100H – Research in Humanities (XC)

Prerequisite: None
Credit: 1 credit in Academy Research
Offered: Juniors, Fall or Spring, Seniors enroll Fall

In this course the principles of research as they pertain to the humanities are emphasized. The students learn methods of topic selection, use of primary and secondary sources, and the correct writing of a scholarly paper. The goal of the class and the end product is to produce a scholarly project based on some level of original research. This course can be taken in either semester of the junior year or the fall semester of the senior year.

RES3000S – Research in the Sciences (XC)

Prerequisite: None
Credit: 1 credit in Academy Research
Offered: Fall or Spring

This course is offered first or second semester of the junior or senior year. The student is expected to develop a grant proposal for an original study in the sciences. The proposal will be presented as a written document and as an oral presentation. Students are encouraged to continue their work as an actual project by enrolling in RES3911S and presenting their work at a science fair or other appropriate venue.
RES3911S – Research Projects in the Sciences (XC)

Prerequisite: None
Credit: 1 credit
Offered: Fall or Spring

In this course, a student will work with a faculty mentor in designing and completing a research project which will be presented in a science fair or similar venue. Enrollment in this course must be approved by the Research Coordinator.

RES6000 – AP Research I: Biochemistry, Biotechnology, and Biomedical Sciences (XC)

Prerequisite: AP Seminar II
Credit: 1 credit
Offered: Fall

In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question in biochemistry, biomedical or molecular biology. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of approximately 4,000-5,000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense and poster presentation.

RES6100 – AP Research I: Biochemistry, Biotechnology, and Biomedical Sciences (XC)

Prerequisite: AP Seminar II
Credit: 1 credit
Offered: Spring

In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question in biochemistry, biomedical or molecular biology. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of approximately 4,000-5,000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense and poster presentation.
INDIVIDUAL STUDY

INTERNSHIPS

The internship program allows students to explore a career interest by working with a professional for a short period of time. The emphasis is on a work experience that enables students to learn about a potential career choice. Students may schedule four or eight hours per week in the Internship program. Students can earn one half credit per semester (4 hrs./week) or one credit per semester (8hrs./week).

DIRECTED STUDY

Through a Directed Study, students form linkages with instructors who have expertise in an area of interest for them that cannot be acquired through the Academy curriculum. If students are interested in pursuing a Directed Study, they should first contact the particular instructor with whom they wish to study to determine if the instructor is willing. If the instructor agrees to the Directed Study, then the instructor and the student must complete the Directed Study Proposal form on the Indiana Academy website at academy.bsu.edu/forms. No student may take a Directed Study if his or her need may be met through an Indiana Academy course offering unless an explicit need or conflict can be demonstrated. Students wishing to enroll in a Directed Study must be at least a second semester junior. The Directed Study must be approved by the instructor, Division Chair, and Director of Academic Affairs. This approval process automatically occurs once the proposal is submitted online.