



NOTRE DAME ACADEMY

CURRICULUM CATALOG

2019-2020

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## MISSION STATEMENT

*Notre Dame Academy is a Catholic, college-preparatory high school dedicated to educating young women to make a difference.*

## PHILOSOPHY

Notre Dame Academy nurtures the whole young woman by recognizing the dignity, uniqueness, and potential of each student. As a Catholic school, Notre Dame Academy encourages students to integrate learning and living in light of the Gospel message. In the spirit of St. Julie Billiart, and in the educational tradition and charism of the Sisters of Notre Dame, the Academy reflects God's goodness and provident care in its warm and welcoming atmosphere.

Parents and guardians are the primary educators of their children; therefore, Notre Dame Academy partners with them to promote the growth of each student. Committed to forming women of faith, the school cultivates an environment that empowers students to live Catholic values and to put her faith into action. Providing myriad opportunities for prayer, reflection, and service, Notre Dame Academy encourages lifelong participation in the Church, as well as in the local and global community.

The rigorous college-preparatory curriculum promotes excellence and is enhanced by technology and extra-curricular activities. Notre Dame Academy strives to develop the academic and leadership potential of each student and to provide the tools to develop self-confidence, set meaningful goals, and take the initiative to achieve them. Celebrating its rich heritage and diversity, Notre Dame Academy cherishes each student as a reflection of God's goodness and prepares her to lead a life characterized by spiritual and moral growth, academic excellence, social responsibility and a love of learning.

## INTEGRAL STUDENT OUTCOMES (ISOs)

Notre Dame Academy graduates are:

- Women of Faith who live Catholic values and witness to God's goodness and provident care.
- Women of Academic Excellence who think critically and communicate effectively.
- Women of Vision and Leadership who collaborate, problem solve, and use technology ethically.
- Women of Service and Compassion who make a positive difference in the world.

## ACADEMIC PROGRAM

	9	10	11	12
Religion	The Revelation of Jesus Christ in Scripture/Who is Jesus Christ?	The Paschal Mystery/Jesus Christ's Mission	Sacraments/Life in Jesus Christ	Responding to the Call of Jesus/Living as a Disciple in Society
Duddy Institute		Disruptive Innovation 1†	Disruptive Innovation 1†, 2†	Disruptive Innovation 1†, 2†, 3† <i>(3 offered 2020-21 school year)</i>
Computer Science			AP Computer Science Principles*	AP Computer Science Principles*
English	Introduction to Composition and Literature Honors Introduction to Composition and Literature Communications† Journalism†	Multi-Cultural Literature and Composition Honors Multi-Cultural Literature and Composition* Journalism†	American Literature and Composition AP English Language and Composition* Journalism†	British Literature and Composition AP English Literature and Composition* Journalism†
Mathematics	Algebra 1 Geometry Honors Geometry	Geometry Honors Geometry Algebra 2 Honors Algebra 2/Trigonometry	Algebra 2 Honors Algebra 2/Trigonometry Pre-Calculus/Trigonometry Honors Pre-Calculus*	Pre-Calculus/Trigonometry Honors Pre-Calculus* Statistics Calculus AP Calculus AB*
Performing Arts	Concert Choir 1 Liturgical Choir† Introduction to Dance Intermediate Dance 1, 2† Advanced Dance Drama 1 Play Production†	Concert Choir 1, 2 Liturgical Choir† Introduction to Dance Intermediate Dance 1, 2† Advanced Dance Advanced Dance Performance Drama 1, 2 Play Production†	Concert Choir 1, 2, 3† Liturgical Choir† Introduction to Dance Intermediate Dance 1, 2† Advanced Dance Advanced Dance Performance Drama 1, 2, 3 Play Production†	Concert Choir 1, 2, 3†, 4† Liturgical Choir† Introduction to Dance Intermediate Dance 1, 2† Advanced Dance Advanced Dance Performance Drama 1, 2, 3, 4 Play Production†
Physical Education	PE/Health Science† PE: Introduction to Dance†‡ PE: Intermediate Dance 1†‡ Sports Conditioning Classes†‡ Sports Teams†‡	PE: Introduction to Dance†‡ PE: Intermediate Dance 1†‡ Sports Conditioning Classes†‡ Sports Teams†‡	PE: Introduction to Dance†‡ PE: Intermediate Dance 1†‡ Sports Conditioning Classes†‡ Sports Teams†‡	PE: Introduction to Dance†‡ PE: Intermediate Dance 1†‡ Sports Conditioning Classes†‡ Sports Teams†‡

<b>Science</b>	Biology Robotics† Rocketry†	Chemistry Honors Chemistry* Robotics† Rocketry†	Astronomy Physics AP Biology* AP Chemistry* AP Environmental Science* AP Physics 1* Robotics† Rocketry†	Astronomy Physics AP Biology* AP Chemistry* AP Environmental Science* AP Physics 1* Robotics† Rocketry†
<b>Social Science</b>	Mock Trial†	Modern World History AP World History* Mock Trial†	U.S. History AP U.S. History* Intro to Psychology AP Psychology* AP World History* Mock Trial†	U.S. Government and Economics AP U.S. Government and Politics* Intro to Psychology AP Psychology* AP World History* Mock Trial†
<b>Visual Arts and Art History</b>	Drawing Painting 2-D Design Art Appreciation Photography	Drawing Painting 2-D Design Film Studies Art Appreciation Photography AP Art History*	Drawing Painting 2-D Design Film Studies Art Appreciation Photography AP Art History* AP Studio Art: Drawing* AP Studio Art: 2-D Design* AP Studio Art: 3-D Design*	2-D Design Film Studies Art Appreciation Photography AP Art History* AP Studio Art: Drawing* AP Studio Art: 2-D Design* AP Studio Art: 3-D Design*
<b>World Languages</b>	Spanish 1 Spanish 2 Honors Spanish 3* French 1 French 2	Spanish 2 Spanish 3 Honors Spanish 3* Spanish 4 Honors Spanish 4* AP Spanish Language* French 2 French 3 Honors French 3*	Spanish 3 Honors Spanish 3* Spanish 4 Honors Spanish 4* AP Spanish Language* AP Spanish Literature* French 3 Honors French 3* French 4 AP French Language*	Spanish 4 Honors Spanish 4* AP Spanish Language* AP Spanish Literature* French 4 AP French Language*
<b>Additional Offerings</b>	Academic Decathlon† Yearbook†	Academic Decathlon† Yearbook†	Academic Decathlon† Independent Study† Yearbook†	Academic Decathlon† Independent Study† Study Hall† Yearbook†

\* eligible for GPA bonus point

†does not satisfy a UC a–g requirement

‡units may be used toward satisfying additional PE credits for graduation

## REQUIREMENTS

	<b>Notre Dame Academy Graduation</b>	<b>UC Admission</b>	<b>CSU Admission</b>
<b>Religion</b>	4 years	No requirement	
<b>English</b>	4 years	4 years	4 years
<b>Mathematics</b>	3 years	3 years <i>4 years recommended</i>	3 years <i>4 years recommended</i>
<b>Science</b>	1 year Biology 1 year Chemistry	2 years <i>3 years recommended</i>	2 years
<b>Social Science</b>	3 years	1 year U.S. History 1 year World History	1 year U.S. History 1 year social science
<b>World Languages</b>	2 years (same language)	2 years <i>3 years recommended</i>	2 years <i>3 years recommended</i>
<b>Visual or Performing Arts (VPA)</b>	1 year-long class	1 year-long class	1 year-long class
<b>Electives</b>	Variable	1 year college-preparatory elective	1 year college-preparatory elective
<b>Physical Education and Health</b>	5 credits PE/Health 5 credits other PE	No requirement	
<b>Communications</b>	1 semester	No requirement	
<b>Christian Service</b>	100 hours (see page 37)	No requirement	
<b>Credits to Graduate</b>	240 (10 credits per year-long class)		
<b>Exam Requirements</b>	No requirement	SAT or ACT plus Writing; some majors require SAT Subject Tests	SAT or ACT
<b>Honors Points</b>	1 extra point for most Honors and AP classes for As, Bs, and Cs	Maximum of 8 semesters awarded for approved honors and AP courses taken during the last 3 years of high school. No more than two approved honors level courses taken in the tenth grade may be given extra points.	
<b>Grades</b>	Cumulative GPA of 2.0. Remediation of D's and F's as required.	A minimum GPA of 3.0 in all "a-g" courses completed in grades 10 and 11, with no grade lower than a C.	
For current UC and CSU approved courses, visit: <a href="https://hs-articulation.ucop.edu/agcourselist#/list/details/3136">https://hs-articulation.ucop.edu/agcourselist#/list/details/3136</a>			

## RELIGION

*Love. Compassion. Peace. Joy. Grace. In the midst of a busy day — carpool, traffic, practice, rehearsal, homework, life with family and friends — slow down and breathe in the peace and love of God. Listen to His Word in Scripture. Reflect deeply on life and true happiness. Discuss the important questions of faith with classmates. Pray. Learn. Grow more fully into the woman God has dreamed you into being.*

*“Be still and know that I am God.” — Psalm 46:10*

### **The Revelation of Jesus Christ in Scripture/Who Is Jesus Christ?**

The Bible is a “love letter” from God. Experience God in new ways as you dive into the Scriptures and their meaning in our faith by learning about biblical archeology, history, language, and everyday life of the Israelite people. Grow in your knowledge and love of Jesus and come to understand his universal call to holiness and discipleship through the study of the Gospels. Deepen your relationship to God through a variety of prayer experiences that incorporate Scripture and Ignatian spirituality.

*“Let the word of Christ dwell in you richly.” — Colossians 3:16*

### **The Paschal Mystery/Jesus Christ’s Mission**

Who is Jesus? How can God die? If Jesus rose from the dead where is he now? Take a journey in faith and love to the deepest mysteries of our faith in Jesus Christ. Discover the clues to Jesus’ whereabouts in your life and the world today. Encounter the Church, the people who make Him present in the world today, as you expand your life of prayer and reflection. Find out what it means to be a pilgrim on the road to holiness and taste the promise of fulfillment along the way.

*“Behold, I am with you always, until the end of time.” — Matthew 28:20*

### **Sacraments/Life in Jesus Christ**

Do you know your *zucchetto* from your *biretta*? An acolyte from an aspergillum? Sacramentary from the sacraments? Find out more about the grace of Jesus Christ available in the Sacraments, how to live them and love them. Cultivate a deeper relationship with Jesus through a life of prayer, reflection and discussion. By learning the precepts that govern the lives of Christ’s disciples, gain a deeper understanding of the moral responsibilities of Christians to God, to us, and to our neighbors.

*“I am the Bread of Life.” — John 6:35*

## Responding to the Call of Jesus/Living as a Disciple in Society

You're a senior and college is on the horizon, but to what and where is God really calling you? Explore the different ways your passions can meet the world's greatest needs as you discern your vocation. No matter what path God desires for you, life as a disciple is grounded in the Catholic Social Teaching of the Church or social justice – a fundamental belief in the dignity of each person, a concern for the common good and the most vulnerable among us, and care for God's creation.

*"For I know the plans I have for you," declares the Lord.* — Jeremiah 29:11

## DUDDY INSTITUTE

*Partnering with ARK Invest, the Duddy Innovation Institute offers a challenging educational experience for young women eager to stretch their learning beyond the boundaries of traditional acquisition of knowledge while influencing a new way of thinking and learning throughout the campus.*

## Disruptive Innovation 1, 2, 3

Innovation – particularly when driven by ethically minded leaders – is essential for the growth of societies and economies. Explore the future of technology, innovation, and entrepreneurship with a leader in the field of disruptive innovation. This unique interdisciplinary opportunity highlights the disruptive innovations recognized by NDA partner ARK Invest as transformative drivers of our future. They include artificial intelligence, block chain technology, genomic sequencing, energy storage, and robotics, as well as all their respective derivatives and pioneering companies leading the way.

## COMPUTER SCIENCE

*Computer science plays a vital role in our communities and is an essential tool for anyone who wants to make the world a better place. Learn how to creatively address world issues by applying our most powerful technologies for good.*

## AP Computer Science Principles

Learn the fundamentals of computing and understand how computing and technology influence the world around you. Get ready to grapple with the impacts computing has on society as you use data to solve problems and explore cybersecurity, the Internet, and programming.



## ENGLISH

*Heighten your understanding of self, others, and the global community in which we live through the study of literature and language. Develop critical thinking and writing skills through the exploration of genres and styles from a variety of historical periods and cultures.*

### **Introduction to Composition and Literature**

Establish a firm critical thinking and writing foundation for your academic career with this introduction to language arts and literature. Focus on writing mechanics, paragraph structure, vocabulary, and expository writing even as you explore Greco-Roman mythology and Shakespeare, as well as works of non-fiction and poetry.

### **Honors Introduction to Composition and Literature**

Explore various literary genres and practice the art of written communication as you hone the skills essential for academic success. Through close reading and analysis, discover literary devices and techniques in short stories, Greco-Roman mythology, Shakespeare, non-fiction, and poetry.

### **Communications**

A Notre Dame Academy graduate expresses herself with confidence and poise with audiences large and small. Develop speaking skills and master various communication techniques (gestures, eye contact, posture, articulation, volume, and inflection) as you craft and present expository and persuasive speeches. Build information literacy skills, Internet safety and ethics, and maximize the use of your MacBook.

### **Multi-Cultural Literature and Composition**

Nigerian writer Chimimanda Adichie warns us of “the danger of a single story.” When we know only a single story about a country or a people, we risk a critical misunderstanding of cultures. Undermine the “danger of a single story” by hearing and analyzing voices from a variety of cultures and from many eras. Consider those voices in poetry, short stories, dramas, non-fiction, and novels. Develop critical analysis and writing skills by responding to those voices in persuasive and research compositions.

### **Honors Multi-Cultural Literature and Composition**

Dive into works from Sophocles to Shakespeare, from Rumi to Hosseini. Enjoy greater depth of analysis in both writing and class discussions as you explore the voices of a variety of cultures and eras. Respond to these voices and sharpen your writing skills with a variety of compositions.

### **American Literature and Composition**

Hawthorne. Miller. Thoreau. Twain. Steinbeck. Faulkner. Explore a wide variety of literary genres and traditions from the beginning of American writings to more contemporary literature. Focus on novels, short stories, poetry, drama, letters, and essays as they convey uniquely American themes. Master the writing process, including pre-writing, drafting, revision, and editing.

### **Advanced Placement English Language and Composition**

How does literature reflect the American experience? Explore the growth of American literature as it parallels and reflects the development of the nation. Discover a wide variety of traditions and genres as you hone rhetorical and persuasive writing skills.

### **British Literature and Composition**

Unmask the most prominent characters in British literature in this study of selected masterpieces. Work with readings from the origins of the first recorded piece of literature written in English (or from ancient oral traditions) to contemporary fantasy and dystopian fiction. Understand poetry, drama, epics, and novels in historical and cultural context. Deepen and refine written composition skills in anticipation of college-level writing with timed in-class essays as well as formally prepared and revised papers.

### **Advanced Placement English Literature and Composition**

Can't put the book down? Put that love of reading to good use as you devour literary classics and related criticism. Present your own critical analysis in both timed, in-class writing as well as formally prepared and revised papers. Employ college-level interpretation and analysis of complex texts while synthesizing philosophy, history, science, sociology, and literary criticism.

### **Journalism**

Join like-minded news reporters and opinion writers to create NDA's blog, *The Queen's Press*. Hone news writing, reporting, editing, and computer graphics skills as you direct every aspect of the copy and layout. Fedora optional.

## MATHEMATICS

*Math is practical; math is beautiful. These two concepts reverberate throughout the math curriculum. Want to hone your logical thinking and problem solving skills? Math will do it. Want to strengthen your ability to succeed at any career, from business to engineering to high tech? Math is the ticket to success.*

### Algebra 1

Virtually every decision we make is made easier by using the methods from algebra. Whether it's comparing prices in the grocery store, deciding on the best route home, or planning a party, everyone uses algebra skills daily. Develop an awareness of the wonderful mathematical underpinnings of this incredibly useful tool. Understand the real number system, solve and graph equations and inequalities, grasp functions from linear to quadratic – all focused on improving practical and delightful problem solving skills.

### Geometry

Experience the most ancient of mathematical disciplines. Geometry made possible the building of the pyramids as well as the plotting of the heavens. Exercise the more visual regions of the brain and examine the world in three dimensions. Geometry surrounds all of us, from the architecture of our buildings to the very design of the car you drive.

### Honors Geometry

Journey through proof-based geometry and arrive at a newfound appreciation for the study of logic. Stretch your mind and learn about coordinate geometry, area and volume, circles, and the many applications of right angle trigonometry.

### Algebra 2

Building on the practical skills from Algebra 1 and the rigorous habits of mind from Geometry, Algebra 2 begins your ascent into higher-level math. New structures like polynomials, exponential functions, and logarithms make their appearance. Impractical? Abstract? Not at all! These are the mathematical translations of the natural world we see around us. They are essential to the progress of science, engineering, and commerce.

### Honors Algebra 2/Trigonometry

In addition to the wonders of Algebra 2, Honors Algebra 2 begins the preparation for the mathematics of change – calculus! Treat functions as living tools to understand and predict. Revisit the incredible power of the simple triangle through trigonometry. Develop the math habits and study skills that will enable you to succeed in college.

### **Pre-Calculus/Trigonometry**

Whether a college calls it Discrete Math, College Math, Business Calculus, or Calculus for non-majors, this class will fully prepare you for math in college. So much of college math – and life – consists of strong algebra skills, and this course revisits and strengthens the skills learned in Algebra 2. Explore the mystery and wonder of the simple right triangle during an in-depth study of Trigonometry. Engaging and fun, you'll leave this course appreciating math, both practically and aesthetically.

### **Honors Pre-Calculus**

Get on board and hold on tight! Honors Pre-calculus will rock your math world. Fast paced and rigorous, it's the introduction to math you've probably never seen before. Dive into the deep end of trigonometry. Navigate exciting pathways that include vectors, polar coordinates, sequences and series, and conic sections. After completing the course, you'll never look at mathematics the same way!

### **Statistics**

Part social science, part experimentation, part writing, and part math, this course is unlike any other math course. Discover its profound connections with AP Psychology and Economics. Learn to critically analyze information not only in school, but also on the news and in advertisements. Graphically display data and information crucial for running a civil society.

### **Calculus**

Only 350 years old, calculus is a math baby compared to algebra, geometry, and trigonometry, but it's so exciting! Our modern science and engineering feats could never have even been conceived without calculus. It's a whole different way of math thinking. Interested in putting your toe in the water, but without making the AP commitment? Take Calculus.

### **Advanced Placement Calculus AB**

Change is good and so is learning about it. Understanding rates of change and accumulation through calculus is a must for scientists, engineers, and businesswomen. AP Calculus will pull together all of your prior math learning into a new and essential math toolbox.

## PERFORMING ARTS

*Dance, music, and theatre have existed throughout the ages in all cultures and uniquely convey knowledge inaccessible through the study of other subjects. Set goals, evaluate, revise, problem solve, think creatively, and apply self-discipline as you dance, sing, and create. Express yourself while collaborating with classmates to create meaningful performances and develop your craft.*

### CHOIR

#### Concert Choir 1, 2, 3, and 4

Discover your inherent musicality and develop your musical gifts through a variety of choral literature, sight reading, music theory, vocal technique and health. Perform throughout the year at Fine Arts Night, Christmas and Spring concerts, and festival performances. All are welcome.

As you progress through the choral arts program, further hone your skills with opportunities to lead sectionals, rehearse and conduct a selected work at the spring concert, and other leadership opportunities.

#### Liturgical Choir

Are you a pop star in the shower? Or have you been studying an instrument or singing for years? In either case, join Liturgical Choir to sing and play at all the liturgical celebrations throughout the school year. Practice worship music from traditional to contemporary as you develop harmonization and music reading skills. All interested singers and experienced instrumentalists are welcome, even those with a possible sport or drama conflict.

### DANCE

#### Introduction to Dance

So you think you can dance? Find out by exploring dance technique and style in ballet, jazz, and modern dance. Learn how to execute dance steps while studying the origins of the steps and styles. Explore dance history, cultural awareness, and appreciation of dance as an art form. View and assess dance performances both on and off campus. Make your debut in the Fine Arts Night and the Spring Dance Concert.

**Intermediate Dance 1**

Do you know your chassé from your jeté? Build your dance skills with more challenging technique and movement styles. Study choreographers within various dance genres. Show off your moves at Fine Arts Night and the Spring Dance Concert.

**Intermediate Dance 2**

Learn a new language – the language of dance and specifically, the Laban technique. Explore the communication of movement and the fundamentals of dance composition through this unique method. Refine and expand the skills developed in Intermediate Dance. Demonstrate those skills in your Fine Arts Night and the Spring Dance Concert performances.

**Advanced Dance**

Join other proficient dancers and focus on advanced jazz and modern technique with extensive preparation for performances and showcases. Study dance composition and practice composition techniques. Benefit from specialized instruction from guest teachers and participate in annual dance events. Analyze professional performances as they relate to the history of dance. Perform in Fine Arts Night and the Spring Dance Concert.

**Advanced Dance Performance**

Take this opportunity to choreograph and master several pieces for performance and competition. Perfect technique and choreography skills as you analyze the history of dance through performance critiques. Profit from specialized instruction from guest teachers and participate in annual dance events, including Fine Arts Night and the Spring Dance Concert.

**DRAMA****Drama 1**

Stanislavski, Brecht, Grotowski, Brook, Hagen, and Adler. Study the principles of these important theater practitioners as you develop theatrical vocabulary and beginning acting technique. Through the study of improvisation, movement, voice, theatre games, monologues and scene study, learn the fundamental elements of dramatic performance. Critically assess performances through written work as well. Help to produce the school play and participate in other drama presentations and festivals throughout the year.

**Drama 2**

Build on performance skills with this in-depth study of acting technique. Assess several genres through written work and performance. Develop the techniques of building a character, scene study, and performance technique. Break a leg in the production of the school play, the DTASC Interscholastic Drama Competition, and various drama presentations throughout the year.

**Drama 3**

Continue to develop acting techniques, now with additional emphasis on performance and analysis. Show your skills at various drama competitions and presentations throughout the year.

**Drama 4**

In this culmination of the drama program, apply your artistic skills in several festivals and performances throughout the year. Write critical assessments and theory of performances as well. Be prepared to devote additional time to rehearsals.

**Play Production**

Develop, rehearse, and execute every aspect of the spring theatrical production in this exciting workshop. Focus on rehearsal and performance techniques, voice and diction, body awareness and an overall appreciation of the theatrical process. Remember that the play requires extensive rehearsal time, so consider potential conflicts with sports teams or seventh-period classes before you audition. The cast and crew are counting on you!

## PHYSICAL EDUCATION

*Girls who play sports do better in school and in life. Forge friendships beyond the classroom and take advantage of this natural stress reliever: exercise!*

### Physical Education/Health Science

You know donuts don't make a healthy breakfast, but do you know why? And how much aerobic activity do you need to work off the two you ate this morning? Learn the basics of nutrition and wellness, even self-defense and first aid. Find your favorite form of exercise by trying aerobic, dance, core training, team sports, and motor skill activities. Prepare for all of them with proper warm-ups, stretching and yoga.

### PHYSICAL EDUCATION: DANCE CLASSES

#### Physical Education: Introduction to Dance or Physical Education: Intermediate Dance 1

Twirl your way through your P.E. requirement by choosing one semester of dance. Please see the introductory and intermediate dance course details in the performing arts section.

### SPORTS CONDITIONING CLASSES

Get ready for the upcoming season so you can own the court, field, or pool. No matter your sport, brush up on the fundamentals with seasonal sports conditioning. While participation doesn't guarantee a spot on the team, a little extra practice never hurt. Or simply stay fit while you complete 2.5 credits toward your P.E. requirement. The following conditioning classes may be offered, depending on student interest.

**All-Sports Conditioning**  
**Basketball Conditioning**

**Soccer Conditioning**  
**Swim Conditioning**

### SPORTS TEAMS

Represent the Regal Gryphons in the sport of your choice. Earn three P.E. credits per team. Remember that teams practice Monday through Thursday, so consider potential conflicts with drama activities and seventh-period classes before you suit up. The team – or the cast – is counting on you!

<b>Fall</b>	<b>Winter</b>	<b>Spring</b>
Cross Country	Basketball	Beach Volleyball
Tennis	Soccer	Softball
Volleyball		Swimming
		Track & Field



## SCIENCE

*Gain an understanding of the key concepts and basic principles of science, recognize both the diversity and unity of the physical and natural worlds, cultivate problem solving and critical thinking skills, and view science, technology, engineering, and mathematics as interdependent enterprises.*

### **Biology**

Journey through the human body. Discover how its DNA blueprints are manifested into intricate molecular workings, complex body systems, and self-check mechanisms that keep the human machine running properly. Appreciate science as a "way of knowing" and use its scaffolds to explore the living world through experimentation, critical thinking, persistence, and wonderment and awe.

### **Chemistry**

Armed with a knowledge of Chemistry, virtually every interaction we have with the physical world becomes understandable. Become a 21st Century learner and a scientifically literate citizen while developing a solid understanding of the principles governing the physical behavior of matter.

### **Honors Chemistry**

Transition from concrete observations of the natural world to an abstract understanding of the atomic and molecular composition that makes up the physical world. Utilize math skills to balance equations, to calculate the mass of chemicals reacted or the amount of energy in a reaction, or to determine the amount of a reactant needed to generate a desired concentration or product. Guided inquiry focuses both complex concepts and the lab experience.

### **Astronomy**

Have you ever wondered why Pluto got demoted? And who decided it deserved demotion? Discover the universe and your place in it—from the Big Bang to Goldilocks planets. Marvel at how stars live their lives and realize how small our solar system is in relation to our galaxy.

## Physics

Physics is hard to escape! It keeps your feet on the ground, lets you see and hear, and gives you energy. From microwave ovens to MRI machines to a body in motion, you personally experience physics. Wondering why the sky is blue? Why clouds are white? Want to learn how rollercoasters, cell phones, solar power, and space travel work? Now is your chance.

### Advanced Placement Biology

View the biosphere through the perspectives of energy and information transfer, evolution, and interactions. Critically analyze and evaluate data and practice applying principles to unknown situations to generate new knowledge.

### Advanced Placement Chemistry

Stellar at stoichiometry? Great at the gas laws? Compound the ingredients from Honors Chemistry into a complex (ion) mix of spectroscopic data!

### Advanced Placement Environmental Science

Consider the interactions and interconnectedness of the living and non-living realms of the Earth. Use current events and headlines to bring to life contemporary environmental challenges that we as humans face. Learn how humans impact the natural systems of the Earth and work toward finding solutions to live more sustainably.

### Advanced Placement Physics 1

How do you measure the natural world? Guided inquiry allows Newtonian mechanics, work, energy, power, waves, and the fundamentals of electric circuits to be fully appreciated. Gain the ability to combine many principles of physics to solve real-world, complex physical situations and learn how to express knowledge both conceptually and mathematically.

## Robotics

Take the VEX Robotics Challenge! Design and build a robot to perform a specific task and take it on the road to other schools to compete. A variety of projects also awaits you to explore engineering, including ROBOTC programming, visualizing engineering designs using Autodesk Inventor, deconstructing electronics, creating a website, and much more!

**Rocketry**

Want to put Newton's Laws of Motion in motion? Explore the principles of aerospace through model rocketry by entering competition rockets in the Team America Rocketry Challenge (TARC). Utilize CAD software to design rockets and simulate the effects of design choices, construct model rockets from scratch, and travel out to the Santa Fe Dam in Irwindale to launch and test your creations with an onboard, data-recording altimeter.

## SOCIAL SCIENCE

*A solid understanding of history informs a balanced perspective on current events both close to home and worldwide. Beginning in sophomore year, construct a timeline of milestones as you discover the genesis of nations, peoples, and cultures.*

### **Modern World History**

Explore the major turning points that shaped the modern world from the late sixteenth century through the present, including the causes and course of the two world wars. Trace the rise of democratic ideas and extrapolate from the American experience that those ideals are often costly, vulnerable, and unique. Understand the historic, geographic, political, economic, and cultural roots and context of current world issues, along with their impact on international relations. Through primary- and secondary-source documents, consider multiple accounts of events to understand international relations from a variety of perspectives. Apply analysis of period art to augment understanding of history.

### **Advanced Placement World History**

Enjoy a year of college-level history as a high school student. Trace the evolution of global processes and contacts among different societies from 8000 B.C.E. to the present. Hone critical thinking, reading, and writing skills while building an arsenal of historical facts and an understanding of global social, economic, cultural, and political development.

### **United States History**

After revisiting the nation's beginnings and the impact of the Enlightenment on U.S. democratic ideals, study the major turning points in American history in the twentieth century. Explore the post-Civil-War era from the Industrial Age to the 21st century while developing critical thinking, writing, and analysis skills.

### **Advanced Placement United States History**

Expand from "What happened?" to "Why?" and "How?" by studying the causes and repercussions of key turning points in American history. Think conceptually about U.S. history from approximately 1491 C.E. to the present and apply historical thinking skills to elucidate the past.

### **United States Government and Economics**

Discover the meaning behind a “government of the people, by the people, for the people” as you focus on the basic philosophy, principles and implementation of the federal, state, and local government structures of the United States. Gain a better understanding of your rights and responsibilities as an American voter and analyze contemporary issues through the lens of all forms of media.

In the second semester, focus on the distinctive characteristics of the free market system, contracts, competition, the profit motive, government regulation, and private enterprise. Contrast other economic systems, investigate challenges to the U.S. economy, and develop an understanding of global economics.

### **Advanced Placement United States Government and Politics**

Explore the political theory and everyday practices that direct the daily operation of our government and shape our public policies. Move beyond a basic analysis of how our government works to develop a critical understanding of the strengths and weaknesses of the American political system, as well as the rights and responsibilities of citizens. Study and analyze government institutions and political processes and examine policy choices. Consider institutions and policies of the U.S. government in light of historical change, constitutional procedures, and comparative perspectives.

### **Introduction to Psychology**

Why did Pavlov’s dog salivate? What is the Bystander Effect? Embark on a journey into the fundamentals of human behavior as you better understand yourself, your friends, and even your parents! This fascinating elective is sure to broaden your understanding of the human experience.

### **Advanced Placement Psychology**

Discover the systematic and scientific study of the behavior and mental processes of human beings and other animals in this college-level class. Explore the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Consider the ethics and methods psychologists use in their science and practice.

### **Mock Trial**

Experience the content and process of the legal system in this unique experience that is both class and competition. Become an attorney, witness, clerk, bailiff, even courtroom artist or journalist and develop critical analysis and presentation skills. Participate as a team at the Mock Trial competition at the Los Angeles Superior Court in November.

## VISUAL ARTS AND ART HISTORY

*Art is thought made visible. Images surround and shape our lives, and an artist, architect, or designer designs everything fabricated. The study of visual arts and art history allows the individual agency over her world. Communicate your ideas using the knowledge of visual language and the elements and principles of design. Innovate while developing specific skill sets in each class. Analyze the historical and cultural context of art to make sense of your world. Visit museums, explore philosophy and theory, and write essays (one per semester) that expand your knowledge of our global landscape. Generate and present a portfolio each quarter and develop an understanding of art critics and aesthetic views through critiques.*

### **Art Appreciation**

Discover the foundations of art production and the basics of two-dimensional and three-dimensional forms: drawing, collage, mixed media, painting and sculpture. Create a broad portfolio of work reflecting your knowledge of value, line, color theory, texture, and shape.

### **Drawing**

Refine observational skills, develop creative intelligence, eye/hand coordination, and visual thinking as you discover the fundamentals of drawing. Explore realism, abstraction, narrative, surrealism, and expressionism.

### **Painting**

Tempera. Watercolor. Acrylic. Explore the movement of paint. Using color theory, cultivate basic painting skills through an exploration of still life, landscape, natural forms, abstraction, and portraiture.

### **Photography**

Grab your digital camera and prepare to explore visual ideas by framing your world. Investigate the technical, visual, and expressive aspect of photography. Master technical control of the camera and use of Adobe Photoshop. Know the history of photography and explore the effects of the camera on our contemporary culture.

## 2-D Design

Line. Shape. Space. Color. Balance. Analyze the compositional structures underlining images through projects using tempera, acrylics, ink, printmaking, and non-traditional found material. Create digital images (posters, books, magazines, or web pages) with Adobe Creative Cloud (Illustrator, Photoshop and In-Design, Flash or Muse). Analyze how your understanding of the world is affected by experiencing visual imagery.

## Film Studies

Seen *Citizen Kane* and *400 Blows*? Obsessed with Hitchcock and Coppola? Want to understand the belief structures in other cultures? Pursue your fascination in this introduction to the art of filmmaking. Study film history and theory, as well as produce films. Watch the Academy Awards knowing what directors, producers, cinematographers, production designers, and others do. Develop artistic vision through the use of storyboarding.

## Advanced Placement Art History

Explore the “big picture” of how the world works through the analysis of art and architecture from across the globe and over time. Understand belief systems – religious, cultural, political, economic, and social – through seeing, analysis, and discussing art. Examine 250 works from the Western tradition as well as Asia, Africa, Indigenous Americas, and the Pacific. No prior exposure to art or art history is required, however, the material dovetails with the AP World History curriculum.

### Advanced Placement Studio Art: Drawing

### Advanced Placement Studio Art: 2-D Design

### Advanced Placement Studio Art: 3-D Design

Engage in the college-level study of art with an emphasis on drawing, 2-D design, or 3-D design. Focus on theory, practice, art history and cultural context. Create a substantive portfolio of artwork—following a conceptual visual investigation of your choice through a series of 15 artworks, that show mastery of the elements and principles of design, mark-making, and spatial concepts. Demonstrate an ability to address the fundamental concerns of the visual arts to earn college credit. Prerequisite: 2 years of art classes and instructor approval through portfolio review. AP Art History is highly recommended.

## WORLD LANGUAGES

*Strong language skills and cultural appreciation are essential for both academic and professional success in our increasingly interconnected world. Achieving proficiency in a second language facilitates a broader worldview. Expand your perspective in the classroom, then take advantage of trips abroad to apply what you've learned.*

### Spanish 1

*Se habla español.* Begin to learn one of the most spoken languages in the Western Hemisphere. Study not only grammar and vocabulary, but also the cultures of a variety of Spanish-speaking countries. You'll develop basic speaking, listening, reading and writing as you establish a firm foundation for language proficiency.

### Spanish 2

Build on your Spanish-language skills as you focus on more challenging grammar and a wider range of vocabulary. Enhance conversational skills through the use of role-play and projects.

### Spanish 3

Develop essential conversation and interpretive skills using your vocabulary and grammar in Spanish 3. In addition to sharpening listening, speaking, reading, and writing skills, gain an understanding of the many diverse Spanish-speaking cultures.

### Honors Spanish 3

Continue to discover the Spanish language as you further develop writing and reading comprehension. Use primary-source documents to explore the cultures of the 21 Spanish-speaking countries. Use Spanish nearly all the time as you refine your speaking, listening comprehension, reading, and writing skills.

### Spanish 4

Focus on intensive grammar review, extensive vocabulary building, and the continued use of written and verbal communication skills. Sharpen speaking ability with group oral presentations, speeches, and consistent use of the language. Practice writing with various forms of compositions.



## Honors Spanish 4

Enjoy all the benefits of Spanish 4 while engaging in Advanced Placement activities throughout the school year as preparation for AP Spanish Language the following year.

## Advanced Placement Spanish Language

Proficiency in conversation, reading, writing, and public speaking is the goal of this college-level language course. Begin with a review of material covered in the previous Spanish courses. Explore aspects of Spanish-speaking cultures, such as science and technology and family and community, through multimedia resources.

## Advanced Placement Spanish Literature

After mastering AP Spanish Language, continue to improve your critical reading and analytical writing skills using representative literature from the Spanish-speaking world. Use the varied media of art, film, articles, and literary criticism as a basis for focusing on cultural connections and comparisons.

## French 1

*Ici on parle français.* Begin the study of French language by focusing on basic vocabulary and grammar. Discover francophone culture while developing reading, writing, speaking and listening comprehension skills.

## French 2

Build on your understanding of the language spoken in 32 countries. Expand vocabulary and grammar as you study francophone history and culture. Enhance conversation and presentation skills as you expand your cultural understanding of French-speaking countries.

## French 3

Discover the art of Monet as well as the music of contemporary French pop artists. Apply your knowledge of French language to focus on aspects of French culture and discover how that culture has international impact. Express yourself through the three modes of communication: interpersonal, interpretive, and presentational.

**Honors French 3**

Continue to build on a solid foundation of French language and culture. Strengthen your ability to communicate in French using multimedia resources. Explore the francophone culture more deeply while further developing reading, writing, listening, and speaking skills.

**French 4**

Achieve written and oral proficiency as you focus on French language and culture. Stretch beyond learning vocabulary and grammar to explore key cultural aspects of French-speaking countries, such as beauty and aesthetics and contemporary life.

**Advanced Placement French Language**

In this third-year college-level course conducted almost entirely in French, focus on grammar review, extensive vocabulary building, and applying written and verbal communication skills. Use multimedia resources to strengthen your performance through formal and informal writing, speaking, and listening.

## ADDITIONAL OFFERINGS

### Academic Decathlon

Looking for a little more challenge and a lot more fun? Match wits against students from other schools in 10 different academic categories: math, science, language and literature, economics, social science, art, music, essay, speech, and interview. Join your teammates to tackle each of the areas of study throughout the year. Winners earn both individual and team medals and the opportunity for college scholarships.

### Independent Study

Schedule simply won't work? Expand scheduling options of required courses in any grade with an online Independent Study course. Can't wait to take accounting, or learn Java? Apply to take those electives and any others not offered at NDA as a junior or senior through an online Independent Study with the approval of the administration.

### Study Hall

If you're taking at least three AP courses, you're eligible for this study opportunity. Or if you have a zero- or seventh-period class, you can take it along with a daytime study hall.

### Yearbook Production

Want to make sure your picture is in the yearbook? Join the production staff of *Royale* and learn more than just picture placement. Make your mark in theme development, writing and editing copy, designing layouts, taking and editing photographs, and selling and designing advertisements.

## COURSE RECOMMENDATIONS AND COURSE LOADS

Great care is given to create a positive high school experience for each NDA student. Early in the second semester, as students are considering the courses they would like to take the following year, the faculty, Deans, and Academic Advisors review the progress of each and every NDA student and recommend a course of action to the Director of Academics.

Many factors are considered for Honors and AP recommendation. Some of these are:

- Evaluation of a student's **habits of mind** by her current and former departmental teachers;
- Evaluation of a student's **growth mindset** by her current and former departmental teachers;
- Demonstrated excellence continuing through the second semester;
- Difficulty of the student's proposed course schedule and extracurricular activities;
- Typically a high "A" average in the foundation courses to enter an AP course;
- Typically a high "A" average to move into an Honors course;
- Typically a "B" average to continue in an Honors/AP sequence course;
- Level of parental support for the student's course selections;
- A placement test in some circumstances;
- Standardized test scores, including STAR Testing results, in some circumstances;
- AP Information Session attendance and signatures on AP Agreement.

If a student is recommended for more than one Honors and/or AP course, the maximum number they may take each year is:

- **Sophomores – 4 total including up to 2 AP courses**
- **Juniors and Seniors – 5 total including up to 3 AP courses**

Not all students will be approved to take the maximum number of honors and AP classes, and in rare circumstances, students may be given permission to exceed the maximum. Exceptions will be considered on a case-by-case basis.

## SCHEDULE CHANGES

Students must remain in the courses they selected for the entire year or semester, as appropriate. Once the semester begins, there will be no student-initiated schedule changes, and no changes will be allowed unless they are deemed necessary by the school.

Below are the only approved reasons for a schedule change:

- Student has been scheduled into a course previously passed
- Student has been scheduled into a course out of sequence (i.e., Spanish 3 before Spanish 1)
- Student did not pass a class that was a prerequisite for another, including making up a course during the summer
- Student has an incomplete schedule
- Senior is missing a requirement for graduation
- Assistant Head of School for Educational Operations must balance the class sizes

Below are some examples of situations that will NOT result in a schedule change:

- A desire for another instructor
- A desire for a class to be in a different/specific period
- Student is failing a course that was requested and is afraid that it will affect graduation (students are responsible for maintaining passing grades and will not be pulled from a class in lieu of failing)
- Student requested the course but is no longer interested in the subject
- A desire to improve GPA
- Student is having conflicts with other students in the class (students need to discuss problems with administrators or counselor for conflict resolution)

**COURSE REQUEST WORKSHEET**

Name \_\_\_\_\_

Entering Grade \_\_\_\_\_

*Use this worksheet to plan out your proposed courses for next year. Refer to the Curriculum Catalog for course information. If you wish to take two different classes in the same department, consider the second class an elective. This worksheet is designed to help you prepare to enter your course requests in PowerSchool.*

Department	Course Request	If applicable, daytime or 0/7 preference
Religion	-----Required-----	-----
English		
Mathematics		
Science		
Social Science		
World Language		
Performing/Visual Arts		
PE/Dance (S1 or S2)		
Elective		
Elective		
Elective		
Team Sport		
Team Sport		
Team Sport		

*Circle if you expect to have these spring commitments:* Musical    Dance Performance

*List any other extracurricular activities or special requests here:*

Number of Honors Courses Requested

Number of AP Courses Requested

## AP EXAM FEES

Each AP exam has a \$95 fee that will be added to the student's FACTS account for each AP on her schedule in September to be paid throughout the school year.

## ZERO AND SEVENTH PERIOD OFFERINGS & STUDY HALL

Students taking one or more Zero or Seventh Period classes in addition to their six classes during the day must pay the listed tuition, which will be added to their FACTS account. However, students taking a Zero or Seventh Period class who wish it to be their sixth class (instead of their seventh) may register for a Study Hall period during the school day and owe no tuition for the Zero or Seventh Period class. Additionally, seniors taking three or more AP classes may consider taking a Study Hall if desired.

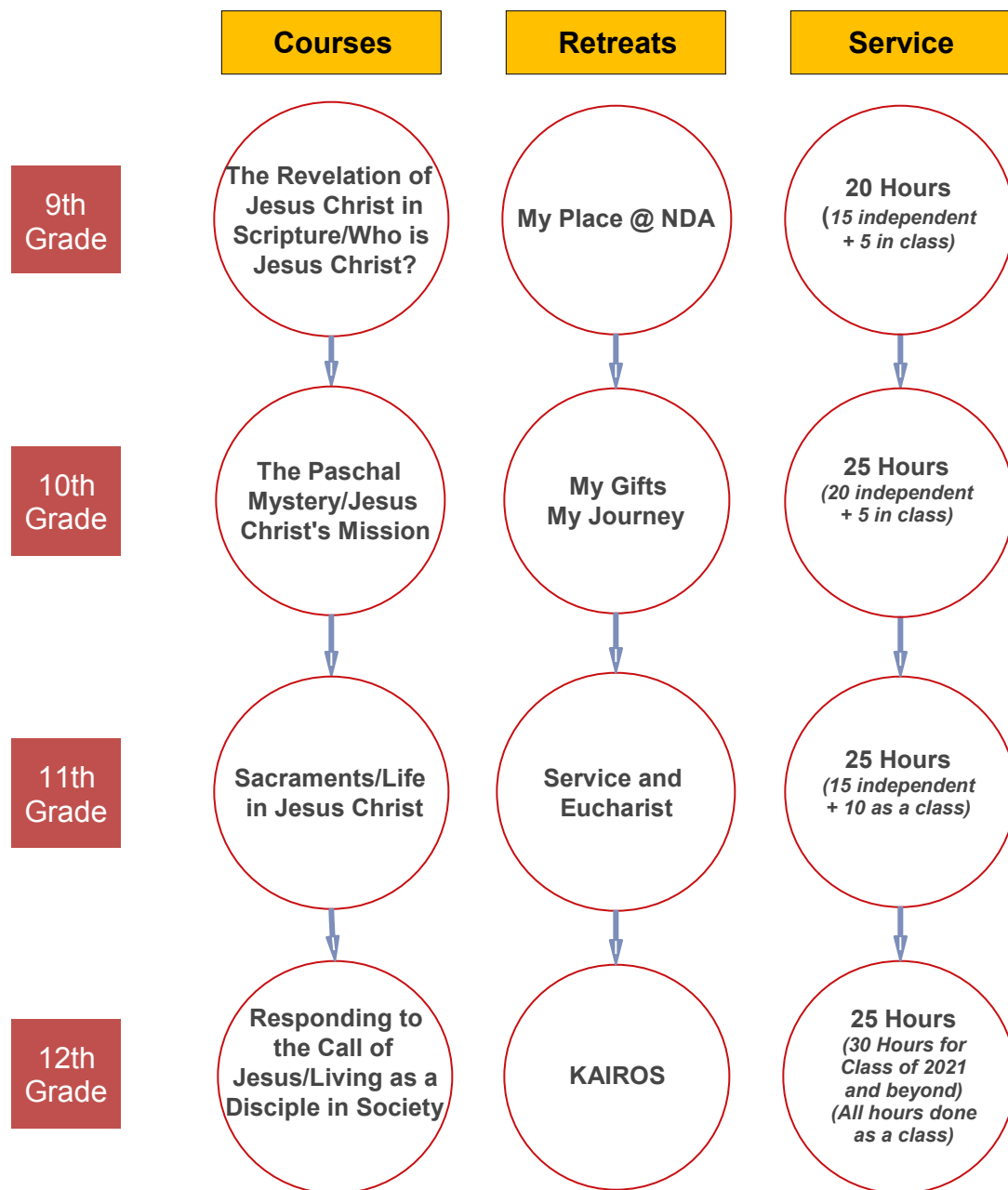
## INDEPENDENT STUDY

Notre Dame Academy provides the opportunity for students to take online courses for NDA credit under the following circumstances:

- 9<sup>th</sup> – 12<sup>th</sup>: A required course is unavailable given the student's overall schedule. NDA will cover the full cost of required courses if approved.
- 12<sup>th</sup>: A senior desires to take a specialized elective course that is not offered at NDA. (VPA and lab science requirements generally cannot be completed via online courses.) Online course tuition is subject to consideration for administrative approval of full, partial, or no coverage by NDA.

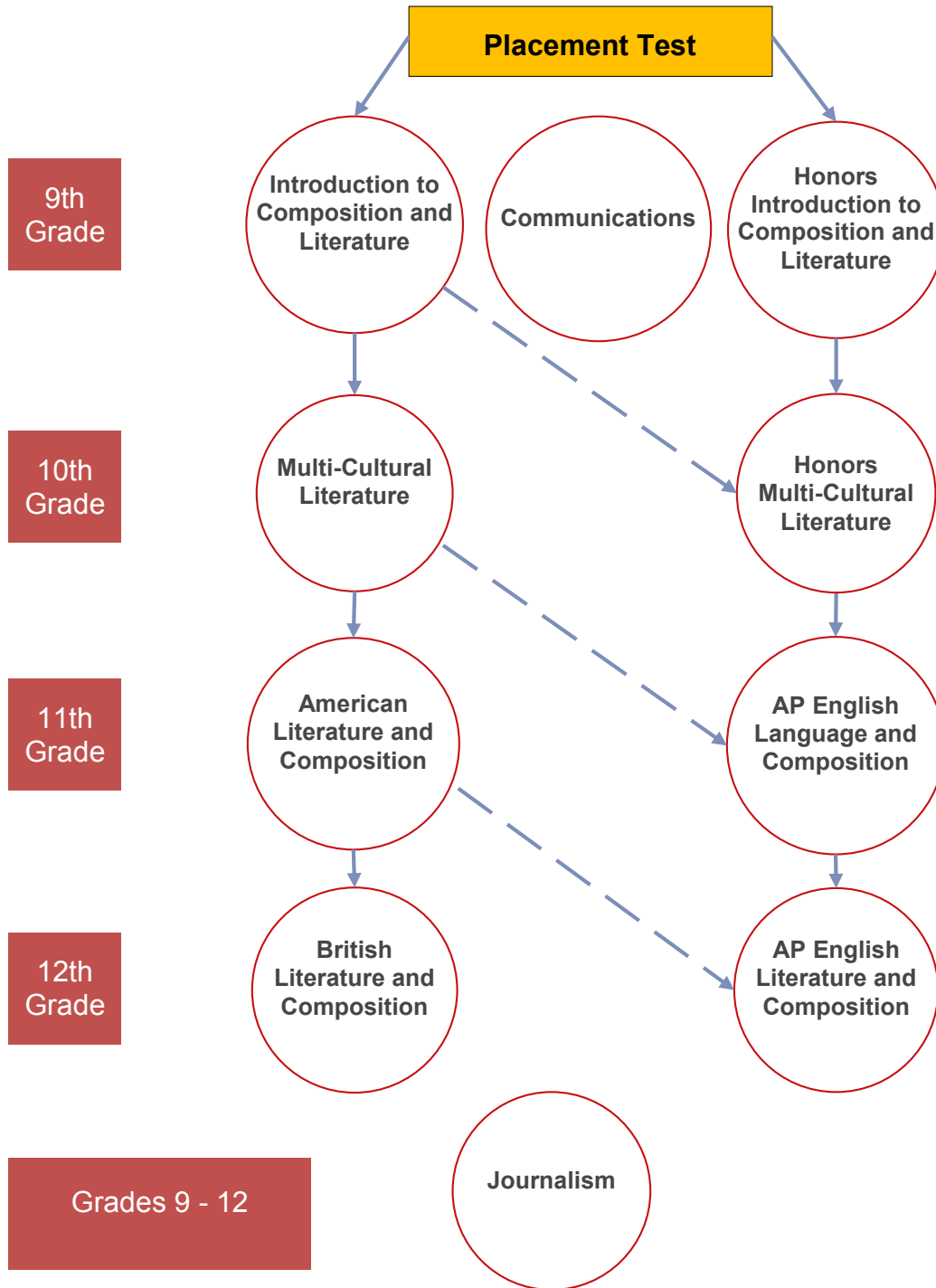
Seniors in the second category should register for Independent Study and submit a request to their academic advisor for approval of the proposed online course. Students must research proposed online classes with their academic advisor to determine eligibility for UC/CSU and NCAA credit (as appropriate). Additionally, students and parents will sign a contract of understanding regarding online course expectations and related financial obligations.

## PATHWAYS THROUGH RELIGION

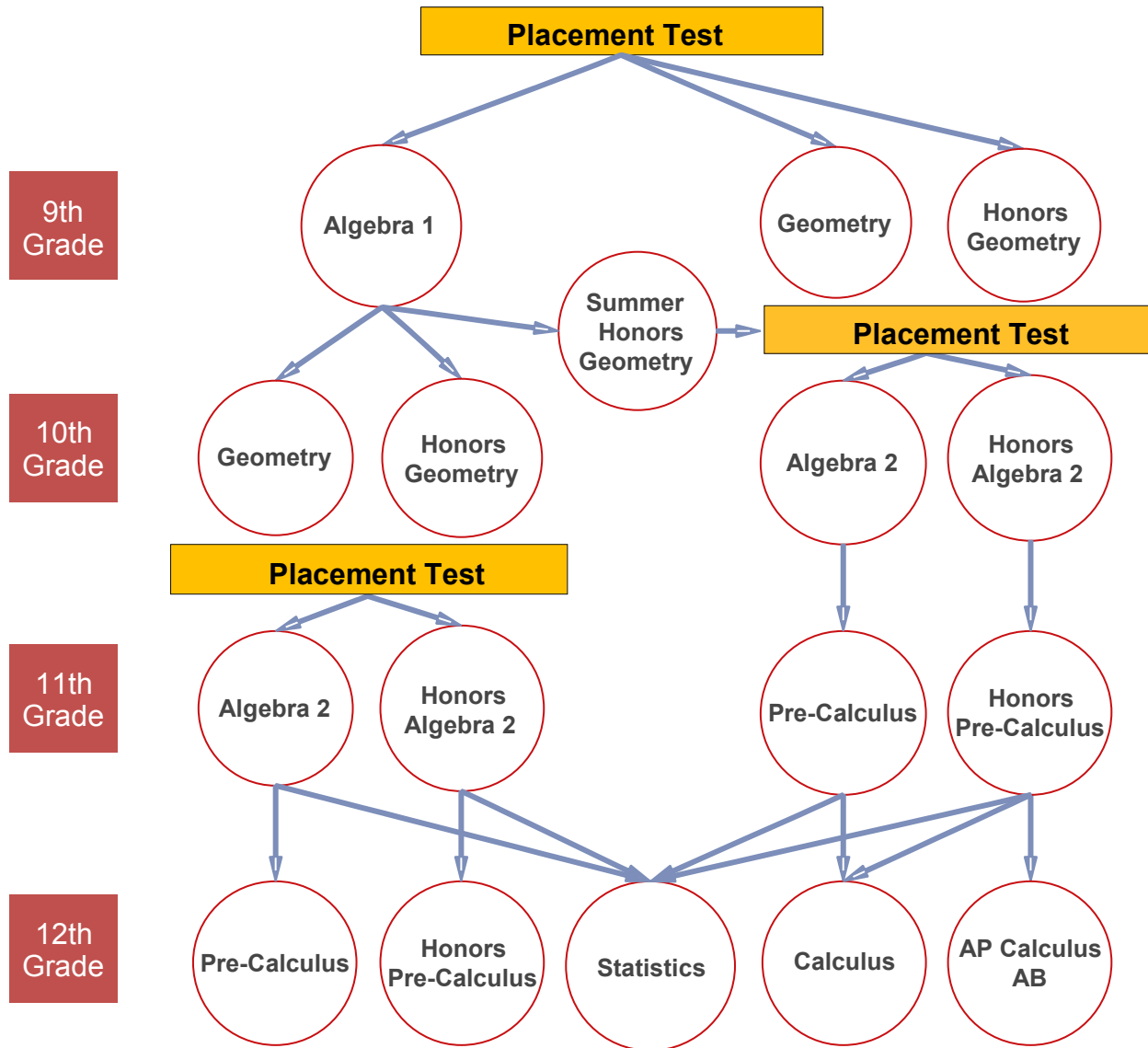




### PATHWAYS THROUGH ENGLISH

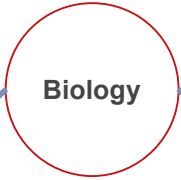


PATHWAYS THROUGH MATHEMATICS

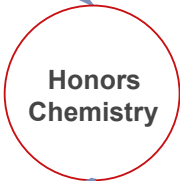
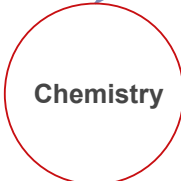


### PATHWAYS THROUGH SCIENCE

9th  
Grade

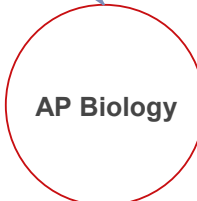
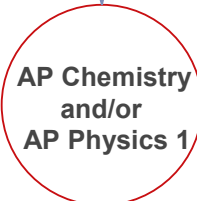
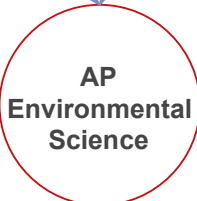
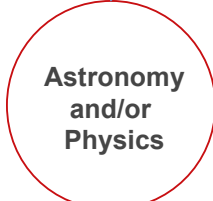
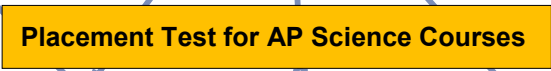


10th  
Grade

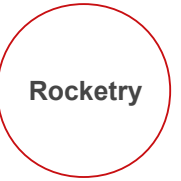
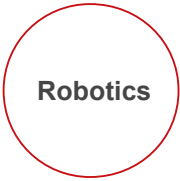


11th  
Grade

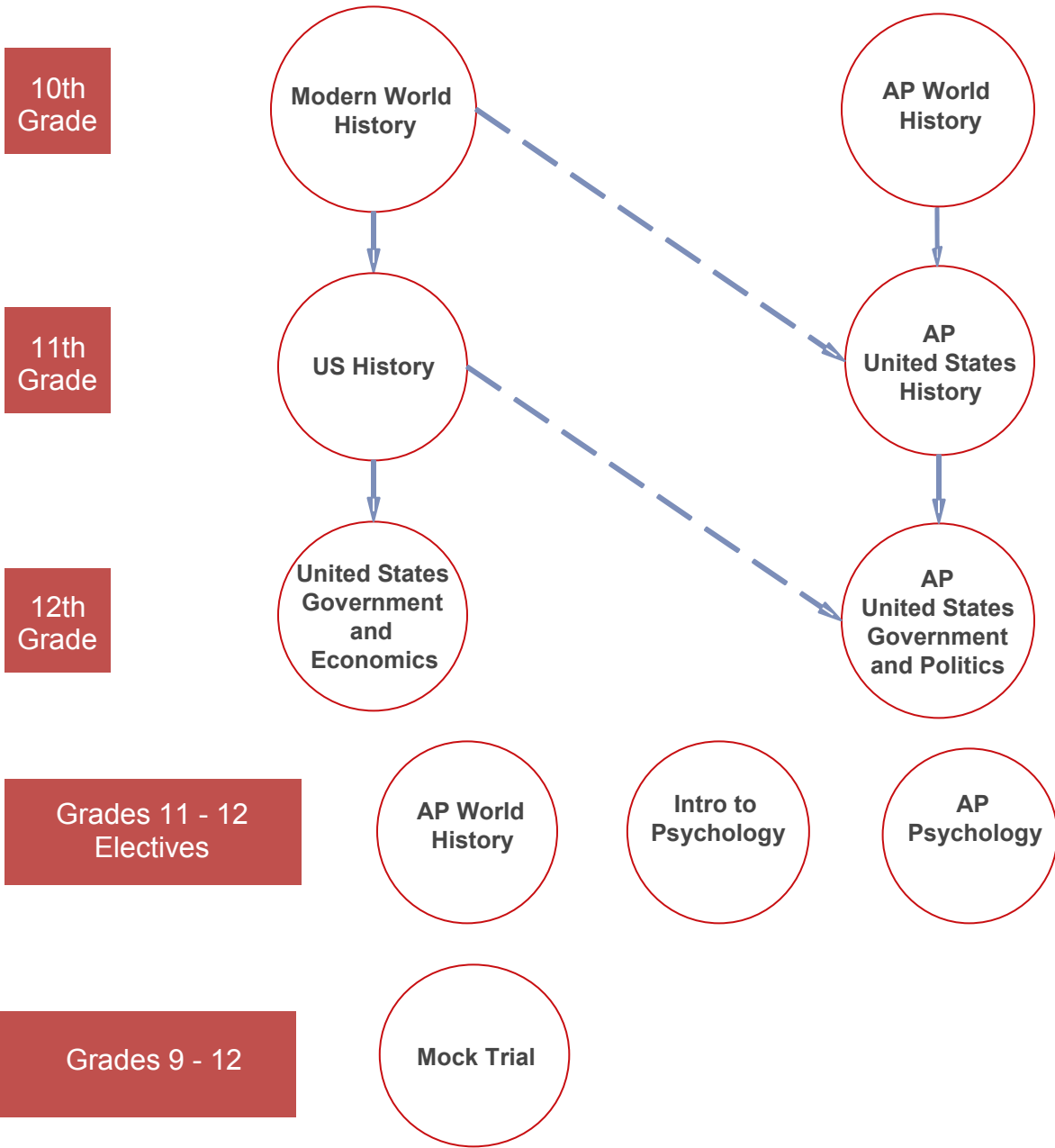
12th  
Grade



Grades 9 - 12

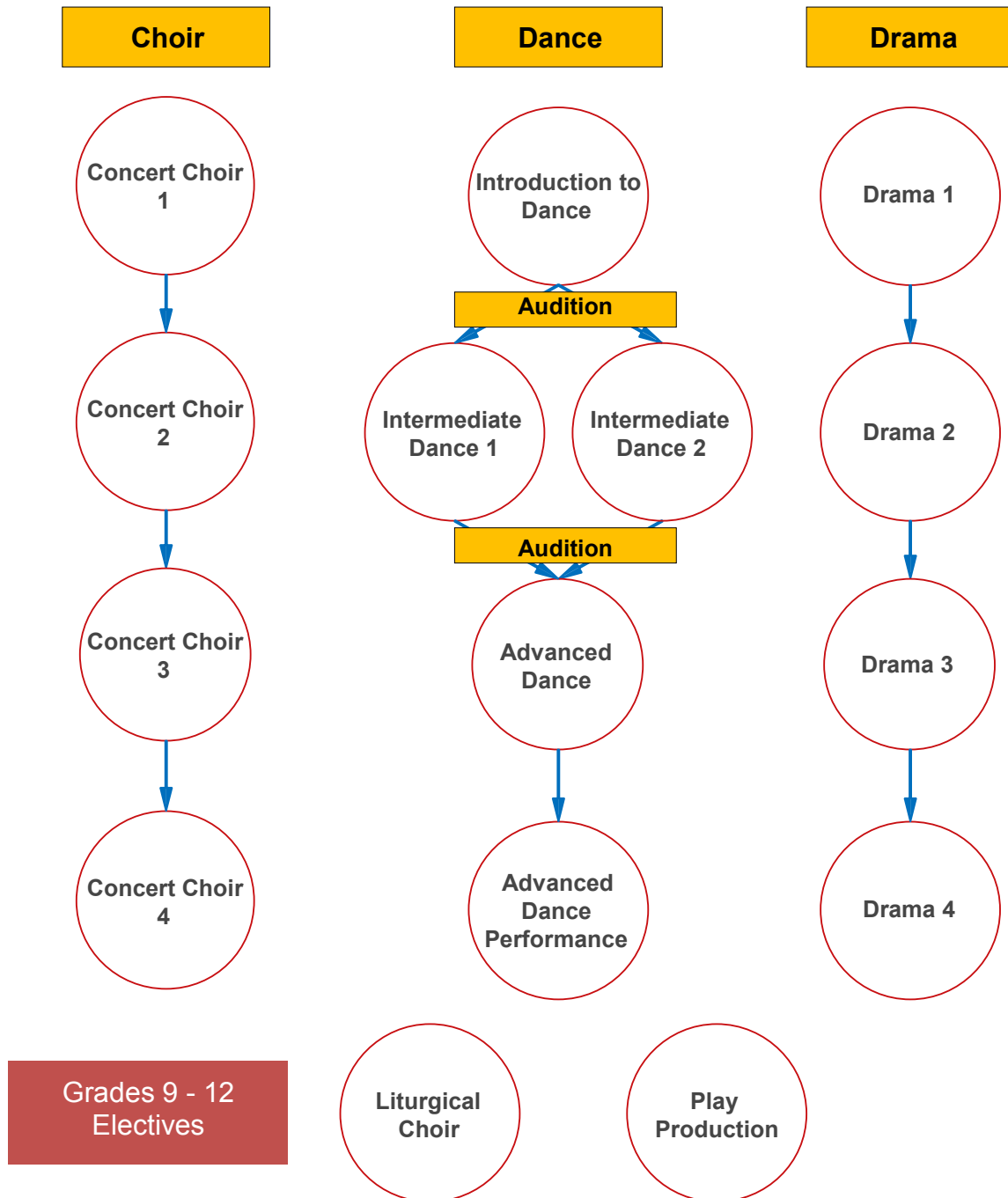


### PATHWAYS THROUGH SOCIAL SCIENCE

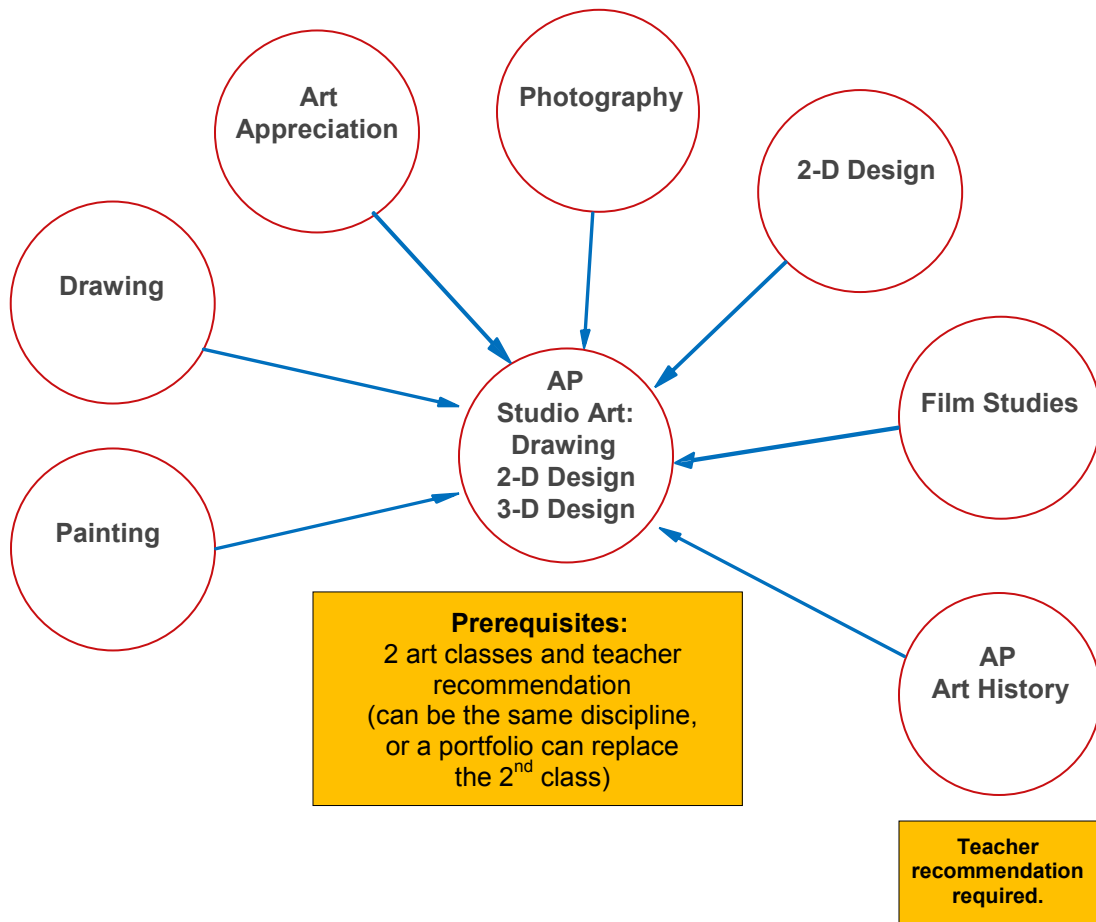


*\*Students may not take both Intro to Psychology and AP Psychology at Notre Dame Academy*

## PATHWAYS THROUGH PERFORMING ARTS



## PATHWAYS THROUGH VISUAL ARTS AND ART HISTORY



## PATHWAYS THROUGH WORLD LANGUAGES

