LIBERTY MAGNET HIGH SCHOOL

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INTRODUCTION

This guide outlines graduation requirements, scheduling requirements, course summaries, and other important information. We strongly advise all students to seek the counsel of their parents and their Liberty counselor and teachers before selecting courses for the coming year. **Students in all grades are required to schedule eight classes** (five courses will meet academic graduation requirements, two will meet STEM pathway requirements, and one free elective). Each student must take an English, science, math, and social studies class each year. All honors (H), dual enrollment (DE), and advanced placement (AP) courses carry one extra quality point for students who earn grades of “C” or above used to determine a student’s grade point average. We strongly recommend that 9th-grade students allow for adjustment to high school when scheduling courses. To be considered for honors, advanced, and/or upper-level classes, 9th-grade students must provide documentation of readiness or eligibility (Liberty placement test scores, overall GPA, subject area GPA, reading stanine on national standardized tests.) The Liberty math and spanish departments strongly recommend placement based on a department administered proficiency exam. Liberty follows a rigorous college preparatory curriculum. Students who follow the recommended placement historically score higher on the ACT and are more successful at Liberty. Liberty is a college-preparatory magnet high school and we take pride in providing a quality education for our students. We expect our students to earn more than the minimum requirements for graduation. At the end of four years, our students will have a total of 32 units of credit including up to 8 elective units in Engineering, Biomedical, Digital Media,or Computer Science.

MINIMUM REQUIREMENTS FOR TOPS UNIVERSITY DIPLOMA

Requirements are subject to change per state guidelines. See LouisianaBelieves.com for more info. The list encompasses course offerings at Liberty.

English (4 Units)
Shall be English I honors; English II honors; English III or AP English Language; and English IV or AP English Literature

Mathematics (4 Units)
Shall be Algebra I, Geometry, Algebra II. The remaining unit shall come from the following: Algebra III, Advanced Math I/PreCalculus Honors, Calculus and Statistics

Science (4 Units)
Shall be Biology and Chemistry. The remaining units shall come from the following: Physics I, Biology II, Chemistry II, or Environmental Science

Social Studies (4 units)
Shall be Civics or AP Government, and US History; two units from the following: AP Human Geo.; World History; African American Studies; or AP Psychology

PE (1½ units) and Health Education (½ unit)
Shall be 1 unit of PE I and ½ unit of PE II plus ½ unit of Health Education. JROTC I and II may be used to meet the PE and Health Education requirements provided the requirements in Section 2347 of Bulletin 741 are met.

Foreign Language (2 units)
Shall be 2 units in the same foreign language.

Arts (1 unit)

Art, Band, Choir, Theatre, Fine Arts Survey, Photography, Engineering Design/Development, Dance

Electives (3 units)

TOTAL (24 units)

THE STATE BOARD OF ELEMENTARY AND SECONDARY EDUCATION (BESE) LEAP 2025 EXAM POLICY EXPLAINS:

In addition to completing a minimum of Carnegie Units of credit, students must pass required LEAP 2025 Tests in the following categories:

Algebra I/Geometry English I/English II Biology/U.S. History

TOPS

Louisiana Tuition Opportunity Programs for Students is a comprehensive program of state scholarships and assistance programs. Specific courses, grade point averages, ACT scores and other eligibility requirements are necessary for this program. Beginning with the class of 2018, the calculation of the TOPS Core Curriculum GPA will use a Five point scale for grades earned in AP and Dual Enrollment courses.

COUNSELING

A counselor is assigned to students at Liberty to help them during their high school career. A student may schedule a conference with a counselor for any number of reasons: scheduling, career counseling, college and scholarship consulting, testing, written recommendations and references, and personal problems. Strict confidentiality is maintained except when there is imminent personal danger or threat to others. Counselors are always available for consultation and guidance. Students also have access to a School Social Worker by referral from the school counselor.

ACT

Scores from the ACT test are used by most colleges and universities as part of entrance and scholarship requirements. Some accommodations may be available to students with special needs - see ACT guidelines. All juniors and seniors take the ACT in the spring.

INDIVIDUAL GRADUATION PLAN

Each student shall develop, with the input of his/ her family, an Individual Graduation Plan to include a sequence of courses that is consistent with the student's stated goals for their four years in high school and one year after graduation. Each student's Five Year Educational Plan shall be reviewed annually by the student, parent, and counselor and revised as needed.

SCHOLASTIC HONOR POLICY

The Liberty Magnet High School Honor and Academic Policies will be strictly enforced.

FEES

The school fee of $75 is due at orientation and is used to support administrative functions, technology, and schoolwide instruction. An additional Senior fee is due at orientation and is used to cover costs associated with conducting the graduation ceremony. Students unable to pay fees may apply to the Executive Secretary for a hardship waiver. Fees may be reduced or waived for students whose families are experiencing economic hardships including but not necessarily limited to: families receiving unemployment benefits or public assistance; foster families caring for children in foster care; and families that are homeless. All hardship waivers and supporting documentation shall be kept confidential. If a hardship waiver is denied, it may be appealed to the Principal.

SCHEDULING: SELECTION AND CHANGES

The selection of teachers is not permitted at any time. Classes may be changed by the principal or designee in order to balance or to change a student who has previously passed a course or to meet graduation or college entrance requirements or as an intervention based on the current course change policy. Students may NOT change courses once school has started.

ADVANCED PLACEMENT COURSES

AP Courses are rigorous courses to give high school students the opportunity to experience college course material with the potential to earn college credit while still in high school. Students should be college-bound with a good work ethic. Students are expected to take the AP Exam at the end of the course. The $97 AP Exam Fees are set by College Board, the AP Exam provider. Honors requirements and teacher recommendations are required. For more info about AP: testing samples, scoring of exams, fees, and reduced fee opportunities, please refer to www.collegeboard.org/. Students enrolled in AP Courses are required to take the AP Exam.

CLEP TEST

In some courses, students may have the opportunity to take the CLEP exam to earn college credit. CLEP is also a College Board product that awards students college credit to institutions who recognize the CLEP test. The CLEP exam fee is $90. CLEP exams are multiple choice tests that do not have written portions.

DUAL ENROLLMENT COURSES

Dual Enrollment courses provide students the opportunity to receive college credit while still in high school. Students must complete all of the course work required for the college course in order to receive the credit. Dual Enrollment has strict prerequisites, noted within the course descriptions that must be met for enrollment. Students must meet the Board of Regents and University requirements to be eligible for Dual Enrollment courses. Incoming 9th grade students are universally eligible for DE under the Early College Academy Model (Pathways to Bright Futures).

HONORS COURSES

Courses listed as honors will earn an additional quality point. Honors courses are more rigorous and require students to be self-directed learners who can keep up with a faster-paced, more content enriched course. Teacher recommendation or minimum LEAP scores are required for enrollment in honors courses.

Grading Scales

Regular Courses	Quality Points	Honors Courses *Extra QP*	Quality Points	AP/Dual Enrollment *10 point grading scale & extra QP*	Quality Points
93-100 = A	4	93-100 = A	5	90-100 = A	5
85-92 = B	3	85-92 = B	4	80-89 = B	4
75-84 = C	2	75-84 = C	3	70-79 = C	3
67-74 = D	1	67-74 = D	1	60-69 = D	1
66-0 = F	0	66-0 = F	0	59-0 = F	0

MAGNET ADMISSIONS/STATUS

Students must maintain a cumulative GPA of 2.5 to remain enrolled at Liberty Magnet High School. Students who drop below a 2.5 will be placed on Academic Probation for one semester. At the end of probation a student will either improve their cumulative GPA to meet the minimum requirement or will have their magnet status revoked at the end of the year, sending the student back to their home school. **Students who fail a core course must recover the credit in summer school prior to returning the next school year. Students who fail STEM courses will be required to retake them in place of their free elective the following year.**

COURSE OFFERINGS:

Note that course offerings, content, requirements, and fees are subject to change as stipulated by the state and/or parish. AP courses substitute where state course codes align. Final course offerings will be determined by student requests.

Below is a course matriculation matrix for students at Liberty Magnet High School. STEM Core requirements may overlap with AP courses, opening more opportunities for choice in the course selection process during the Junior & Senior years.

School counselors should be consulted at each step of the scheduling process. It is imperative that students and parents work with counselors to develop a quality Individual Graduation Plan (IGP) to ensure graduation and STEM pathway requirements are met while also opening up opportunities for students to explore a variety of courses over the four year period.

Free Electives are open for students to take any grade-level appropriate course. AP courses are available to all students with some foundational remediation opportunities available. Dual enrollment eligibility is determined by the Board of Regents and the sponsoring university/college. Students who do not meet Dual Enrollment requirements will not be able to register for the course. Students will not be removed from courses during the year, making the spring course selection process extremely important.

Class of 2023-2025 Course Progression

	Freshman	Sophomore	Junior	Senior
English Core	English I	English II	English III or AP Language	English IV or AP Literature
Math Core	1st Math Course	2nd Math Course	3rd Math Course	4th Math Course
Science Core	Env. Science or AP Env. Science	Biology I	Chemistry	Physics AP Physics I AP Chemistry II AP Biology II/DE
Social Studies Core	World Geography or AP Human Geography	AP Government Or AP Comparative	US History AP US History	World History African Amer. History AP European History AP Psychology
Grad. Req.	Phys Ed I or JROTC I	Phys Ed II/Health or JROTC II	Foreign Language	Foreign Language
STEM Req.	Int. Comp. Think.	Pathway Progression	Pathway Progression	Pathway Progression
STEM Req.	Pathway Intro Course	Pathway Progression	Pathway Progression	Pathway Progression
FREE ELECTIVE	Foreign Language or Free Elective	Foreign Language or Free Elective	ACT Prep *(based on PreACT Scores)* or Free Elective	Free Elective

LSU STEM Pathway Courses

CLASS OF 2026 and Beyond
STEM PATHWAY COURSE PROGRESSION

	Freshman	Sophomore	Junior	Senior
English Core	English I	English II	English III or AP Language or Eng. III/Eng. IV DE	English IV or AP Literature or DE Coursework
Math Core	1st Math Course	2nd Math Course	3rd Math Course	4th Math Course (AP or DE)
Science Core	Env. Science or AP Env. Science	Biology I or Biology I DE	Chemistry or Chem I DE/Econ DE	Physics AP Physics I AP Chemistry II AP Biology II/DE
Social Studies Core	AP Human Geog. or World Geog. DE & World History DE	AP Government or Government DE & Psychology DE	US History AP US History	World History African Amer. History AP European History AP/DE Psychology
Grad. Req.	Phys Ed I or JROTC I or Cyber	Phys Ed II/Health or JROTC II or Cyber	*Foreign Language or Free Elective or DE Options*	*Foreign Language or Free Elective or DE Options*
STEM Req.	Int. Comp. Think.	Pathway Progression	Pathway Progression	Pathway Progression
STEM Req.	Pathway Intro Course	Pathway Progression	Pathway Progression	Pathway Progression
FREE ELECTIVE	*Foreign Language* or Free Elective	*Foreign Language* or Free Elective	*ACT Prep* *(based on PreACT Scores)* or Free Elective	Free Elective

- **Students in the STEM Pathway progression will have a four year scheduling plan that culminates in a Gold STEM diploma seal awarded in one of the four LSU STEM pathways.**

- **Students on the STEM Pathway may still elect to take Dual Enrollment courses where offered in the course progression above. Students will select whether or not to apply the grade to the college transcript at the end of the semester.**

- **Every student must take at least one advanced course (AP or DE) each school year. EBRPSS Guideline. *College grade/transcript must be accepted for DE courses.***

CLASS OF 2026 and Beyond

TRANSFER DEGREE COURSE PROGRESSION

	Freshman	Sophomore	Junior	Senior
English Core	English I	English II	**Eng. III/Eng. IV DE**	**DE Courses**
Math Core	1st Math Course	2nd Math Course	3rd Math Course	4th Math Course (AP or **DE**)
Science Core	Env. Science or AP Env. Science	**Biology I DE**	**Chemistry I DE & Economics DE**	Physics AP Physics I AP Chemistry II **Biology II DE**
Social Studies Core	**World Geog. DE & World History DE**	**Government DE & Psychology DE**	US History AP US History	AP European History African Amer. History **DE** Psychology
Grad. Req.	Phys Ed I or JROTC I or Cyber	Phys Ed II/Health or JROTC II or Cyber	Foreign Language or **Humanities DE**	Foreign Language or **Speech/Fine Arts DE**
STEM Req.	Int. Comp. Think.	Pathway Progression	**DE Options**	**DE Options**
STEM Req.	Pathway Intro Course	Pathway Progression	Pathway Progression	Pathway Progression
FREE ELECTIVE	Foreign Language or Free Elective	Foreign Language or Free Elective	ACT Prep *(based on PreACT Scores)* or Free Elective	Free Elective

- **Students in the Louisiana Transfer Degree Program (Associates Degree) will take prescribed Dual Enrollment courses in an area of concentration. Areas of concentration will be selected when scheduling 10th grade courses.**
- **Students in the Louisiana Transfer Degree Program will also select a STEM Pathway and scheduling will be aligned with completion of a silver STEM diploma seal awarded in one of the four LSU STEM Pathways.**
- **Students must accept the college transcript grade in Dual Enrollment courses. **In order to meet the requirements to earn a Transfer Degree, all college credits in the course progression plan must be completed.****
- **BRCC will be the issuing institution of the Louisiana Transfer Degree.**

STEM Pathways
Course Offerings & Progression

Biomedical Sciences

Required Courses (all 4)	Complementary Courses (need 4)	
Introduction to Computational Thinking (9th) Introduction to Biomedical Sciences (9th) Comparative Anatomy & Physiology (10th) Biomedical Capstone w/internship (12th) **OR** Data Manipulation & Analysis	Forensic Science Biology II DE (1013) AP Biology II AP Environmental Science AP Psychology AP Chemistry	AP Calculus AB AP Calculus BC AP Statistics AP Computer Science A AP Computer Science Principles

Computing

Required Courses (all 4)	Complementary Courses (need 4)	
Introduction to Computational Thinking (9th) Cybersecurity (9th) Interactive Computing (10th) Programming for STEM (10th) **OR** Data Manipulation & Analysis	AP Computer Science A AP Computer Science Principles Video Game Design Coding for the Web Robotics Advanced Robotics Programming Digital Media	AP Calculus AB AP Calculus BC AP Statistics AP Physics I Biology II DE (1013) Data Manipulation and Analysis

Digital Design and Emergent Media

Required Courses (all 4)	Complementary Courses (need 4)	
Introduction to Computational Thinking (9th) Digital Storytelling (9th) Coding for the Web (10th) Programming for Digital Media (11th)	Film & TV (1st course) Basic/Adv Film (2nd course) Photography I Photography II Sound Design (DE option) Video Game Design Dig. Image & Motion G (DE opt) AP Art 3D	Interactive Digital Media AP Calculus AB AP Calculus BC AP Statistics AP Computer Science A AP Computer Science Principles Data Manipulation and Analysis

Pre-Engineering

Required Courses (all 4)	Complementary Courses (need 4)	
Introduction to Computational Thinking (9th) Introduction to Engineering (9th) Robotics (10th) Engineering Development and Design (10th)	Principles of Engineering Advanced Robotics Engineering Economy (DE opt.) Data Manipulation and Analysis AP Calculus AB AP Calculus BC AP Statistics AP Physics I	AP Computer Science A AP Computer Science Principles AP Biology II Biology II DE (1013) AP Chemistry AP Environmental Science Environmental Science Trigonometry DE

ENGLISH

1st Level	2nd Level	3rd Level	4th+ Level
English I English I Honors	English II English II Honors	English III AP Language and Comp. English III DE	English IV AP Literature and Comp. English IV DE

ENGLISH I/ ENGLISH I HONORS

This course reviews basic grammar and note taking skills from previous grades and provides opportunities for oral and written communication. The basic types of paragraphs are taught, along with methods of development. These are combined into short themes. The literature focuses on selected world literature, with emphasis on the theme of coming of age as depicted in short stories, the novel, media, poetry, and Shakespeare. *Refer to requirements for honors (pg 4).

ENGLISH II/ ENGLISH II HONORS

This course emphasizes refinement of those grammar skills essential to advanced writing with increased practice in writing short themes using standard methods development. Library skills leading to a research paper are taught. The literature will focus on selected world literature, with emphasis on the study of culture as depicted in the novel, poetry, drama, short stories, and media. *Refer to requirements for honors (pg 4).

ENGLISH III

This course provides an overview of dominant ideas and styles of major American writers, focusing on regional development with added emphasis on genres and movements particular to America. The writing emphasis is on the four major methods of discourse and the process of writing a fully documented research paper.

AP ENGLISH LANGUAGE AND COMPOSITION

This course is an in-depth survey of and extensive writing in the four modes of discourse, as well as reading and writing assignments specifically designed to prepare students for the AP test. Throughout the course, students develop a voice by making appropriate creative nonfiction choices. Additionally, students read and analyze the rhetorical elements and their effects in nonfiction texts, including graphic images as forms of text, from many disciplines and historical periods. *This course can substitute for English III.* *AP Exam Required

ENGLISH IV

The literature is a survey of British selections from the Anglo-Saxon period to the present. Emphasis is placed on the language, history, and philosophy which has influenced the literature. The writing emphasis is analytical and persuasive and the research paper skills are reinforced. Outside reading is required

AP LITERATURE AND COMPOSITION

This course includes an in-depth survey of major American and British writers and extensive writing in four modes of discourse, as well as reading and writing assignments specifically designed to prepare students for the AP test. *This course can substitute for English IV.* *AP Exam Required

English III/IV DE

Students pursuing the Louisiana Associate's Transfer Degree Program will take college freshman English composition through Dual Enrollment with BRCC. *This course can substitute for English III & IV.*

ENGLISH FREE ELECTIVES

CREATIVE WRITING (11, 12)

This course is a writing workshop that focuses primarily on writing short memoirs, short stories, short plays and poetry. Students will be required to analyze the works of published authors, produce multiple drafts of their own work, and workshop the pieces of other students with the goal of creating publishable pieces.

AP SEMINAR (10,11)

Students investigate real-world issues from multiple perspectives in order to develop and write credible and valid evidence-based arguments. The AP evaluation requires two academic essays with presentations (one group and one individual) and an End Of Course AP exam. Students who earn a score of 3 or higher in AP Seminar, AP Research, and 4 other AP courses will receive the AP Capstone Diploma. This course is a prerequisite for AP Research. Students must have two teacher recommendations, one from the English teacher, and an A or B in English. *AP Exam Required

AP RESEARCH (11, 12)

Students deeply explore an academic topic, problem, issue or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Students reflect on their skill development, document their process, and curate artifacts through a process and reflection portfolio. The course culminates in an academic paper and a presentation with an oral defense. Students who earn a score of 3 or higher in AP Seminar, AP Research, and 4 other AP courses will receive the AP Capstone Diploma. *Prerequisite: AP Seminar* *AP Exam Required

MATHEMATICS

1st Level	2nd Level	3rd Level	4th+ Level
Algebra I Algebra I Honors	Geometry Geometry Honors	Algebra II Algebra II Honors	Adv Math Pre Calculus Advanced Math DE Algebra III AP Calculus AB AP Calculus BC AP Statistics

ALGEBRA I/ ALGEBRA I HONORS

This is an entry-level course that bridges the gap between the concrete ideas of mathematics and the abstract thinking of Algebra. Topics Eng studied include variables; operations and properties of real numbers; equivalent expressions and equations; solving and graphing linear equations and inequalities; factoring and solving quadratic equations; radicals; exponential growth; and probability. Special emphasis is placed on developing an understanding of functions through real-world applications. *Refer to requirements for honors (pg 4).

GEOMETRY/ GEOMETRY HONORS

This course focuses on the study of visual patterns and the use of Geometry to describe the physical universe, to represent mathematical concepts, and to teach problem-solving skills. Students utilize inductive reasoning to discover patterns and make conjectures and employ deductive reasoning to confirm conjectures through proof. Topics include measurement formulas; geometric and spatial visualization; drawing skills; properties of congruence, similarity, parallelism, and perpendicularity; different methods of proof; properties of plane and solid figures; and transformations. Geometry provides unifying concepts that are used throughout high school mathematics. *Refer to requirements for honors (pg 4).

ALGEBRA II/ ALGEBRA II HONORS

This course focuses on sharpening the understanding of concepts introduced in Algebra I and Geometry and extending the use of functions as models for real-world situations. Students explore algebraic expressions and forms, especially linear and quadratic forms, powers and roots, absolute value, and functions and graphs based on these concepts. Topics include logarithmic, exponential, and polynomial functions, and matrices. Algebraic and geometric topics are connected to topics in statistics, probability, science and engineering, and discrete math. Additional Honors level topics include conics, sequences, and series, probability and statistics and trigonometry

PRECALCULUS (ADVANCED MATH) HONORS

This is a college preparatory course that focuses on triangular and circular Trigonometry and Pre-Calculus. It further explores functions and their graphs through mathematical modeling, simulations, and real-world applications. Additional topics include analytic geometry, conics, logarithms, the Number e combinatorics and probability, derivatives, and the use of graphing calculators. Algebraic topics include: solving equations and inequalities; function properties and graphs; inverse functions; linear, quadratic, polynomial, rational, exponential, and logarithmic functions with applications; systems of equations.

ADV MATH DUAL ENROLLMENT (LSU MATH 1021 AND 1022)

Two semesters, two dual enrollment courses: one semester of Math 1021 (College Algebra) followed by one semester of Math 1022 (College Trig.) where students can earn 6 credit hours. Prereq: **Math 1021:** Min. composite ACT-20 **AND** Min. math score of ACT-21 **AND** a 2.5 cumulative HS GPA. Prereq: **Math 1022:** Credit for MATH 1021

College Algebra (1021) is an in-depth treatment of solving equations and inequalities; function properties and graphs; inverse functions; linear, quadratic, polynomial, rational, exponential, and logarithmic functions with applications; systems of equations.

College Trigonometry (1022) is an in-depth treatment of solving trigonometric functions and graphs; inverse trigonometric functions; fundamental identities and angle formulas; solving equations; triangles with applications; polar coordinate systems.

ALGEBRA III

This course provides an in-depth study of quadratic equations, systems of linear equations, inequalities, functions, graphs, exponential and logarithmic functions, complex numbers, and theory of equations. This course may be considered a fourth math from some colleges. Students must have successfully completed Algebra I, Algebra II, & Geometry.

AP CALCULUS AB

This course follows the suggested outline as provided by the Advanced Placement Program of the College Entrance Examination Board. It is an intensive study of differential and integral calculus. This course prepares the student for the Advanced Placement Calculus Examination on the AB level. A graphing calculator is mandatory. *AP or CLEP Test Required

AP CALCULUS BC

This course follows the suggested outline as provided by the Advanced Placement Program of the College Entrance Examination Board. Topics included are those in the AB course; additional methods of integration, vector and parametrically defined functions, sequences and series, polar coordinate system, and elementary differential equations. This course prepares students for the AP Calculus BC Exam. A graphing calculator is mandatory. *AP Test Required

AP STATISTICS

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling, and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding. *Prereq: Completion of Advance Math* *AP or CLEP Test Required

SCIENCE

1st Level	2nd Level	3rd Level	4th+ Level
Environmental Science AP Environ. Science	Biology Biology Honors Biology I/II DE (PBF)	Chemistry Chemistry Honors	Physics AP Physics I AP Chemistry AP Biology II Biology DE (1013/1023) Chemistry DE

Environmental Science/ AP Environmental Science

The Environmental Science course is designed to be equivalent to an introductory college Environmental Science course. The goal of this course is to provide students with the scientific principles, concepts, and methodologies to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the risks associated with these problems, and to examine alternative solutions resolving and/ or preventing them. In this course there will be a lab component as well as a field component. *Refer to requirements for honors (pg 4). *AP Test Required for AP Env. Sci.

BIOLOGY I

Students will do more than learn about science; they "do" science. Simply having content knowledge and scientific skills are not enough; students must investigate and apply content knowledge to scientific phenomena. Phenomena are real world observations that can be explained through scientific knowledge and reasoning (e.g., water droplets form on the outside of a water glass, plants tend to grow toward their light source, different layers of rock can be seen on the side of the road). Science instruction must integrate the practices, or behaviors, of scientists and engineers as students investigate real-world phenomena and design solutions to problems.

BIOLOGY I/II Dual Enrollment (PBF)

This DE course sequence is for the students in pursuit of the Associate's Degree under the Pathways to Bright Future Programs. Students will enroll in General Education College Freshman-level Biology courses and earn high school credit for Biology I and II. Students will take 1st semester HS Biology and will take DE during the 2nd semester. Biology II DE will be taken in the senior year.

CHEMISTRY I/ CHEMISTRY I HONORS

Students acquire an understanding of the basic principles of modern chemistry through classroom and laboratory work. Topics: matter and its composition, the mole concept, gas laws, atomic theory, bonding, thermal chemistry, chemical formulas, and equations, and acids, bases and salts, and varying degrees of math. *Refer to requirements for honors (pg 4).

PHYSICS

This course includes an introduction to mechanics (kinematics, dynamics, and conservation laws), fluids, heat, wave phenomena, optics, electricity, and magnetism. Math problem-solving techniques and laboratory investigations are emphasized. Students should have completed Algebra II prior to signing up for Physics due to math requirements.

AP PHYSICS 1

These courses are college-level, algebra-based physics courses taken together in one school year. AP Physics 1 (fall) topics include Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. *AP Test Required

AP CHEMISTRY II

This AP course is the equivalent to college chemistry and covers all concepts recommended in the AP Chemistry course description. It includes in-depth theoretical studies and extensive problem-solving. *AP or CLEP Test Required

AP BIOLOGY II

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore topics like evolution, energetics, information storage and transfer, and system interactions. *AP or CLEP Test Required

BIOLOGY II DE (1013/1023)

Biology II DE is a college-credit Biology course for non-science majors. Students will earn 6 hours of college Biology credit over two semesters by earning a grade of C or better in the course. The goal of Biology 1013 is to address the foundational units of life, the inheritance of traits, and how traits influence an organism's survival in their ecosystem. The goal of Biology 1023 is to address the diversity of life and the traits that are specific to each phylogenetic kingdom.

SOCIAL STUDIES

1st Level	2nd Level	3rd Level	4th+ Level
World Geography DE & World History DE AP Human Geography	AP Government Political Science/Civics DE & Psychology DE	US History AP US History	World History AP European History AP Psychology African American History Economics DE

WORLD GEOGRAPHY DE/ WORLD HISTORY DE

World Geography and World History Dual Enrollment will be aligned with the BRCC curriculum for each class. Students will complete World Geography (1 high school credit & 3 college credits) in the fall semester and World History (1 high school credit & 3 college credits) in the spring semester. Students will meet two social studies graduation requirements in this progression model.

AP HUMAN GEOGRAPHY

AP Human Geography is a full-year course designed to fulfill the curriculum expectations of a one-semester university human geography course. The course focuses on the processes and cause/ effect relationships of human populations. Students are required to complete additional readings, projects, presentations, and writing assignments.

AP GOVERNMENT AND POLITICS: US

United States Government and Politics give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific examples. It requires familiarity with various institutions, groups, beliefs, and ideas that constitute the U.S. government and politics. Students are required to complete additional readings, projects, presentations, and writing assignments.

POLITICAL SCIENCE (CIVICS) DE

This civics-compatible Dual Enrollment Course is available to Pathways to Bright Futures students in pursuit of an Associate's Degree. Topics will include basic government structures, the role of the citizen, and the impact of political decisions on society. Students will earn college credit through BRCC by earning a C or better in the course.

U.S. HISTORY

United States History offers a study of the history of our nation from the Industrial Revolution until the present. Through content reading, independent research, and collaborative projects, students explore American culture through a chronological survey of major issues, movements, people, and events in the United States.

AP U.S. HISTORY

This course is a two-semester survey of United States History from the age of exploration and discovery to the present. Solid reading skills, along with a willingness to devote considerable time to homework and independent study are necessary to succeed. Emphasis is placed on critical thinking skills, essay writing, interpretation of original documents, and historiography. *This course can substitute for US History.*

WORLD HISTORY

World History examines the development of society over time from the dawn of civilization to the present day. Students learn about the socioeconomic conditions, political institutions, and ideological attitudes that have marked various time periods throughout history. Using primary and secondary sources, students examine historical events, cultural developments, and social and family structures. Students will analyze statistics and data from maps, charts, and graphs to identify trends and patterns throughout history.

AP EUROPEAN HISTORY

AP European History is an introductory college-level European history course. Students cultivate their understanding of European history through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like the interaction of Europe and the world; economic and commercial developments; cultural and intellectual developments; states and other institutions of power; social organization and development; national and European identity; and technological and scientific innovation.

AFRICAN AMERICAN HISTORY (11, 12)

This course will provide an overview of the history of Africans and their descendants across the globe, including but not limited to African civilizations prior to European colonialism, encounters between Africa and Europe, movements of Africans to the Americas and elsewhere, and development of Black communities in and outside Africa. Learners will explore the complex interplay among the political, economic, and cultural forces that shape our understanding of the historic achievements and struggles of African-descended people in the United States and their relation to others around the world.

AP PSYCHOLOGY

The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, evaluate claims and evidence, and effectively communicate ideas. Students should be able to read a college-level textbook, clinical supplementary material, and write grammatically correct, complete sentences.

SOCIAL STUDIES FREE ELECTIVES

INTRODUCTION TO PHILOSOPHY (11, 12)

Study the major themes and concepts of philosophy, including metaphysics, epistemology, free will and determinism, evil and the existence of God, personal identity, ethical values and politics, modern cognitivism, and more. And you'll meet the major philosophers throughout the ages: Socrates, Descartes, Locke, Hume, Kant, Hegel, Nietzsche, Mill, and Marx. You'll also explore Eastern influences on Western philosophy, including Taoism, Confucianism, and Zen Buddhism.

WORLD LANGUAGES

Louisiana requires 2 years of the same language to graduate

Biliteracy Diploma Endorsement Seal: students must fulfill all English course requirements, achieve a composite score of 19 or better on the Reading & English components of the ACT, (EL students must pass ELPT with early advanced proficiency), and satisfy at least one of the following criteria: pass 4 years of World Language high school levels (I-IV) or score a 4+ on a World Language AP exam.

FRENCH I

This is a beginning course designed to introduce students to basic French conversation skills in reading, writing, listening and speaking. Students will also gain an appreciation and understanding of French and francophone culture. This course is conducted in the target language as much as possible

FRENCH II

This course is a continuation of French I with an emphasis on continuing to improve proficiency in the conversational skills of reading, writing, listening and speaking. Upon completion of this course, students will have a basic command of elementary sentence patterns and grammatical structures, as well as further understanding of French and francophone culture. This course is conducted in the target language as much as possible.

FRENCH III HONORS

This is an advanced language course with a focus on developing greater proficiency in the conversational skills of reading, writing, listening and speaking. Students will also develop a greater understanding of various cultural perspectives of the francophone world. This course is conducted predominantly in the target language.

FRENCH IV AP

This is an advanced language course designed to further develop proficiency in the conversational skills of reading, writing, listening and speaking. Students will also develop a greater understanding of various cultural perspectives of the francophone world. This course is conducted predominantly in the target language. Students will prepare for and take the French AP Exam at the end of the year.

FRENCH V HONORS

This course is designed to be the equivalent of the introductory French literature readings course at the college level. This is a writing and reading-intensive course that will push students to further their communicative abilities in French. All course reading, writing, and discussion take place entirely in French, and the curriculum centers on Francophone literature and film and engages with contemporary questions of cultural identity. The course covers diverse authors and film-makers from all corners of the French-speaking world, and students will undertake at least one novel study per semester.

SPANISH I

A beginning course designed to give students the experience of learning a second language and gaining an appreciation of the cultures and places in which Spanish is spoken. Listening, comprehension, speaking, reading, and writing are included in the course curriculum. This course introduces students to language immersion.

SPANISH II

This course furthers the material covered in Spanish I, with a stronger emphasis on advanced grammatical structures. As well as more advanced speaking and reading material, the course also includes a more in-depth study of cultural norms and practices.

SPANISH III

This is an advanced language course with a focus on developing greater proficiency in the conversational skills of reading, writing, listening and speaking. Students will also develop a greater understanding of various cultural perspectives of the Spanish world. This course is conducted predominantly in the target language.

SPANISH 1101/1102 DUAL

This is a two-semester, DUAL enrollment course where students can earn 8 total credit hours. Basic lexicon and structure of Spanish; emphasis on communicative language use. These are college-level Spanish Language courses that serve as an accelerated version of Spanish I and Spanish II. A college-level work ethic is required.

SPANISH 2101/2102 DUAL

This is a two-semester, DUAL enrollment course where students can earn 8 total credit hours. Continuation of elementary Spanish. Additional emphasis on reading and writing.

SPANISH V

This course is designed to be the equivalent of the introductory Spanish literature readings course at the college level. This is a writing and reading-intensive course that will push students to further their communicative abilities in Spanish. All course reading, writing, and discussion take place entirely in Spanish, and the curriculum centers on Spanish literature and film and engages with contemporary questions of cultural identity. The course covers diverse authors and film-makers from all corners of the Spanish-speaking world, and students will undertake at least one novel study per semester.

LATIN I

This course concentrates on the basics of the Latin language with drill in grammar and translation. Roman history, legends, myths, religion and customs are presented throughout the course to promote a greater understanding of the Romans.

LATIN II

This course extends the study of the Latin language, but the major emphasis is on translating the language with precision.

LATIN III Honors

This course consists of more difficult readings from the works of Roman writers, poets, and historians with emphasis on differences in styles, in point of view, and in word usage.

LATIN IV Honors

This course helps the advanced Latin student to understand Vergil's Aeneid, Caesar's De Bello Gallico, and additional readings of other Roman writers in depth. Emphasis will be on the content of what the Roman author says, his style, and how it is interpreted by today's scholars.

PHYSICAL EDUCATION & JROTC

PHYSICAL EDUCATION

Purchase of School PE Uniform required

PHYSICAL EDUCATION I, II

The aim of this course is to develop activities which a person can use later in life. Such activities as volleyball, basketball, track and field, soccer, flag football, and softball are taught

HEALTH

The goal in this class is to provide experiences and activities in health education that will help students to make informed choices about personal, family, and community health. The topics to be covered are first aid and safety, personal health, substance use and abuse, nutrition, and how to prevent obesity. 1/2 Credit is required for graduation.

PHYSICAL EDUCATION I, II, III, IV (Athletic)

These sections of Physical Education are reserved specifically for athletes who are active on team rosters at the beginning of the year. Schedule changes will not be made during the school year if a student earns a roster position during the school year.

BALLET

This beginner course is an introduction to Ballet elements including: beginning Ballet movements, positions, and vocabulary. Modern elements include floor positions, Modern dance vocabulary, and dance history. In each dance class, students will be expected to participate in warm-ups, across the floor progressions, choreography, and review. This course will culminate in a Spring Showcase. *Physical Education Credit*

JROTC

The Army Junior Reserve Officer Training Corps (JROTC) teaches character education, achievement, wellness, leadership, and diversity. It is a cooperative effort between the Army and the high schools to produce successful students and citizens while fostering in each school a more constructive and disciplined learning environment. The curriculum consists of education in citizenship, leadership, social and communication skills, physical fitness and wellness, geography, and civics. *JROTC has hair, makeup, and jewelry standards higher than the school standards. Cadets are required to wear the uniform properly and participate in physical training at least once per week.*
JROTC I and II substitute for Physical Education I, Physical Education II, and Health graduation requirements.

JROTC I

Introduction to Drill and Ceremony, Physical Training, Drill Team, Color Guard, Rifle Team, marching, rifle drill, customs and courtesies, and wear of the JROTC uniform. ROTC 1 counts towards credit for physical education and health.

JROTC II

JROTC II gives students an opportunity for leadership in cadet formations, marching, physical training and team events. Completion of ROTC I and II give full credit for physical education and health.

JROTC III

Introduction to individual and team planning, problem-solving, decision making, public speaking and service-learning. Cadets in JROTC III have the opportunity for more advanced leadership in a program purposely designed for student-led activity: Leadership in Drill Team, Color Guard, and Rifle Team. Highly motivated, disciplined, fit, consistent, productive, cooperative, and respectful cadets will have an opportunity to serve in Cadet Battalion Staff positions.

JROTC IV

The highest level of leadership and responsibility. Leadership Education Training (LET) 4 cadets have the opportunity to lead, plan, and execute training and service for the entire Corps of Cadets. LET 4 cadets must be the hardest working cadets in the school, setting the example: teaching, training, coaching, and mentoring other cadets. Completion of JROTC 4 gives cadets an advantage in competing for ROTC scholarships and entry into military service

JROTC Cyber-STEM Courses

The Army Junior Reserve Officer Training Corps (JROTC) Cyber-STEM Program is designed for those students interested in learning about computer programming and cybersecurity. Students will earn advanced industry certifications, such as A+. With the implementation of the pilot program, all levels of Cyber-STEM will be assigned 1st year curriculum coursework. The cybersecurity training will give students the ability to work in private industry, as independent contractors, or in government and military positions. Students who are serious about computer programming will find this as a rigorous supplemental program to support learning in any of the LSU STEM Pathways. All course curricula are aligned to the Army JROTC Cybersecurity Pilot Program. Seats in the program are limited.

JROTC 1 Cyber-STEM

Emphasis is on becoming a Developing Leader. Cadets in JROTC 1 Cyber-STEM will learn and practice advanced techniques in leadership, planning, and executing JROTC classes and events. Completion of JROTC 1 and 2 give full credit for physical education and health. Implementation of the JROTC Cyber-STEM pilot curriculum. Students will work towards attainment of A+ certification by the end of the school year. Skills focus on computer programming and Cyber security.

JROTC 2 Cyber-STEM

Prerequisite is ROTC 1. Emphasis is on becoming a Developing Leader. Cadets in JROTC 2 Cyber-STEM will learn and practice advanced techniques in leadership, planning, and executing JROTC classes and events. Completion of JROTC 1 and 2 give full credit for physical education and health. *Teacher recommendation required.

JROTC 3 Cyber-STEM

Prerequisite ROTC 1, 2, or by express permission of the Senior Army Instructor. Emphasis is on becoming a Supervising Leader. Cadets in JROTC 3 Cyber-STEM will learn to run all aspects of the JROTC program. They will practice leadership techniques, supervise other leaders, and serve on the cadet staff. *Teacher recommendation required.

JROTC 4 Cyber-STEM

Prerequisite ROTC 1,2,3, or by express permission of the Senior Army Instructor. Emphasis is on becoming a Managing Leader. This is the highest level of leadership and responsibility. Cadets will manage the entire scope of the JROTC Program and work closely with the Senior Army Instructor. Great care will be placed upon earning scholarships, gaining entrance to colleges, and successfully preparing for the next phase of life. Completion of JROTC 4 gives cadets an advantage in competing for ROTC and Service Academy scholarships, and advanced entry into military service. *Teacher recommendation required.

FINE ARTS

FINE ARTS SURVEY

This class is designed to further your understanding of the **Fine Arts**. When we discuss the **Fine Arts**, we are speaking about music, **visual art**, drama (including theater and film)

MUSIC APPRECIATION

This course takes an academic view of music and is intended for students who are interested in the study of music without performing. Throughout the year, students will explore music as music historians, music theorists, and composers, gaining a deeper understanding for where music has been, what it is currently, and where it may go in the future.

VISUAL ARTS

$50 Fee for all Art Courses
$94 AP Art Exam Fee
Students enrolled in AP Art Courses are REQUIRED to submit an AP Portfolio at the end of the course. College credit may be granted based on the student's AP Exam score.

ART I

This course covers studio production, critical analysis, aesthetic awareness, and selected art history topics. Students experience basic drawing and painting in a variety of media and techniques.

ART II

This course is an intermediate level of visual arts which absolutely requires students to be able to formulate their own projects with teacher guidance.

AP STUDIO ART COURSES

College-level accelerated art courses addressing conceptual and perceptual aspects of art production. The AP exam requires a 24 piece portfolio due in April of 2022.

AP STUDIO ART: DRAWING

Work may be in any media (painting, drawing, printmaking, collage, mixed-media) as long as it incorporates drawing in some way. *AP Portfolio Required.

AP STUDIO ART: 2-D DESIGN

Work may be in any two-dimensional media. The final portfolio must collectively address all elements and principles of design. *AP Portfolio Required.

AP STUDIO ART: 3-D DESIGN

Work may be in any three-dimensional media. The final sculpture portfolio must address all elements and principles of design. *AP Portfolio Required.

VOCAL MUSIC

BEGINNING CHOIR

This is an entry-level vocal ensemble for both treble and bass singers. Students within this ensemble will learn the fundamentals of music theory, sight-singing, vocal technique, and music history, as we explore choral literature ranging from the classical era to modern arrangements of commercial music. No prior singing experience or knowledge is necessary.

CONCERT CHOIR (Advanced Choir)

This is an intermediate-/advanced-level choir intended for students who have previously taken "Beginning Choir" (or have gotten approval from the current choir director) and understand the fundamental concepts of music theory and vocal technique. This course continues the study of music theory, music history, and vocal technique, as well as introduces fundamental ideas of vocal pedagogy. The Concert Choir is the ensemble which may represent Liberty Magnet in various competitions and events throughout the school year.

INSTRUMENTAL MUSIC

$25 Class Fee + $25 Fee per semester for School Owned Instrument, availability is limited.

BEGINNING BAND

This course is designed for students with a serious interest in studying instrumental music and developing skills necessary to join the more experienced performing ensembles. In order to achieve the outcomes of this course perspective students should be disciplined and self-motivated. Students will need to obtain an instrument.

INTERMEDIATE BAND

Intermediate Band is a performing ensemble. Most rising 9th graders are expected to have already achieved the skill level necessary to perform at the Grade II level. This class will include a continuation of skills learned at the middle-school level. Besides the learning and performance of concert music, other music fundamentals will be reinforced.

ADVANCED BAND (SYMPHONIC BAND)

The Advanced Band is the top performing ensemble. Typically this band is for serious students with several years of experience. Focus will be on more advanced instrumental and ensemble techniques, and more advanced literature will be performed. Permission of the director is required.

JAZZ ENSEMBLE

This course is for advanced musicians. Students in Jazz Ensemble should also be enrolled in Advanced Band. This course will cover a variety of styles and interpretations for the best literature written for this medium as well as basic improvisation and theory. Permission of the director is required.

ORCHESTRA

This course explores performance techniques of orchestral stringed instruments. Skills will be developed for solo and ensemble performance.

Studio Piano

This is an introductory-level course for piano that covers proper piano technique within a group classroom setting, while incorporating the necessary elements of music theory and pedagogy to gain a better understanding for use and execution of musical expression. Students within this class will explore various aspects, types, and techniques of piano performance, including solo repertoire, duet repertoire, and accompaniment.

PERFORMING ARTS

THEATER I: INTRODUCTION TO THEATER

Students explore basic techniques in acting, directing, and producing live theater as well as critical analysis of the art. A variety of performance and project assignments provide an opportunity for the individual to develop, organize, and interpret knowledge for application. Students develop creative expression through the application of knowledge, ideas,

communication and collaboration skills, organization abilities, and imagination in preparation for further learning. No prior acting experience necessary.

THEATER II: METHODS & STYLES OF ACTING

Students apply basic techniques in acting, directing, and producing live theater while exploring major developments in drama, major playwrights and their plays, the evolution of theater as a culture, production styles, and critical analysis of the art.

THEATRE III: ADVANCED ACTING

Students refine skills in acting, characterization, script analysis, and research technique through the study of improvisation, monologues, scenes, stage combat, auditioning, and musical theater. Students will also investigate career opportunities in theater arts. Students develop accountability, productivity, and collaboration skills. Students may be required to participate in a one-act or full length play each semester. After school and/or evening rehearsals will be required in preparation for performances. * may be repeated for credit

THEATER IV: PLAY PRODUCTION

Students apply acquired knowledge and skills in acting, characterization, script analysis, focused research, play selection, publicity and promotion, stage management, and house management as well as scenery, costume, prop, and sound design/ construction. Students are required to participate in a one-act or full-length play each semester. After school and/or evening rehearsals will be required in preparation for performances. * may be repeated for credit

TECHNICAL THEATER / SET DESIGN

This is an introductory course to stagecraft and technical theater with work in basic stage carpentry, lighting, special effects, and scenery painting presented in the form of lectures, demonstrations, and skills labs. Students are required to crew shows after regular school hours.

MUSICAL THEATER

Our innovative program in Musical Theatre is designed for a new generation of storytellers. With an unrivaled approach to hands-on, interactive learning, students find themselves completely immersed in their course of study from day one, developing practical skills in acting, singing, and dancing. As a musical theater production student, you will participate in daily musical theater production rehearsals where you will work closely with the creative and performing arts director to bring productions to life.

BALLET

This beginner course is an introduction to Ballet elements including: beginning Ballet movements, positions, and vocabulary. Modern elements include floor positions, Modern dance vocabulary, and dance history. In each dance class, students will be expected to participate in warm-ups, across the floor progressions, choreography, and review. This course will culminate in a Spring Showcase. *Physical Education Credit*

DANCE I

This more advanced course is the continuation of Physical Education (Ballet) and builds upon the foundation of technique and principles of dance. In theory we will discuss history and concert works with a more critical point of view. This course will also culminate with a concert performance. *Art Credit. Taken after Ballet.*

LSU STEM
Pathway Courses

LSU STEM PATHWAYS

Liberty Magnet High School, in collaboration with Louisiana State University and the Louisiana Department of Education, is providing programs for high school students that will better prepare them for college and careers in technology, engineering, and data-driven fields of employment. We are offering high quality courses in LSU's Pre-Engineering and Digital Design & Emergent Media Pathways that highlight 21st century skills such as critical thinking, problem solving, communication, collaboration, and appropriate use of technology. Upon completion of each of these electives, students will earn a LSU-issued certificate of course completion and may earn a Silver of Gold STEM Diploma Seal issued by the Louisiana Department of Education when graduating from Liberty.

INTRO TO COMPUTATIONAL THINKING (Required for all 9th grade students)

This course will introduce coding as the means to express and communicate STEM ideas and to interact with computing devices. Students will be presented with problems arising from science, engineering, and mathematics for which simple computational solutions are easily available. These ideas will be illustrated using games, where the Pythagorean Theorem is the basis of collision detection, and the equations of motion are the basis of realistic behavior. This course will build upon concepts from Algebra I, which will be visualized and put into practice in numerous hands-on projects. *This course applies to all LSU STEM Pathways.*

DATA MANIPULATION AND ANALYSIS

This course is an introduction to the emerging field of Data Science, which is a combination of mathematics and statistics on one hand, and computational thinking and programming on the other hand. Students will learn how to collect and clean data from different sources, such as databases, web scraping or measurement devices. They will then use charts and plots to visualize the data, and statistical measures to analyze it. Machine learning techniques such as clustering, regression and Bayesian classification will be introduced as modern approaches to make sense out of large amounts of data. The course will end with an overview of Big Data and the archetypical Map-Reduce algorithm. *Prerequisite: All students signing up for Data Manipulation should have already completed Algebra II due to math requirements.*

LSU PRE-ENGINEERING

Courses in Red are required. Students must have four additional courses from the elective pathway and/or complementary courses

1st Level	2nd Level	3rd Level	4th Level	Complimentary
Introduction to Comp. Thinking	Robotics	Engineering Design & Development	*Select Complementary Course*	Principles of Engineering Advanced Robotics Engineering Economy (DE opt.) Data Manipulation and Analysis AP Calculus AB AP Calculus BC AP Statistics AP Physics I AP Computer Science A AP Computer Science Principles AP Biology II Biology II DE (1013) AP Chemistry AP Environmental Science Environmental Science
Introduction to Engineering	Principles of Engineering	*Select Complementary Course*	*Select Complementary Course*	

INTRO TO ENGINEERING

This course exposes students to the design process, research and analysis, teamwork, communication methods, ethical decision making, engineering standards, and technical documentation. Students have the opportunity to develop these skills through project-based learning and to continually hone their interpersonal skills, creative abilities, and understanding of the design process. In addition to hands-on activities from each of the 10 major engineering disciplines, students will interact with industry professionals through guest presentations. *Also available in a dual enrollment format.*

ROBOTICS (LSU PARTNERSHIP)

Students use robotics to explore the fundamentals of engineering and programming. The course consists of project-based learning including principles of engineering, physics, electronics, mechanics, and programming using VEXCode. Students will use VEX components to create robots for various classroom projects. While building the robots, the design process will be emphasized as the robots are tested and their designs are modified to accomplish varying tasks. The second-semester projects will have a heavier focus on programming the robot to move autonomously.

ADVANCED ROBOTICS

Advanced robotics for VEX uses skills learned in Introduction to Robotics to create complex mechanical structures and high-level programming in order to compete at VEX Robotics competitions. After school and weekend commitments may be required.

PRINCIPLES OF ENGINEERING

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students continue to enhance their skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and computational thinking.

ENGINEERING DESIGN & DEVELOPMENT

Students work in teams to research, design, test, and construct a solution to an open-ended engineering problem. Students will study visualization and prototyping techniques including freehand sketching and 3D modeling using Inventor. The curriculum includes studies in principles of design methodology, product development, and prototyping with 3D printers. Students will also learn about project management by creating a design portfolio with an emphasis on technical writing and presentation skills.

ENGINEERING ECONOMY

Students learn how to plan engineering projects based on economic studies for decision-making, including considerations of rate of return, payback period, cost-benefit calculations, depreciation and tax relationships, and introduction to multivariate alternative studies. *Also available in a dual enrollment format.*

ENGINEERING CAPSTONE FREE ELECTIVE (12)

Students apply the knowledge and skills obtained throughout the Pre-Engineering Pathway to create a collaborative project which they present to other students, faculty and industry professionals.

LSU DIGITAL DESIGN & EMERGENT MEDIA

Courses in Red are required. Students must have four additional courses from the elective pathway and/or complementary courses

1st Level	2nd Level	3rd Level	4th Level	Complimentary
Introduction to Comp. Thinking	Coding for the Web	Programming for Digital Media	*Select Complementary Course*	Film & TV (1st course) Basic/Adv Film (2nd course) Photography I Photography II Sound Design (DE option) Video Game Design Dig. Image & Motion Graphics (DE opt) AP Art 3D Interactive Digital Media Capstone AP Calculus AB AP Calculus BC AP Statistics AP Computer Science A AP Computer Science Principles Data Manipulation and Analysis
Digital Storytelling	Film & TV or Photography I	*Select Complementary Course*	*Select Complementary Course*	

DIGITAL STORYTELLING

This is an introductory course to Digital Design & Emergent Media. This is a project based learning (PBL) inspired class that utilizes a PBL assessment guide, as well as thoughtful integrated learning. Experimentation and the practice of storytelling through the lenses of multiple mediums will help the students develop narrative reasoning, digital literacy, and critical thinking skills, while simultaneously giving them a realm to be creative and challenged. This course was created due to the “entertainment” industry’s demand for content creation and a transfer of thinking. The purpose of this course is to get our students to become creators versus consumers. The course focuses on the realms of: Visual, Auditory, Videographic, and Interactive Storytelling, ending the course with a Culminating Project and a Diverse Media Rich Portfolio.

CODING FOR THE WEB

Coding for the Web is an introductory course focusing on the foundational programming concepts in web development, such as functions, for loops, conditional statements, as well as analyzing and solving problems like a programmer. Though we are utilizing HTML, CSS, and JavaScript, this is not a “web design” course. Students will have the skills, knowledge, and experience to create web applets by the end of the course. The main goals of this class focus on teaching students to think critically about how to solve a problem using programming, and writing JavaScript programs using functions, for loops, and conditional statements.

PHOTOGRAPHY I (10th/11th Grade Only)

An introductory course that will help the students become well rounded in the fundamentals of digital photography. Four areas of instruction emphasized are: how cameras work, how composition works, how lighting works, and how to use photo editing software. Priority for enrollment is given to Digital and Emergent Media Pathway students.

PHOTOGRAPHY II

This course will help students develop a portfolio of their work. Further techniques and skills will be refined and incorporated into their work.

FILM AND TV (LSU PARTNERSHIP)

An entry-level course that will serve as an introduction to basic video/film/audio production. The goal of the course is for the student to develop the ability to capture great video images and audio, and to be able to edit those elements together to tell a story.

PROGRAMMING FOR DIGITAL MEDIA

This course introduces a broad array of topics related to digital media through project-oriented programming of graphics, audio, and hardware applications. The motivation for this course is to provide a basic introduction to computer programming using subjects that are relevant or appealing to incoming students who are new to technological fields of study, with no prior programming coursework. The course is presented in four segments, covering three distinct areas in digital media, with a fourth covering the integration of these areas. There is a strong emphasis on computer programming tasks throughout, and the hands-on exercise of digital media tools in class is required. The first segment introduces real-time graphics rendering and user interaction. The second introduces sound synthesis and audio production. The third introduces basic electronics and requires students to develop hardware devices with embedded processing. Finally, communication mechanisms are developed, allowing the disparate elements of graphics, sound, and hardware to be composed into interactive systems.

DIGITAL IMAGE (LSU ART 2050) & MOTION GRAPHICS (LSU ART 2055) (11/12)

These courses will be based on hands-on training in the use of computer hardware and software to create digital graphics, starting with the basics of Photoshop and Illustrator and continuing Maya software. As the student develops familiarity with these industry-standard programs and graphic tools 2D animation and design projects will be overseen by mentors. The 2D animation partition of the class will focus on, rigging, planar tracking, rotoscoping, motion tracking, etc in order to develop their own animated short. The class will conclude with the introduction of 3D design, development, and rigging. These will be offered as dual enrollment courses thru LSU.

SOUND DESIGN (LSU MUS 2745)

Create original projects using a variety of music production software tools for sequencing, sound editing, synthesis, and effects. Get familiar with music notation software. Use edit and mix a studio session using professional tools. Get hands-on training with microphones, mixers, and other live sound equipment.

INTERACTIVE EMERGENT MEDIA CAPSTONE

Students create an individual project, presenting it to fellow students, faculty, and industry profession- als. They apply knowledge and skills obtained in the program to design a significant project in a collaborative environment. At the end of the se- mester, they make a formal oral presentation of their project to a faculty committee.

BROADCASTING FREE ELECTIVE (11/12)

This course is project-based, the students will learn the basics of broadcast journalism, how to write for broadcast and how to produce a news show. The focus of the course will be to produce a live news production and school promotional videos every week to be broadcast at the school. Students will learn the major groups of production including: camera operator, sound engineer, editor, producer and director. The course will be dedicated to allowing students to explore newsgathering in the electronic age. While producing the news, students will have the opportunity to use professional studio equipment. Students are expected to have basic knowledge of cameras and tripods, as well as some video editing experience.

LSU COMPUTING

Courses in Red are required. Students must have four additional courses from the elective pathway and/or complementary courses

1st Level	2nd Level	3rd Level	4th Level	Complimentary
Introduction to Comp. Thinking	Program. for STEM or Data Manip./Analys	*Select Complementary Course*	*Select Complementary Course*	AP Computer Science A AP Computer Science Principles Video Game Design Coding for the Web Robotics Advanced Robotics Programming Digital Media AP Calculus AB AP Calculus BC AP Statistics AP Physics I Biology II DE (1013) Data Manipulation & Analysis
Cybersecurity (LSU)	Interactive Computing	*Select Complementary Course*	*Select Complementary Course*	

INTERACTIVE COMPUTING

This course focuses on the nuances of programming for interacting with the real world in two representative areas: autonomous robots and the front end of web applications. Students learn how to iteratively approximate a software model to the realities of the physical hardware, how to write test suites and how to systematically debug their programs. Through fun and engaging projects, the students learn problem solving skills, such as programming robots to navigate mazes and play soccer, developing on-line pages to read sensors and control actuators. *(Prerequisite: Introduction to Computational Thinking)*

CYBERSECURITY (LSU PARTNERSHIP)

This course is designed to foster interest in Information Technology and networking careers. Through hands-on projects, students learn to install and administer operating systems, to have computers communicate with each other and to detect and repair vulnerabilities in systems and networks. This course also covers connections of computing and society, including ethics, security, and privacy in on-line communication.

PROGRAMMING FOR STEM

This course expands the practice of software development in a variety of settings, so that students acquire a broad set of programming skills and a deeper understanding of software engineering principles. Students learn to plan, design and implement relatively large programming projects that require background research and teamwork. Topics include simulations, games and interactive online applications. Robust program design and sound software engineering practices are emphasized throughout the course.
(Prerequisite: Interactive Computing or Data Manipulation and Analysis)

PROGRAMMING FOR STEM/ENGINEERING

Pre-Req: Intro to Computational Thinking for STEM The goal of this course is to have students develop a transferable skill set of computer programming abilities, which they could apply to any future programming task. Topics will include the software development cycle, data representation and processing, variables, functions and expressions, logic and control commands, repetition, implementation of basic algorithms, and physical computing. Projects will cover command-line scripting in Python, graphical interfaces in the JavaScript P5 environment, and interaction with electronic components in the Arduino platform.

AP COMPUTER SCIENCE A

AP Computer Science A introduces students to computer science through programming. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. The course emphasizes object-oriented programming and design using the Java programming language. *Prerequisite: first-year high school algebra course*

AP COMPUTER SCIENCE PRINCIPLES

The AP Computer Science Principles course is designed to be equivalent to a first- semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests. Students will also develop effective communication and collaboration skills by working individually and collaboratively to solve problems, and will discuss and write about the impacts these solutions could have on their community, society, and the world.

VIDEO GAME DESIGN

The course is project-based, the students will not just be learning dry programming concepts, but applying them immediately to real games. Students will build an entire game themselves with no prebuilds. Students will also be challenged to apply, and re-apply their knowledge regularly. The course will be taught only utilizing C#. The students will learn C#, including Test-Driven Development, a highly valuable skill. This is a higher-order thinking course that can build student's confidence in the basics of coding and game development, and make them hungry to learn more.

CODING FOR THE WEB

Coding for the Web is an introductory course focusing on the foundational programming concepts in web development, such as functions, for loops, conditional statements, as well as analyzing and solving problems like a programmer. Though we are utilizing HTML, CSS, and JavaScript, this is not a "web design" course. Students will have the skills, knowledge, and experience to create web applets by the end of the course. The main goals of this class focus on teaching students to think critically about how to solve a problem using programming, and writing JavaScript programs using functions, for loops, and conditional statements.

LSU BIOMEDICAL SCIENCES

Courses in Red are required. Students must have four additional courses from the elective pathway and/or complementary courses

1st Level	2nd Level	3rd Level	4th Level	Complimentary
Introduction to Comp. Thinking	Comparative Anatomy & Physiology	*Select Complementary Course*	Biomedical Capstone or Data Manipulation & Analysis	Forensic Science Biology II DE (1013) AP Biology II AP Env. Science AP Psychology AP Chemistry AP Calculus AB AP Calculus BC AP Statistics AP Computer Science A AP Computer Science Principles
Introduction to Biomedical Sciences	*Select Complementary Course*	*Select Complementary Course*	*Select Complementary Course*	

INTRO TO BIOMEDICAL SCIENCES

Learning and Growing by Investigating Medical Mysteries Through scaffolded activities that connect learning to life, students step into the roles of **biomedical science** professionals and investigate topics including human medicine, physiology, genetics, microbiology, and public health.

COMPARATIVE ANATOMY & PHYSIOLOGY

Human Anatomy and Physiology is a laboratory-based course that investigates the structure and function of the human body. Topics covered will include the basic organization of the body and major body systems along with the impact of diseases on certain systems.

FORENSICS SCIENCE

Focuses on the skills and concepts behind physical aspects of crime scene investigation and **forensic science**. This **course** includes a broad series of lessons and activities that offer a variety of modalities for ultimate student engagement and content retention.

BIOMEDICAL CAPSTONE

This course is for seniors in the Biomedical Pathway. Students spend time interning for a wide range of biomedically focused local companies, businesses, and organizations. Students in this course will gain work experience and become more familiar with several possible career paths and opportunities available to them so that they can make informed decisions on how to best achieve their biomedical professional goals. It is recommended that students have access to their own transportation. *Prerequisites: Introduction to Biomedical Sciences & Comparative Anatomy and Physiology*

OTHER ELECTIVES/OFFERINGS

ACT PREP

This is a junior-level course required for students who did not meet college-readiness standards on the Pre-ACT. The course will focus on test preparation strategies and content in the four ACT testing sessions: English, Math, Reading, and Science. Students who earn a 21 composite score with college readiness of 18+ English/19+ Math on the ACT prior to the start of the junior year will be exempt from this course. Students who earn a score within the top of the predictive college-readiness range on the PreACT during the Sophomore year will be exempt from this course.

OFFICE AIDE -- APPLICATION ONLY

Students serve as office aides in the various Academy offices. This class is NOT for credit. Grade 12 ONLY. Application ONLY. *Requires administrator recommendation.

LIBRARY AIDE -- APPLICATION ONLY

Students serve as office aides in the library. This class is NOT for credit. Grade 12 ONLY. Application ONLY. *Requires administrator recommendation.

PRINCIPLES OF MARKETING

Principles of Marketing introduces the basic foundations and functions of marketing and entrepreneurship. Emphasis is placed on knowledge, skills, and attitudes necessary for entering and advancing in the field and reinforced in this course through the application of marketing and entrepreneurial principles. Work-based learning strategies appropriate for this course include job shadowing, field trips, and/or cooperative education. Business simulations, projects, teamwork, DECA leadership activities, conferences, and competitions provide opportunities for application of instructional competencies.

CUSTOMER SERVICE

In this course, students are taught the key concepts of a successful customer service program. Students in this course have scheduled class time as employees in our school store.

PUBLICATIONS I (11th & 12th Grade)

In Publications I, students will work in a project-based format in conjunction with the photography team to produce the annual yearbook. Students will be responsible for designing layouts and themes, writing articles and interest stories, attending school events to collect photographs and first-hand information, and proofreading. **Students must be approved by the instructor.**

CTE Internship (12th Grade)

Students in CTE Internship earn high school credit for workforce experiences during the school year. Paid internships must be within the student's STEM Pathway. Students in this course must provide their own transportation and will be dismissed during the class to report to their job placement. **This course is only open to students who have been accepted into the East Baton Rouge Parish WorkForce Readiness Internship Program. The program requires an application, interview, background check, and drug screen.**

COURSE OFFERINGS LIST

Math	Science	Social Studies	English
Algebra I Algebra I Honors Geometry Geometry Honors Algebra II Algebra II H Precalculus (Adv Math) Adv Math DE 1S Trig 1223 DE 1S Algebra III AP Calculus AB AP Calculus BC AP Statistics A	Environ. Science AP Env. Science Biology I Chemistry Chemistry H Physics AP Physics I AP Biology II AP Chem II Biology II DE	World G. DE/World H.DE AP Human Geog AP Government Political Science/Civics DE Psychology DE US History AP US History World History AP European History AP Psychology African Amer. History	English I English I H English II English II H English III AP Lang. & Comp. English IV AP Literature English III DE English IV DE
Computer Science	**Digital Arts**	**Pre-Engineering**	**Biomedical**
Coding for Web Program. STEM Cybersecurity LSU AP Comp. Sci. A AP Com. Sci. Principles Interactive Computing Programming for STEM	Photography I Photography II Digital Storytelling Dig.Image & Mot Graph.(DE) Film & TV Basic/Adv Film (II) DDEM Capstone Video Game Design	Int. Eng. Des. DE Robotics LSU Adv. Robotics Eng. Economy DE Eng. Design/Devel. DE Principles of Engineering	Intro Biomedical SciForensic Science Comparative Anatomy Biomedical Capstone
Fine Arts	**Foreign Language**	**Physical Ed.**	**Electives**
Art I Art II Studio Art Drawing AP Studio Art 2D AP Studio Art 3D Beg. Choir Adv. Choir Fine Arts Survey Music Appreciation Studio Piano Dance Ballet Theater I, II, III, IV Set Design/Production Musical Theater Beginning Band Advanced Band Advanced Orchestra Jazz Ensemble	French I French II French III - Honors French IV - AP & Honors Spanish I Spanish II Spanish Elementary DE Spanish Intermediate DE Spanish III Spanish IV Latin I Latin II Latin III H Latin IV H	Physical Ed I Physical Ed II 1S Health 1S Physical Ed III Physical Ed IV Ballet JROTC I JROTC I CYBER STEM JROTC II JROTC II CYBER STEM	ACT Prep English ACT Prep Math AP Research AP Seminar Broadcasting Creative Writing CTE Internship Customer Service Dance (Art credit) Data Analysis Intro. Comp. Thinking JROTC III JROTC III CYBER STEM JROTC IV JROTC IV CYBER STEM Philosophy Principles of Marketing PublicationsI/II Study Skills **Approval Req.*