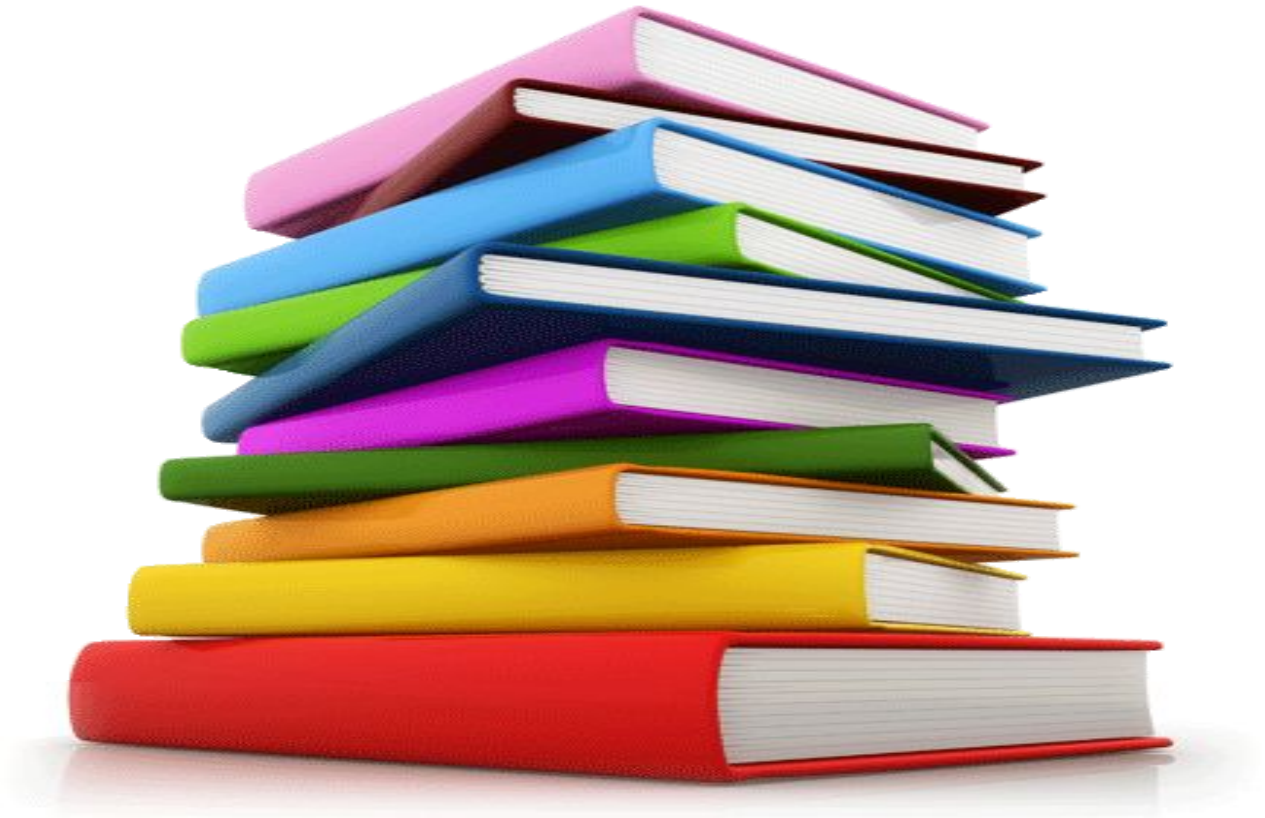
TWINFIELD
UNION SCHOOL
2015 – 2016

Course Offerings



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Explanation of Semesters and Credits

Twinfield's school year is divided into two semesters (fall and spring). Each semester is approximately eighteen weeks. There are four periods a day; each class is approximately 90 minutes long. Some courses are single block courses that occur 4 times per week for 45 minutes. Courses are assigned a credit value of .5 or 1 upon successful completion of the semester unless otherwise noted in the description of courses.

General Academic Requirements for class of 2019

A total of **24 credits** are required for graduation

English	4
Math	3
Science	3
Social Studies	2
U.S. History	1
Fine Arts	1
Physical Education	1.5
Health	.5

Grade Placement

Students are designated by a grade level according to the number of credits they have successfully completed.

Grade 10 = 6 Grade 11 = 12 Grade 12 = 18 Graduation = 24

Honor Roll

The Twinfield Union School Honor Roll has three levels of achievement based on the grade-point average of that reporting semester.

Highest Honors – GPA 94-100% with no grade below a 94

High Honors – GPA 90-93% with no grade below a 90

Honors – GPA 85-89% with no grade below an 85

National Honor Society

Students are chosen for the National Honor Society based on demonstrated leadership, character, service and scholarship. Students who have reached a second semester sophomore status, and who have accumulated a grade point average of 90 or above are considered for membership. Members are required to participate in community service projects each year. Each member must complete 20 hours of community service in addition to any hours required for the diploma plus.

Diploma Plus

Twinfield Union School recognizes students who work significantly beyond the minimum requirements for graduation. To earn a Diploma Plus, graduating seniors must have achieved in three areas. The must have: 1) completed at least one accredited course outside of the course offerings at Twinfield (usually through the Renaissance Program), 2) volunteered a minimum of 80 hours of community service, and 3) maintained a career GPA of 85.

COURSE SELECTION REQUIREMENTS

All students in grades 9-12 must take at least six courses each semester to be considered a full time student. Prior approval is required from the administration and parent or guardian for a student who needs to carry fewer than six courses each semester.

Adjustments to Schedules

1. A student may change his or her schedule during the add/drop period (which is three days after the new semester begins) provided that:
    a. the student continues to carry six courses per semester
    b. the teachers, guidance counselor and parents approve the change

Recommended Preparation For Post-Secondary Education

Students who are considering secondary education are strongly advised to complete the following as a minimum in addition to the graduation requirements.

2 credits of the same World Language
2 credits of Algebra (Algebra 1 and 2) plus Geometry or Pre-Calculus
2 Lab Sciences

Programs such as Engineering, Physical and Occupational Therapy, etc., usually require four years of math through Pre-Calculus and four years of science.

Community Service and Volunteerism

All Twinfield students are strongly encouraged to seek opportunities to perform voluntary service to the community. Colleges and employers are looking for students who are "givers" as well as good students. Many Physical Therapy programs require volunteerism in their chosen field prior to acceptance. Community service has become a major selection criterion for most private scholarships. Community service also gives a job resume an edge for students just entering the workforce.

Recommended Preparation for Students Entering the Workforce

Students who wish to pursue employment are strongly advised to either participate in an aide position offered at Twinfield, volunteer in the community, or explore opportunities that are offered through the Barre Technical Center and to take advantage of the various Math and Business courses here at Twinfield. Students should also take advantage of team building activities such as sports and drama, because it will broaden a student's pool of resources and employers today look for team oriented employees.

Co-Curricular Activities

Successful participation in a variety of activities will strengthen a student's transcript and give them opportunities to develop leadership qualities. Evidence of strong leadership ability will greatly improve a student's chances of gaining entrance into college or employment.

Freshmen & Sophomores

Science and Humanities

Synapse 9 (two semesters)
Synapse 9 will combine Science and Humanities, allowing students to engage with ideas and topics that combine the subjects, while making connections, working with others, and communicating effectively. Students will learn to use technology as a tool to access information, create products, and express ideas. They will have opportunities to pursue their interests and invest personally in their learning. Synapse will center around focus questions and allow students freedom in the ways they explore these concepts. The key themes of this class will be Evolution, Revolution, and Innovation, as well as Global Issues.
Students will earn three credits: one in Science, one in English, and one in Social Studies.
Open to 9th grade students.
Credit: .5 English, .5 Social Studies, .5 Science each semester

Synapse 10 (two semesters)
Synapse 10 will combine Science and Humanities, allowing students to engage with ideas and topics that combine the subjects, making connections, working with others, and communicating effectively. Students will learn to use technology as a tool to access information, create products, and express ideas. They will have opportunities to pursue their interests and invest personally in their learning. Synapse will center around focus questions and allow students freedom in the ways they explore these concepts. The key themes of this class will be Human Impact on the BioSphere, Identity and Genetics, WWII and the Holocaust, What is Truth?, and Engineering Our Future.
Students will earn three credits: one in Science, one in English, and one in Social Studies.
Open to 10th grade students.
Credit: .5 English, .5 Social Studies, .5 Science each semester

Math Offerings:

MA-107
Algebra 1 (two semesters)
A required course for all high school math options, this course will cover fractions, decimals, percent's, ratio-proportions, as well as rules for exponents, solving equations and inequalities, mathematical properties of real numbers, real number operations, graphing linear equations, problem solving, factoring, Pythagorean theorem, roots, functions, advanced graphing, the quadratic formula, and some basic statistics.

MA-202
Geometry (two semesters)
Geometry concepts are intuitively developed using exploration and activities. Content ranges from the analysis of figures and shapes to the establishment of the properties of figures. Visualization is a key component of the course material. We'll be drawing and creating for both artistic and practical purposes. The specific material covered will include, but is not limited to, angle measurement and relationships, triangle congruency, parallel lines, transformations, polygons, similarity, circles, surface

area and volume.
Prerequisite: Successful completion of Algebra 1, primarily Grades 10, 11

MA-209
Algebra 2 (two semesters)
This course is a continuation of elementary algebra. Topics covered include linear equations and inequalities, matrices, quadratic functions, exponential and logarithmic functions, rational equations and functions. **Prerequisite:** Successful completion of Algebra 1

Barre Technical Center: Pre-Tech Exploratory

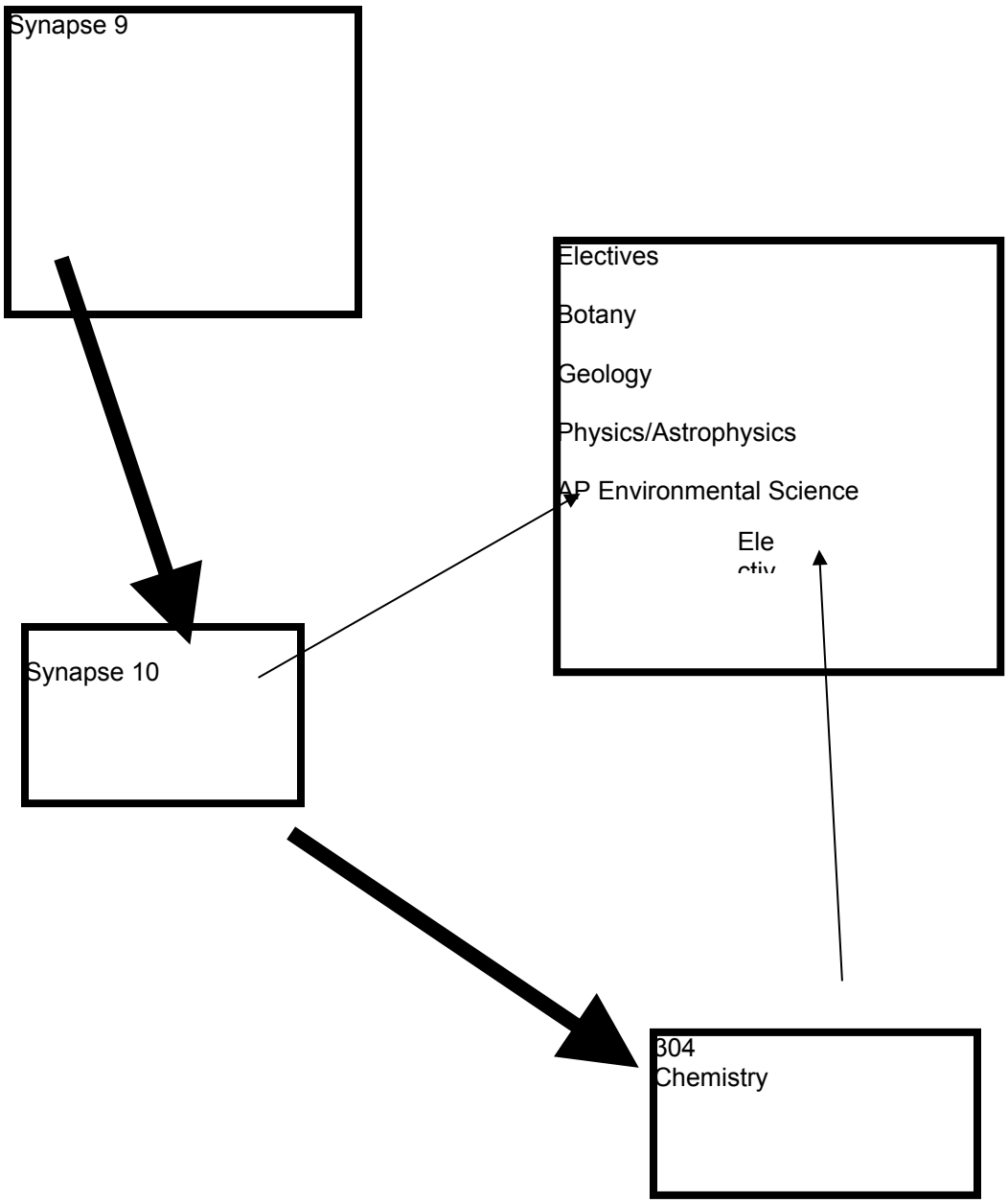
This program is designed for sophomores that are planning to enroll in one of the technical trades at the Barre Technical Center. Students explore all the different trades offered at BTC. The Pre-Tech program follows a standards based curriculum that emphasizes skills such as critical thinking, reasoning and problem solving.
Students learn applied foundational skills to prepare them for success in: core classes, technical programs, workplace environments. Students will shadow actively engage in all programs.
Industry Certification: Career Safe 10 Hour OSHA safety course, Career Safe 10 hour Construction Safety, CPR/First Aid.

Open To – Grade 10
Prerequisite – Students are selected through an application and interview process
Program Length – 1 year
Awarded Credit - 1 credit of English
1 credit of Social Studies
1 credit of Science
1 credit of Math
2 credits of Electives

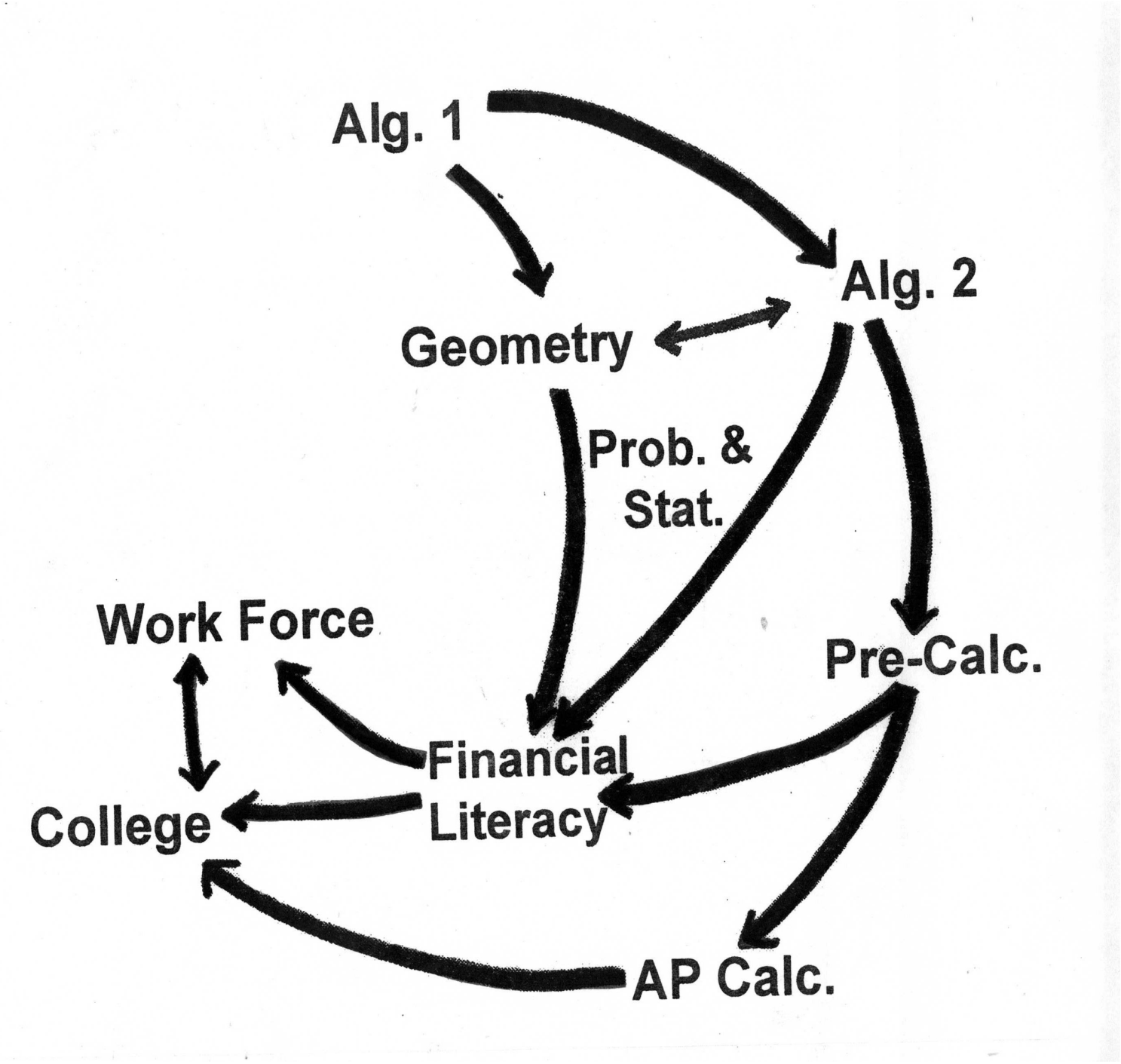
There are numerous elective offerings available to freshmen and sophomores as well. Please refer to page 20 for a full list and descriptions.

Science Courses and Sequence

The Science Department offers courses that will provide the basis for students to become scientifically literate citizens. Students will be required to take two integrated foundation courses, Synapse 9, and Synapse 10 in 9th, and 10th grades respectively. Upon successful completion of Synapse 10, students are eligible to sign up for our more advanced courses.



Math Sequence



Junior & Senior Offerings

English and Social Sciences:

Eng 350
Honors American Literature (2 semesters)
This full-year class is recommended for students considering admission to selective post secondary colleges or universities. This class will balance classic American Literature with contemporary authors. This class requires a great deal of reading, writing, and class discussions. Students are also responsible for summer work that must be completed for the first day of class.
Prerequisite: Successful completion of tenth grade English and completion of summer reading work.
Credit 1

Eng 302 American Studies (2 semesters)

American Studies examines the core values and ideas that define American culture, while at the same time emphasizing the diversity of its expressions in past and contemporary times. We will draw upon the content of several disciplines, including American literature, writing, history, political science, sociology, anthropology and economics. Readings will include both traditional fiction and nonfiction studied in American literature and US history courses and also readings that represent the diversity of cultures that constitute the fabric of America.
Open to students in grade 11 and 12. Students are required to take both sections of the double block. **Credit: 1 credit English, 1 credit U.S. History**

SS 501 Honors US History (full year)

As Americans, we have inherited a dynamic and complex legacy from those who have lived before us. United States history is a search into our past as a nation and as individuals. The course is a seminar on historical issues, arranged chronologically. Read, write and discuss US history extensively! The entire scope of US history from the colonial period to the present will be addressed.
Section I covers US history from the Revolutionary War through Reconstruction.
Section II covers Post-Reconstruction through Modern America
In addition, the course focuses on the tools and methods of history. Students will be reading primary source documents, as well as secondary, and will be asked to write interpretive essays in much the same manner that a historian would. Students will be using an Advanced Placement text, Kennedy, Cohen and Bailey's The American Pageant, and a wide variety of supplemental readings, both primary and secondary including Howard Zinn's Peoples History of the United States. Success requires the ability to acquire information independently and to write well, as well as a commitment to hard work and excellence.
Credit .5 per semester

Math Offerings:

MA-202
Geometry (two semesters)
Geometry concepts are intuitively developed using exploration and activities. Content ranges from the analysis of figures and shapes to the establishment of the properties of figures. Visualization is a key component of the course material. We'll be drawing and creating for both artistic and practical purposes. The specific material covered will include, but is not limited to, angle measurement and relationships, triangle congruency, parallel lines, transformations, polygons, similarity, circles, surface area and volume. **Prerequisite:** Successful completion of Algebra 1, primarily Grades 10, 11
Credit .5 each semester

MA-209
Algebra 2 (two semesters)
This course is a continuation of elementary algebra. Topics covered include linear equations and inequalities, matrices, quadratic functions, exponential and logarithmic functions, rational equations and functions. **Prerequisite:** Successful completion of Algebra 1
Credit .5 each semester

MA-305
Introduction to Probability and Statistics
This course will be tailored to a variety of ability levels. Topics include, but are not limited to, gathering and organizing data, extrapolation and interpolation, theoretical and experimental probability, and normal distribution. Students will use graphing calculators and computers as resources. **Prerequisite:** Successful completion of Algebra 1, Grades 10, 11, 12
Credit .5

MA-204
Financial Literacy
Looking to avoid bankruptcy in the future?! Want to buy that super car?! This course will introduce you to many issues you will deal with every day. Some areas covered are earning and budgeting money, choosing a credit card, purchasing/owning an automobile, managing loans, the insurance game, taxes, investments and retirement, and other life challenges.
Prerequisite: Successful completion of Algebra 1 or Geometry Grades 11, 12
Credit .5

MA-401
Pre-Calculus (two semesters)
Pre-Calculus is recommended for students who are interested in post-secondary study. This course uses graphing calculator technology to study problem situations analytically, graphically, and numerically. Algebraic modeling is stressed in the following topics: polynomial and rational functions, exponential and logarithmic functions, and vectors. Trigonometry (triangles and waves) will be the main topic of the second semester.
Prerequisite: Successful completion of Algebra 2, primarily Grades 11, 12
Credit .5 each semester

MA-500
AP Calculus (two semesters)
This course will prepare students for college level mathematics. Graphing calculators will be used extensively. Topics include limits, differentiation, integration, logarithmic and exponential functions, and volume of solids of revolution.
Prerequisite: Successful completion of Pre-Calculus and teacher recommendation, primarily Grade 12
Credit .5 each semester

Science Offerings:

SC-304
Chemistry (full year)
Students will learn about the structure of matter, chemical interaction, phase changes, solutions, gas laws, acid-base reactions, and the scientific laws that describe these processes. Class will include a combination of lecture, projects, readings, and learning lab basics. Laboratory investigations will be used to illustrate concepts discussed, and students will be introduced to many tools and techniques commonly used in a chemistry lab. Part of the laboratory grade will be based on lab safety.
Pre-requisite: Successful completion of SC-200
Credit .5 per semester

SC-401 Physics and Astrophysics

Students will learn about forces, motion, gravity, vectors, simple machines, momentum, work, energy and heat, electricity, and light and sound. We will do a lot of hands-on activities. A unit on astrophysics/astronomy using the Peacham telescope (Northeast Kingdom Astronomy Foundation) will be the centerpiece for learning about light. Pre-requisite - Successful completion of biology. Students may take this while studying chemistry.
Credit .5 per semester

Science & Humanities (Senior Level)

Bioethics and Science through Literature (2 semesters)
Bioethics will allow students to delve into a variety of controversial issues in society. Students will focus on issues through the lense of current scientific research, while also focusing on societal influences in the making of ethical decisions. In examining the morality of situations, students will formulate arguments based on scientific research, paying particular attention to supporting evidence. In addition, students will include in their arguments influences that are more difficult to quantify, such as background, personal experience, and religion. Students will also study literature, investigating how authors make connections to science and civilization and how science influences culture. Possible titles for study include *Frankenstein*, *Flowers for Algernon*, *Othello*, and *The Martian*. This class can be designated as Honors with the completion of summer work and additional or alternative assignments throughout the course of the year.
This class is for seniors and will meet for a full block four days a week.
Credit: .5 English, .5 Science each semester

Electives

DESIGN TECHNOLOGY

Woodworking I
Students learn basic skills and techniques of using hand tools and knowledge of working with wood through hands on projects. Topics covered include; tool use, safety, tree identification, wood types and their uses, tree harvesting and lumber preparation. Possible projects include: carving mallet, signs, dovetail box, archery bow, baseball bat, cutting board, canoe paddle.

Sketch-Up Design and 3D printing
Students learn how to design, create and manipulate 3D computer models in Google Sketch-Up. Students will make prototypes on the school's 3D printer.

Engineering I
Students explore a range of engineering concepts, knowledge and skills. Topics include; simple machines, aeronautics, and basic robotics. A hands-on class focused on designing a building working machines.

Engineering II
Students expand skills and knowledge acquired in Engineering I. Topics include; advanced robotics and programming, DC electricity, and renewable energy.

Geology and Field Mapping
Students study the physical and chemical processes that shape the landscape; learn to identify basic rocks and minerals; explore Vermont's varied geology; record, analyze and map geologic features. Students also learn how to read topographic and geologic maps, use a compass and GPS, and use Google Earth and GIS mapping software. (Can also be taken for 0.5 science credit)

Independent Design Technology
An advanced study of a topic of each student's choosing that challenges them to learn new skills/knowledge and gain experience. Examples include; RC airplanes, advanced robotics, and furniture design/construction.

DRIVER EDUCATION
Driver Education is intended primarily as a course for sophomores, although any student with a valid Vermont Learners permit may take the class. Enrollment is offered to older students with a valid permit. Date of permit is a determining factor in enrollment. Driver Education consists of 30 classroom hours, 6 driving hours and 6 observation hours.
Students must have a valid permit by the first day of class and must bring the permit to class each day.
Credit .5

English Electives:

Reading and Writing Fiction (1 semester)
Students will read a wide variety of fiction from various genres in order to examine the author's craft. They will write creative fiction, focusing on a variety of literary elements and styles.
Credit .5

Reading and Writing Drama (1 semester)
Students will read a wide variety of plays in various styles in order to examine the author's craft. They will write dialogue, monologues, and scenes, focusing on a variety of literary elements and styles.
Credit .5

Health
This course will provide students with an overview of today's health issues. Its purpose is to provide students with up to date health information that will guide students in making better choices and more informed decisions about their health. The curriculum will cover areas in personality development, psychology, stress and stress management, addictions, coping with loss, depression, suicide, eating disorders, the reproductive systems, childbirth, methods of birth control, sexually transmitted infections, harassment, sexual assault, relationships, communication skills, and decision making. Grades 9-12
Credit .5

MUSIC

High School Band
Concert band is a large instrumental performing ensemble comprised of students who play and/or who have taken a minimum of one year of instrumental music lessons. Students will rehearse and perform band literature. Participants are exposed to large ensemble playing, elements of band literature, terminology, self-discipline, with the long-term goal of a lifelong enjoyment of performing and an appreciation and understanding of performed music. Open to students in grades 9-12**. Credit .5 (full time) .25 (half time) per semester**

High School Jazz Ensemble (full year)
This performance ensemble is an outgrowth of concert band. Jazz band is open to those students who perform on the following instruments: saxophone, trombone, trumpet, drum, electric guitar, electric bass and keyboard. Open to students in grades 9-12 and by invitation to middle school youth. Prerequisites for this course are one-year musical instrument instruction, membership in concert band, and the desire to perform jazz/jazz rock music.
Credit .5 per semester

High School Chorus
This course is for students who enjoy singing. Learn to sing in harmony, improve your voice, read music and follow a conductor by singing many styles of music with a group. Concert performances are part of the course and students are eligible to participate in district, state and

New England music festivals. Open to students in grades 9-12. **Credit .5 (full time) .25 (half time)**

Physical Education:

High school **Physical Education** programs currently allow students in grades 9-12 to select from a variety of activities that will promote healthy attitudes towards life long activities. Students are required to earn a **minimum of .5 credit** through the PE course offerings. Students also have the opportunity to earn .5 credit through athletics and .5 credit by assisting with an elementary class (PE Aide). Students are required to earn a total of 1.5 credits in physical education during their high school career.

Physical Education Class

This class provides students with the opportunity for a more traditional class with student input. The goal is to provide a variety of team as well as individual sports to appeal to a wide variety of students. **Credit .5** per semester

Outdoor Adventures

Activities in this course include: orienteering, hiking, backpacking, canoeing, kayaking, climbing, cross country skiing, winter survival, and biking.
Credit .5 per semester

RENAISSANCE

Ren-301 Renaissance

Personalize your learning by creating your own standards-based study or studies based on your own interests and learning styles. Renaissance studies can be academic studies, art, music, sport or career internships and/or community service-learning oriented. Students have worked individually or in a small group of students. You can study with or without mentors, attend afternoon or evening classes, take college classes, travel with a purpose in the U.S. or abroad, work with master craftspeople, create small classes and/or teach classes to others. You can even design your whole curriculum and be a full-time Renaissance student. The Renaissance Coordinator and mentor will help you structure your study so it meets your needs and the rigorous criteria for credit approval. The study ends with a final exhibition/presentation/celebration that you create. As well, you are part of the assessment panel that decides your overall grade. Studies take 3-4 weeks to set up and (depending on the study) last for 1-2 semesters. These classes may be substituted for prerequisites at the teacher's discretion.
Grades 9-12

Social Sciences:

SS-104 Comparative World Religions

Grades 9-12
In this class, students will use project-based learning to discover the history and philosophies of the world's five largest religions—Hinduism, Buddhism, Judaism, Christianity and Islam. Through inquiry and discovery students will work both cooperatively and individually to build a picture of how the histories of these religions impact our world in the past and today.

SS-233 Psychology

In this course, students will study the newest research in cognitive neuroscience as applied to educational science and traditional theories of developmental psychology. Class will include student exploration through experimentation. Offered for multi-age 9-12 grades.

VISUAL ARTS

The goal of the Visual Arts program at Twinfield is to expose students to the world of communication through visual art. Our objective is to help them gain the skills and knowledge to understand the ever-changing art world and to communicate their ideas using the power and impact of visual media.

Our program is choice-based in which students select projects that interest them within the course topic and learn the skills and knowledge necessary to be successful. Courses are open to all students (except for Art 300 Independent Art). Projects and expectations are based on student skill level.

Skill Levels:

- Level One (100s): The beginning student who may have worked in art before but is new to approaching it as tool for communication. Student learns the basic visual language of art: value, color, shape, scale and composition; and the primary modes of communication; emotion, narrative, symbolism and comment/opinion.

- Level Two (200s): The student who has taken a class at level one and is proficient at using visual media to communicate. Students explore a medium/idea in more depth and with a greater command of the tools and methods of communicating in visual art.

- Level Three (300): The student has mastered communication in more than one media and wants to undertake an advanced exploration of an idea.

ART-101/201 2D Media (x2)
Students explore core art concepts through the study of drawing and painting. Media include graphite, charcoal, pen and ink, colored pencil, pastel, watercolor, acrylic, oils, and mixed media. Assignments emphasize topics such as observation/perception, communication of ideas/concepts, cultural awareness, and artistic process.

ART-102/202 Art Workshop
This course is an exploration of 2-D and 3-D art materials & techniques, art history, and creative ideas. The main topics of investigation are design & composition, observation and perception, process, and the role of communication in art. A wide variety of media will be explored.

ART-103/203 Ceramics
This course explores the making of art with clay. Students work with the ideas of form, function, meaning and ornamentation through hand-built and wheel thrown ceramics.

ART-104/204 Stained Glass and Metal
Students explore creating artwork with stained glass and small-scale metalwork. Topics include window panels, mosaics, ornament and form. Assignments emphasize skill and experience with the materials and utilizing the characteristic of the media to communicate ideas.

ART-105/205 Sculpture
Students explore core art concepts through the study of sculpture. Media include plaster, wood, metal, paper mache, wire, balsa foam, cardboard, and found objects. Assignments emphasize design in three dimensions, craftsmanship, and problem solving.

ART-106/206 Black & White Photography and Printmaking
Students explore the mediums of black and white film photography and printmaking. Topics include film and print developing, block printing, etching and screen-printing. Emphasis is on the impact of composition, image manipulation, and contrast on the viewer.

ART-107/207 Digital Media
This class explores communication through digital media. Students will learn the fundamentals of design & composition, and explore the relationship of computer art to art history and contemporary culture. Topics may include digital photography, image manipulation, photojournalism, digital collage, and combining digital images with traditional media.

ART-300 Independent Art (x2) A course for level three students who want to further explore a specific media or the communication of a particular idea or concept. Emphasis is on depth of study and culminates in a "show" of the student's work and presentation of ideas explored. (Open to students who have successfully completed another art course at skill level two, and permission of teacher.)

WORLD LANGUAGE

FL-101/102 (Level 1)
Students in level-one language will practice the four skills of speaking, listening, reading and writing. While building vocabulary through topics such as description, clothing and shopping, house, food and city, students will manipulate language chunks and grammatical structures to build simple, present tense sentences and paragraphs and to ask and answer questions in practiced contexts. There will be a heavy focus in the first year on oral proficiency and students will practice speaking on a daily basis. Students will also study the cultural practices, products and perspectives of the target-language world to learn where in the world French and Spanish are spoken and to develop cultural awareness.
Credit .5 per semester

FL – 201/202 (Level 2)
The second level course builds upon the proficiency achieved in Level 1. Students will continue to practice the four skills and begin to use the language to communicate past-tense events and activities. Class time will focus on oral practice reinforced through reading, writing, and listening comprehension activities. Students will have opportunities to communicate on a variety of topics as they build sentences and paragraphs with more detail and complexity. Grammar and vocabulary are expressed with increasing accuracy and automaticity at this level.
Credit .5 per semester

FL – 301/302 (Level 3)
The focus in Level 3 shifts from building language skills to using them for communication. We continue to practice all four skills in a variety of contexts and students are expected to be able to sustain longer oral and written communications in both the presentational and interpersonal modes. In the third year, students are able to move between the present and past time frames with accuracy and to communicate in practiced contexts using the future time frame and conditional phrases. Students are exposed to authentic oral and written texts that are then discussed using the target language.
Credit .5 per semester

FL – 401/402 (Level 4)
In the Level 4 course, students will be exposed to most of the verb tenses and be expected to understand and communicate using multiple timeframes with some accuracy. While we will continue to study and apply more complex grammatical concepts, the focus of this class will be to communicate about target-language culture through the study of literature, current events, art, music, and history. Class instruction will be conducted in the target language and students will have regular practice speaking, reading, writing and listening in authentic contexts throughout the year.
Credit .5 per semester

Yearbook Photography, page layout and design, written descriptions and captions of school events and sales are the topics to be covered in this class. Students will be responsible for being photographers, reporters, editors, and work as part of a team. They will work with an online program to design layouts for the yearbook. Students should be willing to work independently and be responsible for managing time and meeting deadlines. **Credit .5 per semester**

ALTERNATIVE ACADEMIC PROGRAMS

Teacher Aide Positions
Students may assist Twinfield staff members in a variety of settings. In each setting, students develop the skills necessary to assist staff and sometimes other students. Some common Aide Positions are Library Aide, Teachers Aide, PE Aide, Cafeteria Aide, and Maintenance Aide. Students sign up with the individual staff member at the beginning of each semester. *Students interested in an experience such as a teacher aide internship please see Renaissance teacher.*
Credit .5 Pass/Fail class

Independent Study
A study taught by a Twinfield teacher within his/her area of certification at a time that is convenient for the teacher and student. Students sign up with an individual teacher at the beginning of each semester. These classes may be substituted for prerequisites at the teacher's discretion.
Credit .5 per semester study

Dual Enrollment
Juniors and Seniors are eligible to receive two Dual Enrollment Vouchers. Each voucher is entitles you to one free college course. The college credits earned also count towards your high school graduation requirements. Please see your Teacher Advisor or Guidance Counselor for more information.

Barre Technical Center Program Offerings:

Automotive Technology The Automotive Technology Program provides an introduction to four areas of the automotive service industry. The program provides training and experience in the theory, operation, diagnosis and repair of automotive systems. Areas of concentration include: steering and suspension, brake systems, electrical systems and engine performance. Students will learn how to properly repair, maintain, and service automobiles and light trucks. Instruction includes the proper use of power and hand tools as well as lifts, tire alignment and wheel balancers, brake lathe and welding equipment. Students will be eligible to receive certification from the Vermont Automotive Dealers Association for proficiency in Basic Automotive Technology. Students from this program are typically hired by the State Highway Department, Walker Motors, Formula Ford, Cody Chevrolet, local specialty and auto supply stores, service stations, and independent garages. Students completing this program have gone on to attended Vermont Technical College, New Hampshire Technical College, University of Northwestern Ohio, Universal Technical Institute, Ohio Technical College, and Baron Institute. **Open To – Grades 11, 12Prerequisite – Students are selected through an application and interview process, at least grade level in reading and Algebra.**
Program Length – 1 year
Awarded Credit – 1 credit of Science
1 credit of Math
4 credits of Elective

Building Trades
Building Trades prepares students for careers in general construction. The projects students participate in are governed by the community as well as industrial trends and needs. Students will learn a basic background in the principals and skills of general carpentry by constructing a five piece modular home. Areas of study include: safety, tool use, site work, excavating, form work, framing, material selection, measuring, cutting, fastening, siding, use of hand tools and power tools, foundations, drywall, scaffolding, plastering, painting, roofing, and reading of building plans. Students have an opportunity to achieve Level 1 Certification through the Association of General Contractors Association. Students from this program are typically hired as carpenters, brick masons, and cabinetmakers. Local companies who hire students from this program are: East Shore Drywall, Huntington Homes, Allen Lumber Company and the State of Vermont as well as private contractors. Many graduates of this program are self-employed. Some students attend post-secondary institutions, such as Vermont Technical College and New Hampshire Technical College.

Open To – Grades 11, 12
Prerequisite – Students are selected through an application and interview process. Reading at grade level, Algebra and Geometry are recommended.
Program Length – 1 year
Awarded Credit - 1 credit of Science
1 credit of Math
4 credits of Elective

Cosmetology I and II
The Cosmetology Program is available for students with an interest in becoming a licensed cosmetologist upon graduation from high school. Completion of this two year, 1500 hour program

allows students to take the State of Vermont Licensing exam . They are trained in cutting, styling, pedicures/manicures, facials and coloring. Many placements lead to fill time employment after high school graduation. Since this is a **two year** program it is essential that students meet as many of the high school requirements as possible during their freshman and sophomore years. Students from this program have been employed by local businesses or have opened their own business.

Open To – Grades 11, 12
Prerequisite – Students are selected through an application and interview process. Reading at grade level and Algebra are recommended.
Program Length – 1 year
the program is a 1500 2 year Program (if students need to complete hours beyond graduation there is a small tuition fee).

Awarded Credit - 1 credit of Science
1 credit of Math
4 credits of Elective

Culinary Arts
Culinary Arts students will learn critical and relevant aspects of this industry and will learn the skills necessary to be employed in restaurants and resorts, or continue onto post secondary education. Much of culinary arts students training is provided through the operation of the onsite Green Room restaurant or the offsite BTC Bakery.
Students interested in cooking in the Green Room should have at least grade level math and reading.
Careers in the Culinary field include: Chef, line cook, wait staff, host/hostess, banquet and catering services, pastry chef, baker, cake decorator, chocolatier, confectioner.
Open To – Grades 11, 12
Prerequisite – Students are selected through an application and interview process. It is recommended that students interested in cooking in the Green Room should have at least grade level math and reading.
Students interested in baking at the BTC Bakeshop should be prepared for a higher academic level program with reading preferably at or above grade level in reading and algebra, geometry and algebra II.
Program Length – 1 year
Awarded Credit – 1 credit of Science
1 credit of Math
4 credits of Elective

Digital Media Arts
Digital Media Arts is a program that offers state-of-the-art experiences and projects for students interested in creating today's media-drenched world. Students learn photography, graphic design, illustration, video production, special digital effects, web site design, Flash, and 3D animation. This award-winning (Commissioner's Award for Technical Programming) program balances real-world projects, problem solving, design, and portfolio creation. The program also offers students college credit toward popular design and media arts schools. Students from this program often attend post-secondary education. With successful scores on the Accuplacer and necessary portfolio work, students have the opportunity to gain up to six credits with the Community College of Vermont, Lyndon State College and the Arts Institute

Open To – Grades 11, 12
Prerequisite – Students are selected through an application and interview process and should be reading at or above grade level.
Program Length – 1 year
1 credit of Science
1 credit of Fine Art
4 credits of Elective

Electrical Technology
Electrical Technology Program students are trained as future electricians to install, connect, test, and maintain electrical systems for a variety of purposes, including climate control, security, and communications. Students will learn how to install and maintain the electronic controls for machines in business and industry. Successful students have the opportunity to test out of 300vhours in Electrical Level I and enter Level II in the apprenticeship program and accumulate work hours. Electricians will be needed to install and maintain electrical devices and wiring homes, factories, offices, and other structures. Additional jobs will open in power plants, computer systems, telecommunication equipment and automated manufacturing systems. Students from this program have been employed with Lamberton Electric, Norway Electric, Northern Power Energy Systems, SEB Electronics and other local businesses.

Open To – Grades 11, 12
Prerequisite – Students are selected through an application and interview process. Reading at grade level and Algebra are recommended. If a student is interested in a post secondary education, math up to Algebra II is suggested.
Program Length – 1 year
Awarded Credit - 1 credit of Science
1 credit of Math
4 credits of Electives

Human Services
The Human Services Program prepares students for employment in careers that relate to families and human needs including education, counseling and mental health services, as well as personal care services. Students participating in this program will develop academic foundations, problem solving skills, workplace skills, citizenship, ethics, and leadership training. Successful completers of the Human Services program may receive college credits at the Community College of Vermont. Students must pass the Accuplacer assessment with an 85 to receive college credit. In addition, students have the opportunity to earn a CDA (Child Development Associates), a national childcare certification . Students completing this program can go to post-secondary education and are hired by local schools and day care providers, Washington County Mental Health, Berlin Health and Rehabilitation, and Woodridge Nursing Home.

Open To – Grades 11, 12
Prerequisite – Students are selected through an application and interview process. Reading at grade level or above is recommended.
Program Length – 1 year
Awarded Credit - 1 credit of Social Studies/History Elective
1 credit of Science
4 credits of Electives

Medical Services
The Medical Services Program allows students to explore many careers within the health care field. In this program we cover anatomy and physiology, Medical Terminology, communication skills, and practicing of emergency scenerios. Initial exploration of healthcare careers include lecture, readings and independent study projects and visits with local experts in the fiels. Job shadowing in various healthcare settings including Central Vermont Hospital, Fletcher Allen Healthcare and local emergency medical service providers.

Open To – Grades 11, 12
Prerequisite – Students are selected through an application and interview process.
Student are recommended to have a strong math and science background including algebra, and biology. Students going onto secondary education must have chemistry and at least Algebra II to supplement program.
Program Length – 1 year
Awarded Credit - 1 credit of Science
1 credit of Math
4 credits of Electives

Plumbing and Heating
The Plumbing and Heating Program prepares students for careers as a licensed plumber or professional certified technicians in the field of climate control. Students will learn how to install, service, and repair environmental systems that control temperature, humidity and air quality. Students also gain hands-on skills installing basic plumbing systems. There is an emphasis on applied math and pipefitting skills. Students who master all required competencies may receive Association of General Contractors Certification and 300 hours credited toward the Plumbing apprenticeship program and an OSHA 10 card.

Students from this program are prepared to enter post-secondary education in Plumbing and Heating and are typically hired by Suburban Energy, Averils Plumbing, Heating, and Air Conditioning Systems, Inc., Johnson Dix Fuel Corporation, Conti Oil, ARC Mechanical, and Ward's Plumbing and Heating, among others.

Open To – Grades 11, 12
Prerequisite – Students are selected through an application and interview process. Recommended reading at grade level and Algebra. Students should have at least Algebra II if applying to college.
Program Length –1 year
Awarded Credit - 1 credit of Science
1 credit of Math
4 credits of Electives
Awarded Credit - 1 credit of English
1 credit of Social Studies
1 credit of Science
1 credit of Math
2 credits of Electives