



TEC Online Academy

Program of Studies

2015-2016

Including online courses from our TEC Connections partnership



Table of Contents

About TEC Online Academy & TEC Connections Partnership	2
TEC Online Academy Advisory Committee	3
NCAA Approved Courses	4
How to Register for a TEC Online Academy Course	5
How to Register for a TEC Connections Learning course	5
For TEC-member districts:	5
For students from schools that are not part of TEC member districts :	5
Student Code of Conduct/Acceptable Use Policy (AUP)	6
Frequently Asked Questions	8
PROGRAM OF STUDIES 2015-2016	10
English:	10
TEC014 Digital Storytelling	10
Fine Art:	10
TEC110 Fine Art Digital Photography	10
Foreign Language:	10
TEC201 Spanish for Business (Honors/College Prep)	10
TEC202 Spanish for Health Care (College Prep)	10
TEC203 Spanish I	11
TEC204 Latin I (Honors)	11
TEC205 Latin II (Honors)	11
Mathematics:	11
TEC300 Advanced Math Topics	11
TEC302 Algebra Skills	11
TEC303 Introduction to Business/Personal Finance	12
TEC305 AP Micro Economics	12
TEC306 AP Macro Economics	12
TEC307 AP Statistics	12
TEC308 Advanced Algebra and Geometry for Middle School Students	13
TEC309 PreCalculus	13
Science:	13
TEC401 Genetics (Honors)	13
TEC402 AP Environmental Science (AP)	14
TEC403 Forensic Science	14
TEC405 Anatomy & Physiology (Honors)	14
Health and Wellness:	15
TEC406 Destination Health and Fitness	15
Social Studies:	15
TEC500 The Archaeology of Ancient Greece	15
TEC501 The Archaeology of Ancient Rome	15
TEC502 Modern Global Issues	15
TEC503 Irish History	16
TEC510 AP US Government and Politics	16
Computers and Technology:	16
TEC601 Cybercrime and Security:	16
TEC603 JAVA Programming	16
Electives	17
TEC301 Introduction to Business/Personal Finance	17
TEC603 Emotional Intelligence	17

About TEC Online Academy & TEC Connections Partnership

Why an Online Academy?

Today's students must be provided with opportunities to develop the knowledge and skills needed to utilize technology to learn, communicate, access information, collaborate and compete for advancement whether they pursue a career or attend college. The TEC Online Academy is an innovative online learning environment that was designed to address this common need.

History of the TEC Online Academy

The Education Cooperative's (TEC) regional virtual school was originally developed to expand access to online learning opportunities for students of the Massachusetts towns of Canton, Dedham, Dover, Dover-Sherborn, Framingham, Holliston, Hopkinton, Medfield, Millis, Natick, Needham, Norwood, Sherborn, Walpole, Wayland, and Westwood. In 2009 TEC's member Superintendents worked collaboratively to develop an innovative model for online learning that mirrored the rigorous high standards and expectations of in-district daily classroom instruction. Their shared vision resulted in the creation of the TEC Online Academy, a collection of unique and engaging college preparatory, honors and AP courses developed and taught by exemplary teachers from our TEC districts.

Students and teachers have embraced TEC Online Academy and to date over 40 highly qualified teachers have participated in rigorous professional development with our educational partner, EDC (www.edc.org) resulting in a collection of original online courses offered in this program of studies. To date, over 500 high school students have successfully participated in online courses offered by the TEC Online Academy. We continue to grow and this year TEC Online Academy was included in the *2012 Keeping Pace Report*, a national survey of innovative K-12 online and blended learning programs (kpk.12.com).

About the TEC Connections Partnership



In the summer of 2013, TEC launched a pilot program to test out courses being offered by a Connections Learning, a Pearson company. This led to TEC being able to offer to its member districts, a full complement of virtual courses from kindergarten through to grade 12. These courses are available on the same basis as the TEC Online Academy courses and provide another option for those students who need courses, including those for credit recovery.

Acknowledgements

I want to thank the educational leaders within our member districts that have guided and supported the development of the TEC Online Academy. Their vision for teaching and learning and innovative partnership is helping to prepare today's students for tomorrow's world. I want to thank the guidance staff and district coordinators from participating districts for their ongoing help and feedback that has helped to improve our program over the years.

Most of all, I want to acknowledge our outstanding teachers who have worked hard to develop unique and imaginative courses that have expanded the opportunities for students to participate in an engaging, authentic virtual learning experience that promotes the development of lifelong, self-directed learning skills required for success in college and career.

Sincerely,

Moira Rodgers, Ed.D.

Director of Professional and Online Learning

TEC actively develops and coordinates educational and organizational programs to meet the needs of member communities and their students.

TEC Online Academy Advisory Committee

Michael Curry, Mathematics Department Chair, Canton
Steven Bliss, Superintendent, Dover-Sherborn
Cynthia Kelly, Assistant Superintendent, Dedham
Bill Hahn, Assistant Principal, Walpole High School, Walpole
Linda Henderson, Data Manager, Hopkinton
Michelle Jones, Teacher, Millis
Jean Kenney, Assistant Superintendent, Walpole
Joan Lynn, Assistant Superintendent, Millis
Katie Nunes, Dean of Academics, Medfield
Karen LeDuc, Assistant Superintendent, Dover Sherborn
Sean Kane, Vice Principal, Norwood High School, Norwood
Kristen McDonnell, Guidance Dept. Head, Norwood
Liz McGonagle, Executive Director, TEC
Paula Marini, Online Learning Specialist, TEC
Emily Parks, Assistant Superintendent, Westwood
Moiria Rodgers, Director of Professional and Online Learning, TEC
Sherri Sigel, Coordinator of College and Career Services, TEC
Leisha Simon, Director of Technology, Wayland
Ann Arpin, Director of Technology, Walpole

NCAA Approved Courses

TEC Online Academy is proud to offer the following NCAA eligible courses. TEC Online Academy is listed as *The Education Cooperative* on the NCAA Eligibility site. Please call us if you have any questions.

	NCAA Approved
Mathematics	
Advanced Math Topics	✓
Science	
AP Environmental Science	✓
Forensic Science	✓
Social Studies	
The Archaeology of Ancient Greece	✓
The Archaeology of Ancient Rome	✓
Modern Global Issues	✓
Irish History	✓
Foreign Language	
Latin & Greek (Honors)	✓

New course are always being added! For current offerings please visit:
<http://www.tec-coop.org/alt-skls-online-schedule.html>

For additional information please contact:
Dr. Moira Rodgers, Director of Professional and Online Learning
Email: mrodgers@tec-coop.org
Telephone: 781-352-5716 (direct line)

How to Register for a TEC Online Academy Course

Students:

If you are a student attending school in a TEC community, ***your guidance counselor can register you for your class.*** TEC member districts include: Canton, Dedham, Dover, Dover-Sherborn, Framingham, Holliston, Hopkinton, Medfield, Millis, Natick, Needham, Norwood, Sherborn, Walpole, Wayland and Westwood, Massachusetts.

If you are a student in a TEC member town and have questions about the TEC Online Academy please contact guidance counselor for more information.

All other students (attending public school, private school, or home schooled) please contact TEC directly to register for a class:

Dr. Moira Rodgers, Director of Professional and Online Learning
Email: mrogers@tec-coop.org
Telephone: 781-352-5716 (direct line)
Website: www.tec-coop.org

Districts:

If you are a TEC Member District trying to register your students, contact:

Dr. Moira Rodgers, Director of Professional and Online Learning
Email: mrogers@tec-coop.org
Telephone: 781-352-5716 (direct line)
Website: www.tec-coop.org

How to Register for a TEC Connections Learning course

TEC Connections Learning courses are courses that are provided by our partners at Connections Learning (a Pearson company).

For TEC-member districts:

Registration for students in TEC-member districts must be done by a guidance counselor, or designee. Guidance submits the registration to TEC.

The range of courses available is accessed via our website: <http://www.tec-coop.org/tec-online-academy/tec-online-academy-course-information>. Scroll to the bottom of the page and select an educational level.



For students from schools that are not part of TEC member districts :

To enroll students (attending public school, private school, or home schooled) please contact TEC directly to register for a class:

Dr. Moira Rodgers, Director of Professional and Online Learning
Email: mrogers@tec-coop.org
Telephone: 781-352-5716 (direct line)
Website: www.tec-coop.org

The range of courses available is accessed via our website: <http://www.tec-coop.org/tec-online-academy/tec-online-academy-course-information>. Scroll to the bottom of the page and select an educational level.

Student Code of Conduct/Acceptable Use Policy (AUP)

For each course taken using the TEC Online Academy and Education Development Center, Inc. (EDC) course management system, students and their parents must agree to behave responsibly, safely, ethically and within legal constraints at all times. All students enrolled in the TEC Online Academy are sponsored by their home school district and must adhere to his/her local school district's policies and procedures including the district's student Acceptable Use Policy (AUP). Prior to TEC Online Academy course access all students and their parents must agree to the following guidelines in the educational online learning environment:

I agree to the following terms of use:

- I will exhibit respectful behavior in the course/course management system, just as I would in a classroom. I understand that no obscene, profane, dishonest, threatening, or bullying commentary/behavior is allowed.
- I will not copy the work of others, allow others to knowingly copy my work, or misuse work in any way that could result in removal from the course/course management system.
- I will protect the security of the course/course management system and notify my teacher or guidance counselor if I identify any security problem.
- I will keep my password secure and will not allow anyone else to use my password.
- I will not provide any personal information/photographs or arrange for personal meetings with anyone in the course or course management system outside the scope of the published course syllabus. I will immediately report any message I receive that is inappropriate or makes me uncomfortable in any way to my teacher and/or guidance counselor.
- I will use an email address to access the course/course management system that does not contain any inappropriate words, symbols or connotations. I will keep my teacher informed of any change in my email address during the course.
- I understand that TEC and EDC assume no responsibility for any phone charges or usage fees for connectivity to the Internet, the course, and/or the course management system and assumes no responsibility for access to Internet resources or entities not authorized by the teacher. TEC and EDC assumes no responsibility for claims and damages of any nature arising from my use or misuse of the course, course management system, and/or Internet and reserves the right to seek restitution for costs incurred, including legal fees, due to the my inappropriate use of electronic resources.
- I agree to comply with all local, state, and federal laws and I understand that TEC and EDC will cooperate fully with my school district and local, state, or federal officials in any investigation related to illegal activities conducted through this course or course management system and that TEC and EDC reserves the right to deny me access to the course management system if I violate this Acceptable Use Policy.
- Social networking tools (Flickr, VoiceThread, etc.) may be used for educational purposes and will be monitored by the course instructor.

Student Acknowledgement

I have read the TEC and EDC Acceptable Use Policy and agree to abide by all provisions. I understand that violation of these provisions may result in disciplinary action including but not limited to the revocation of privileges, suspension or expulsion from school, and criminal prosecution.

Signature _____ Date _____

Parent/Guardian Sponsor

I have read the TEC/EDC Acceptable Use Policy. I hereby release TEC, EDC, the district, its operators, and institutions with which they are affiliated from any and all claims and damages of any nature arising from my child's use of, or inability to use the TEC Online Academy.

- I give permission for my student to participate in the TEC Online Academy.
- I do not give permission for my student to participate in TEC Online Academy.

Signature _____ Date _____

**TEC Online Academy
2015-2016
Academic Calendar**

Semester 1: September 2, 2015 - January 26, 2016

September 3, 2015 - Online Orientation Begins
September 8, 2015 - First week of class
September 21, 2015 - End of Drop/Add period
October 21, 2015 - First Term Progress Report
November 7, 2015 - End of First Term
December 15, 2015 - Second Term Progress Report
January 20, 2016 - Second Term Ends
January 27, 2016 - Final Grades Submitted to District

Semester 2: January 27, 2016 - June 3, 2016

January 27, 2016 - Online Orientation Begins
February 1, 2016 - First week of class
February 22, 2016 - End of Drop/Add period
March 17, 2016 - First Term Progress Report
April 3, 2016 - End of First Term (3rd term for year-long courses)
May 2, 2016 - Second Term Progress Report
May 27, 2016 - Second Term Ends (4th term for year-long courses with seniors)
June 1, 2016 - Final Grade Submitted to District for Seniors
June 3, 2016 - Second Term Ends (4th term for year-long courses with others)
June 13, 2016 - Final Grade Submitted to District for all other students

Frequently Asked Questions

1. Why take a TEC Online Academy course?

- Develop communication and collaboration skills you need to be successful in college and career
- Take innovative courses that may not be offered in your own school
- Flexibility and independence! Be in charge of your own learning schedule
- Collaborate with other students from outside of your school district
- Learn from talented teachers from the Greater Boston Boston school districts.

2. Who is a good candidate for an online course?

Are you self-motivated, able to structure your time and meet deadlines? Developing these habits is essential to succeed with online courses. Since there is no face-to-face contact with your instructor or peers, you must take responsibility for your learning and create routines to ensure that you actively participate in your course.

Helpful hints for success:

- **COMMUNICATION IS ESSENTIAL** - Log in to your TEC Online Academy course frequently and check for messages from the instructor on a daily basis. If you need help don't wait---contact the instructor and ask for clarification.
- **DEVELOP A ROUTINE** - Plan to spend at least 5-6 hours per week on your course. Include your online course assignments, readings and discussion board responses in your daily planner. To succeed you must actively participate in your online course and complete assignments on time. Online learning makes more demands on your time management skills and requires self-discipline.
- **BE PROACTIVE** - If you have questions or are having any difficulty, contact your instructor and check in with your guidance counselor. If you send an email to your instructor about an assignment, do not stop your progress in the course; move on to the next assignment while waiting for a response.

Check out these resources to become more aware of strategies for success in an online learning environment:

- * What Makes a Successful Online Student?

<http://www.ion.uillinois.edu/resources/tutorials/pedagogy/StudentProfile.asp>

- * What Makes a Successful Online Learner?

<http://www.iseek.org/education/successonline.html>

- * Characteristics of an Online Learner

http://www.fairmontstate.edu/academics/distancelearning/successful_student.asp

3. Will I receive credit towards graduation for this course?

Each school district sets the policy on how course credit is applied to your academic transcript. Please consult your guidance counselor for additional details.

4. Will the course count towards my grade point average?

Each school district sets the policy on how course credit is applied to your academic transcript. Please consult your guidance counselor for additional details.

5. What will the experience be like?

You will participate in a challenging semester-long (18-week) online learning experience. You will need to work independently and include time in your daily schedule to log in to check for messages from your teacher. Some classes may offer an optional face-to-face meeting with instructor and classmates. You should expect to spend a minimum of 5 to 6 hours per week on your coursework that will include readings, posting to discussion boards, viewing videos and a range of interactive assignments. There will be a final exam or a culminating project.

6. Who can take courses?

Any high school student currently enrolled in a TEC member school district is eligible and has priority to take an online course. The TEC Online Academy will also welcome other high school students if space allows. This provides a perfect opportunity for home-schooled students to have a collaborative online learning experience. We are currently developing additional courses for middle school students.

7. What are the costs?

Fees for the 2015-2016 school year are typically \$300 per semester course for students in schools that are members of the TEC collaborative and \$400 per semester course for students in other high schools or home schooled students. ***It is important to note that textbooks for AP Courses and courses that require an electronic textbook subscriptions are additional charges over and above the \$300 course charge.*** Please call Dr. Moira Rodgers, Director of Professional and Online Learning, 781-352-5716, if you have questions.

8. How will I be graded?

Similar to your own school's academic policies, progress reports will be issued midway through the semester and a final exam or a culminating project will be expected. Grades will be sent directly to you and your high school guidance contact. Each school district will determine how and if the grades and credits reflect on the student transcript.

9. Is TEC an approved AP provider?

Yes, TEC Online Academy is an approved AP Online provider.

PROGRAM OF STUDIES 2015-2016

English:

TEC014 Digital Storytelling

This course is meant to be an introduction and exploration in digital storytelling. Students will investigate the idea of telling stories through the use of digital tools. It is part storytelling and part technology workshop. It is intended to deepen media literacy, as well as develop narrative and reflective skill by the production of digital stories of various type and documenting the process. Students are expected to have regular access to computers. In addition, participants should be proficient with using email, browsing the Internet, and navigating computer files and have access to the following digital tools: camera for still photography and video, something for recording sound. Essentially, the features of a good smartphone (iPhone or Android) will be more than sufficient. Students will be asked to use a series of Web 2.0 tools and social media, which may require dedicated accounts.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	College Prep	First Semester, Second Semester	Successful completion of English 9 & 10	Fred Haas Hopkinton

Fine Art:

TEC110 Fine Art Digital Photography

This introductory online course will explore the fundamentals of digital fine art photography, including composition, capture, editing, and output. We will cover the foundations of what it takes to make a high quality creative photographic image with a digital camera. The basic terms and techniques of photography will be explained so that students can get the most out of their subject and camera. We will discuss current digital imaging technology and how that affects the way we take pictures. Students will use online image editing software to edit and manipulate photographs. Students will need regular access to a 6 megapixel (or more) digital point-and-shoot or DSLR camera for this course. Additionally, students will create an online portfolio of their photographs and maintain a reflection blog of their experiences.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grades 11 & 12	College Prep	First Semester	None	Sterling Worrell - Hopkinton

Foreign Language:

TEC201 Spanish for Business (Honors/College Prep)

Spanish for Business will focus on teaching students how to communicate in typical business situations through listening, speaking, reading and writing. Students will complete listening activities in the target language and students will be required to make audio recordings to submit through the ItsLearning platform. The course would include appropriate etiquette, cultural notes, grammar and conversation. Class experiences will include webquests, wikis, and blogs. Students will gain proficiency by listening to audio recordings of vocabulary sets, simplified grammar rules and conversations. Lessons for each topic would contain conversational situations for specific business. The class would be organized into chapters covering different business themes as well as various cultural aspects and business etiquette of the Spanish speaking countries. Students will need to be sure that they have access to a microphone so that they can submit their audio recordings.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grade 12	Honors	First Semester, Second Semester, Summer	Successful completion of Spanish 4	Cindy Derrane - Norwood

TEC202 Spanish for Health Care (College Prep)

This course, which focuses on health care professionals, provides essential points of grammar and vocabulary for students whose profession requires a working knowledge of Spanish. The course is designed to help students better communicate with Spanish-speaking people with whom they interact in their work in the healthcare profession. This course is ideal for juniors and seniors who have already taken Spanish 2 and 3. Students will complete listening activities in the target language and will be required to submit audio recordings as well. Students will need to be sure that they have access to a microphone so that they can submit their audio recordings.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grade 12	Honors	First Semester, Second Semester, Summer	Successful completion of Spanish 2 and 3	Cindy Derrane - Norwood

TEC203 Spanish I

The goal of this Introduction to Spanish course is to gain a basic foundation in the Spanish language. By the end of this Introduction to Spanish course, students will be able to read and write basic Spanish sentences, listen to and speak in the present tense while discussing likes and dislikes, needs and wants. These skills will be developed through emphasis on both an understanding of Spanish language and cultures of the Spanish-speaking world. Students will learn basic facts about Spain and Spanish culture and do cultural comparisons with their own culture.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All	College Prep	Fall, Spring, Summer	None	Cindy Derrane - Norwood

TEC204 Latin I (Honors)

Latin I introduces students to the basics of Latin grammar and vocabulary as well as the culture of the Romans through primarily their language but also their literature, mythology, and archaeology. The objective of the course is a thorough understanding of the basic grammatical patterns of Latin literature, the development of a strong vocabulary base, and the ability to read short stories in Latin and Ancient Greek. Careful nightly preparation is expected. This course is particularly useful in building the English vocabulary skills needing for success on the SAT by focusing on the Latin etymologies of English words.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All	Honors	Full Year (2 semesters)	None	Ed DeHoratius Wayland

TEC205 Latin II (Honors)

Latin II continues students' introduction to the Latin language by focusing on more complex grammatical structures and developing students' facility with reading Latin texts. The focus on vocabulary and etymology continues and more reading of Latin will be expected of students. At the end of the Latin II course it is expected that students will be able to transition to reading Latin authors in full.

Prerequisite: Latin I

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	Honors	Full Year (2 semesters)	Latin I	Ed DeHoratius Wayland

Mathematics:

TEC300 Advanced Math Topics

Advanced Math Topics will explore several advanced mathematics topics including polynomial functions, conic sections, exponential and logarithmic functions, trigonometry, analytic geometry, systems of equations, complex numbers, inequalities, absolute value functions, vectors, sequences and series, and polar coordinates. In addition, the student will explore several topics that are traditionally introduced in a typical college level calculus course. These topics include: limits, definition of the derivative, and rate of change (derivatives). This course is ideal for a student who will continue on to a formal calculus sequence in college or take the AP Calculus AB or BC course upon completion of this course.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	College Prep	Full Year (2 semesters)	Open to any student who has taken a standard Geometry course and has taken or will be taking Algebra II at the same time	Mike Curry - Canton

TEC302 Algebra Skills

Students will increase their algebraic fluency and increase their mastery of solving linear and quadratic equations and inequalities. Other topics include simplification of expressions with polynomials, exponents, and radicals; factoring; use of linear and quadratic equations as mathematical models; solution of linear systems; analytical geometry of the straight line and parabola; functions.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	Credit Recovery	First Semester, Second Semester	This is a "credit-recovery" type course that will be paced to help students to build their skills in order to be successful in a mainstream course.	Mike Curry - Canton

TEC303 Introduction to Business/Personal Finance

This course is an introduction to essential business skills such as management, understanding consumer needs, and ethical/responsible behavior. Business is also used as a way of illustrating important real world skills such as making decisions, managing processes, critical thinking, and acting as a responsible citizen. The course is hands-on, project based, and utilizes a variety of engaging computer-based simulations that allow students to operate convenience stores, distribution centers, and experience other realistic situations. A significant "life skills" unit teaches financial literacy, setting financial goals, managing your career, understanding credit and debt, and achieving balance between personal and work life.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	College Prep	First Semester, Second Semester, Summer	None	Joe Williams – Hopkinton

TEC305 AP Micro Economics

This course will prepare students to take the AP Micro Economics Exam. The course is described as follows by the College Board (www.collegeboard.com): The purpose of an AP course in Microeconomics is to provide a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the larger economic system. It places primary emphasis on the nature and functions of product markets, and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	College Prep	First Semester	Successful completion of Algebra II; strong writing skills	Mike Curry - Canton

TEC306 AP Macro Economics

This course will prepare students to take the AP Macro Economics Exam. The course is described as follows by the College Board (www.collegeboard.com): An AP course in Macroeconomics is designed to give you a thorough understanding of the principles of economics that apply to an economic system as a whole. Such a course places particular emphasis on the study of national income and price determination, and also develops your familiarity with economic performance measures, economic growth, and international economics.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	College Prep	Second Semester	Successful completion of Algebra II; strong writing skills	Mike Curry - Canton

TEC307 AP Statistics

This course is designed to give students a foundation for further studies in statistics while emphasizing preparation for all social science studies as well as technical fields such as engineering and the health sciences. This course is intended for students with demonstrated evidence of advanced proficiency in mathematics and strong reading and writing skills. The purpose of the AP Statics course to give students an opportunity to : explore data by describing patterns and departures from patterns, investigate sampling and experimentation, plan and conduct a study, anticipate patterns, explore random phenomena using probability and simulation and study statistical inference by estimating population parameters and testing hypotheses.

Required Text(s)/Software/Tools: TI 84 Calculator and purchase of *MyMathLab Student Access Kit* - Additional Cost: \$100.00

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	College Prep	First Semester, Second Semester	Successful completion of Algebra II; strong writing skills	Mike Curry - Canton

TEC308 Advanced Algebra and Geometry for Middle School Students

The foundation for the study of algebra and geometry is explored in this course. Students will utilize the language of algebra, its properties, and methods of solving equations. Students will learn how many real-world situations can be modeled by linear and nonlinear functions, tables, and graphs. Students will increase their mastery of solving linear and quadratic equations and inequalities. Other topics include simplification of expressions with polynomials, exponents, and radicals; factoring; use of linear and quadratic equations as mathematical models; solution of linear systems; analytical geometry of the straight line and parabola; functions. They will use mathematical models to represent and understand quantitative relationships and analyze change in various contexts. They will apply algebra to geometry problems. Major topics in geometry include parallelism and perpendicularity, triangles, quadrilaterals, and polygons, congruence, similarity, circles, area, volume, and surface area.

Prerequisite: *This course is designed for students who demonstrate a strong aptitude for mathematics at the start of the second semester of the school year.*

Open to: Open to All (see prerequisite)	Level: Middle School	Course Duration: Second Semester	Prerequisite: Strong aptitude for mathematics	Instructor: Mike Curry - Canton
--------------------------------------------------	-------------------------	-------------------------------------	--------------------------------------------------	---------------------------------------

TEC309 PreCalculus

This course was created to serve as a bridge for 11th grade students who wish to take a calculus class as a senior at their school. This course moves at an accelerated pace so that students can take calculus in the 12th grade. Students who complete this course receive a full treatment of Precalculus topics. Special attention is given to topics that are essential as prerequisites for calculus. Since Precalculus is typically a 36 week course, prospective students will need to be especially motivated to complete the equivalent coursework in 11 weeks. Approximately 15 hours per week will need to be devoted toward the completion of the assignments in this class.

Required Text(s)/Software/Tools:

Algebra and Trigonometry Enhanced with Graphing Utilities and MyMathLab Student Access Kit, Michael Sullivan, Prentice Hall, ISBN 978-0138133979. Additional Cost: approximately \$80.00

Open to: Students entering Senior Year	Level: Honors	Course Duration: Summer	Prerequisite: High School Algebra I, Geometry (partial completion of Algebra II). A "B or B+" average in these classes is recommended.	Instructor: Mike Curry - Canton
-------------------------------------------------	------------------	----------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------

Science:

TEC401 Genetics (Honors)

This course is designed as an introduction to the study of genetics. We will begin with the form and function of DNA and progress to how our genes are expressed and passed down from generation to generation. Biotechnology will be introduced as it applies to the topics covered. Students will investigate how genetics impacts their daily lives. Emphasis will be placed on problem solving, online activities, discussion, projects as well as reading and research. Although we do not have a physical lab at our disposal we will be utilizing a number of available electronic tools in order to replace the laboratory.

Open to: Open to All (see prerequisite)	Level: Honors	Course Duration: First Semester, Second Semester	Prerequisite: Successful completion of Biology	Instructor: Lindsey Reichheld – Walpole
--------------------------------------------------	------------------	--------------------------------------------------------	------------------------------------------------------	-----------------------------------------------

TEC402 AP Environmental Science (AP)

This full-year *AP Environmental Science* class is equivalent to an introductory, one semester, college level Environmental Science class. If you have successfully completed both high school level biology and chemistry, if you are interested in the environment and, if you are looking for a challenge, this course might be for you! Because this is a college level course, be ready to commit time to your study. This course will cover concepts in ecology, geology, sociology, biology and chemistry that will further your understanding of Earth and the life on it. Students examine interrelationships with the natural world, identify and analyze environmental problems, both natural and human-made, evaluate risks associated with these problems, and examine alternative solutions for resolving/or preventing them. Integrated in the course is a laboratory component which will improve the students' observational skills, allow them to develop and conduct well-designed experiments, and have them interpret and share their results and conclusions with classmates. Each student will also become involved in a Personal Research Project.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All (see prerequisite)	AP	Full Year (2 semesters)	Successful completion of Biology & a lab course in the physical science(s)	Charlotte Shire - Hopkinton

TEC403 Forensic Science

Are you a CSI fan? In this course, students will learn how criminal investigators use science to provide information that could establish the guilt or innocence of people suspected of criminal activity. Students will be asked to play the role of forensic scientists. Applying the principles of chemical science, physical science, life science, earth science, archaeology, and anthropology, students will gather, analyze, and interpret evidence, and make interpretations of crime scenarios. Lab activities and web site interactions will be important parts of the course. In order to add realism to the course, students will investigate real-life studies (e.g., video presentations and web site programs). The course has been designed for students that are motivated and are able to work well independently and in small groups. Some of the topics that will be covered include DNA fingerprinting, forensic toxicology, forensic anthropology, forensic informatics, and firearms and ballistic examination. Using various disciplines of science, students will gather, analyze, and interpret evidence, and make interpretations of crime scenarios.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grades 10-12	College Prep	First Semester, Second Semester, Summer	Successful completion of Biology	James Levasseur – Holliston

TEC405 Anatomy & Physiology (Honors)

This course is designed to complement the College Preparatory and Honors biology courses with the completion of the study of the structure and function of the human body. This course will provide students with a working knowledge and understanding of the role that each organ system plays in the homeostasis of the human organism.

Topics covered within this course include: Skeletal/Muscular System, Digestive System, Respiratory System, Circulatory System, Excretory System, Integumentary System, Endocrine System, Nervous System, Reproductive System and Sensory Systems. These body systems will be explored through interactive online teaching, laboratory work, independent readings, Internet research, and presentations. This is a challenging course in which students will be required to generate detailed laboratory reports, complete group research projects, and complete nightly homework assignments. This course offers all students a comprehensive working knowledge of the human body.

Prerequisite: Students appropriate for this course have received a teacher recommendation or a minimum grade of "A" in College Preparatory I Biology or "B" in Honors Biology.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grades 10-12	Honors	First Semester, Second Semester, Summer	Biology – see above	James Levasseur – Holliston

Health and Wellness:

TEC406 Destination Health and Fitness

This course is an exploration into the hot topics in wellness facing high school students today. This semester long course will focus on developing lifelong healthy living and decision making skills for the 21st century. Students will explore attitudes, thoughts, beliefs and trends around topics in personal fitness, nutrition diabetes, and heart health. Unlike a traditional health and physical education class, students will utilize the high school textbook, Fitness for Life, and complete readings, quizzes and other assessments from this text. In addition students will complete projects and writing assignments of current research and data pertaining to topics in health. Some assignments are: view the Food, Inc DVD and complete a writing assignment, creating a Muscle Fitness Powerpoint, analyze a fitness app to name a few. Students will also need to complete weekly online discussion board prompts.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grades 10-12	College Prep	First Semester, Second Semester	Successful completion of Biology	Dara Johnson – Dover- Sherborn

Social Studies:

TEC500 The Archaeology of Ancient Greece

How does the culture of ancient Greece reveal itself to us? How do we know so much about a culture that existed almost 2,000 years ago? The Archaeology of Ancient Greece will explore the material remains of ancient Greece, focusing on the primary sources, both literary and physical, that allow us to formulate some understanding of these distant cultures. This course will include historical, literary, and art historical readings and units. The Greece course will begin with the mythology of early Greece, including the Trojan War and its heroes, progress through classical Athens and its development of democracy, and end with the empire of Alexander the Great. Assessments will include, but will not be limited to short quizzes, response journals and creative projects.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grades 9-12	Honors and College Prep	Fall Semester	None	Ed DeHoratius – Wayland

TEC501 The Archaeology of Ancient Rome

How does the culture of ancient Rome reveal itself to us? How do we know so much about a culture that existed almost 2000 years ago? The Archaeology of Ancient Rome will focus on primary sources, both literary and physical, that allow us to formulate some understanding of this distant culture. We will begin with Rome's legendary beginnings in Troy and the legend of Romulus and Remus, continue through the Roman Republic and the Roman Civil Wars, focusing on the role of Caesar and the rise of Augustus, and end with the Roman Empire and its legacy. Assessments will include, but will not be limited to short quizzes, response journals and creative projects with the materials.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grades 9-12	Honors and College Prep	Second Semester	None	Ed DeHoratius – Wayland

TEC502 Modern Global Issues

Modern Global Issues explores the critical themes of the Post-Cold War world, examining trends in Independence, Globalization, the Middle East Crisis and Terrorism. Students will study how technology and globalization have impacted the world in the late 20th and early 21st century. Students will use on-line resources to research specific themes and create essays, presentations and videos to present to the class. Students will be required to consistently contribute to message board discussions and provide insightful and independent thoughts to instructor directed debates. The course will focus on: The Cold War: The End and Its Impact, Globalization: Technology, Communication and the Shrinking World, Independence Movements: The Struggle for Freedom and The Middle East: Crisis and Conflict.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grades 9-12	College Prep	First Semester, Second Semester	None	Matt Brenneman – Natick

TEC503 Irish History

This course will explore key periods of Irish history and how those periods impacted the development of Ireland as a nation, including how that history contributed to the creation of Northern Ireland. Students will identify the early influences of the Celtic society, discover the factors contributing to Irish nationalism as well as examine inequalities that impact the Catholic majority in Northern Ireland and identify how this contributed to the civil unrest in the 1960s. The impact of the 1916 Rebellion, the Irish Civil War and the partitioning of Northern Ireland and how these events shaped the mindset of the people of Northern Ireland will be investigated. Finally, we will take a look at Northern Ireland since the 1998 Easter Accords.

Open to: Grades 11 & 12	Level: College Prep	Course Duration: Second Semester	Prerequisite: Completion of US History I and II	Instructor: Scott O'Connor - Holliston
----------------------------	---------------------------	-------------------------------------	-------------------------------------------------------	-------------------------------------------

TEC510 AP US Government and Politics

AP U.S. Government and Politics is a full-year, college level course designed to prepare students to take the Advanced Placement exam administered by the College Board in May. Throughout the course we will examine and evaluate our institutions of government and the people who run them, the public policies debated and enacted by these institutions, and the influence of the electorate on these institutions and public policy. Special attention will be given to policy making, both foreign and domestic, and to issues involving civil rights and civil liberties. We will keep up with and discuss current developments regularly. This course is recommended for students that have already taken U.S. History, although it is not required. Students will be required to take the Advanced Placement Exam in May.

Open to: Grades 11 & 12	Level: Advanced Placement	Course Duration: First and Second Semester	Prerequisite: US History	Instructor: Eva Urban Hughes-Wayland
----------------------------	---------------------------------	--------------------------------------------------	-----------------------------	-----------------------------------------

Computers and Technology:

TEC601 Cybercrime and Security:

Cybercrime and Security is an exploration into the motives of cyber criminals, the means with which they cause harm, and how each user can help prevent himself or herself from becoming the next victim of various forms of cybercrime. Students will explore case studies, learn about preventative techniques and implement safety measures to protect themselves and their families. Topics will include these topics and more: system and data, commercial and home networks, Malware, identity theft, browsing and email, social networking and cyber-bullying, E-commerce and banking, peer to peer networks and piracy, mobile devices, and ethics and legal issues.

Open to: Grades 11 & 12	Level: College Prep	Course Duration: First Semester, Second Semester, Summer	Prerequisite: None	Instructor: Doug Scott – Natick
----------------------------	------------------------	-------------------------------------------------------------------	-----------------------	------------------------------------

TEC603 JAVA Programming

This introductory course, Java (btw not coffee), will expose you to the concepts of an object-oriented programming language called Java. Did you know that Java was used to create the video game *Minecraft*? Does the idea of creating video games or phone applications interest you? The high school student, who has solid algebraic skills and a desire to further investigate programming in the Java language from its inception to its syntax, will be interested in selecting this course. Upon completion, you will have a basic working knowledge of the history of Java to program coding procedures and practices. You will also further develop your logical, critical thinking and reading skills.

Open to: Open to All (see prerequisite)	Level: Honors, College Prep	Course Duration: First Semester	Prerequisite: Solid Algebra skills	Instructor: Susan Pepin–Dedham
--------------------------------------------------	-----------------------------------	------------------------------------	---------------------------------------	-----------------------------------

Electives

TEC301 Introduction to Business/Personal Finance

This course is an introduction to essential business skills such as management, understanding consumer needs, and ethical/responsible behavior. Business is also used as a way of illustrating important real world skills such as making decisions, managing processes, critical thinking, and acting as a responsible citizen. The course is hands-on, project based, and utilizes a variety of engaging computer-based simulations that allow students to operate convenience stores, distribution centers, and experience other realistic situations. A significant "life skills" unit teaches financial literacy, setting financial goals, managing your career, understanding credit and debt, and achieving balance between personal and work life.

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Open to All	College Prep	Fall, Spring, Summer	None	Joe Williams – Hopkinton

TEC603 Emotional Intelligence

In this course students will gain an understanding of how to define, recognize, examine, refine, and finally to develop Emotional Intelligence. Emotional intelligence is the intelligence of the future. Many people believe that emotional intelligence is as important as regular intelligence, and many companies now use EI testing to hire new staff. Emotional intelligence is an awareness of your actions and feelings, and how they affect those around you. It also means that you value others, listen to their wants and needs, and are able to empathize or identify with them on many different levels, while still holding on to your own values, wants and needs. Students will examine the six core strengths of emotional intelligence and learn how manage themselves and their relationships at school, in the community, and at home. Throughout the course, students will become more aware of their own feelings and moods and learn important skills for keeping themselves motivated to "push through" difficult emotions. They will then move on to recognizing these emotions in others and learning to manage their own emotions based on the "emotional situation" that surrounds them. In each session, they will devise an implementation plan for themselves. The final project will use these implementation plans to create a PowerPoint slide show or video entitled "Know Thyself".

Open to:	Level:	Course Duration:	Prerequisite:	Instructor:
Grade 9-12	College Prep	First Semester, Second Semester, Summer	None	Marylou Gair –Walpole