Tolles Career & Technical Center



Course Selection Handbook 2021-2022

Contents:

Academic Staff Information	3
Student Services Contact Information	4
Course Registration Form	5
Academic Schedule Change Request Form	6
Academic Course Descriptions	7
English	7
Mathematics	11
Science	13
Social Studies	17
Other/Elective	19



Academic Staff Information

ADMINISTRATION

Superintendent Assistant Superintendent Building Director Special Education Director Academic Supervisor	Jay Poroda Connie Strebe Kate Blachly
STUDENT SERVICES	
Supervisor/Dean of Students Counselor Counselor School Nurse	Ben Hahn Althea Mulichak
ACADEMIC INSTRUCTORS	
English English English English English Mathematics Mathematics Mathematics Mathematics Science Science Science Social Studies Social Studies	Mary Crain Holly Knurek Steve McGhee Jennifer Moffett Diana Boehmer Courtnay Dollinger Jim Haskell Karen Klosterman Julie Steiner Todd Bolenbaugh Joe Wiese Cathy Mehl
Social Studies	Christina Funderburgh

Student Services Contact Information

Building Director:

Connie Strebe

614-873-4666 ext. 4221 cstrebe@tollestech.com

Student Services Supervisor:

Grace Waggoner

614-873-4666 ext. 4409 gwaggoner@tollestech.com

School Counselors: (Assigned by career-technical program)

Althea Mulichak

614-873-4666 ext. 4222 amulichak@tollestech.com

Programs:

Animal Management Services
Art Design & Communication

Computer Network & Support Technology
Cosmetology
Early Childhood Education
Exercise Science
Pharmacy
Pre-Nursing
Pre-Veterinary
Web Design & Development

Ben Hahn

614-873-4666 ext. 4227 bhahn@tollestech.com

Programs:

Automotive Technology
Auto Collision Repair
Career Exploration
Construction Technologies
Criminal Justice
Culinary Arts
Engineering & Manufacturing
Firefighting & EMS
Outdoor Careers
Power Sports & Automotive Services
Welding & Fabrication



Course Registration Form 2021-2022

Name:		Care	er Tech F	Program:			
Home School:Student Email:		Current Gra	ade: 10 [11 <u></u> 12 <u></u> Stu	dent ID	#:	
AM PM (I understand the of 2 nd semester) Site Early Dismissal: Reason:	udent Ir	nitials		•			
			_Late A	_			
English/Lang					nematics	•	
Course	Credit		Select	Course	Credit	Code	Select
English 11	1.0	ENG 11		Geometry	1.0	GEOM	
Honors English 11	1.0	HE 11		Algebra 2	1.0	ALG 2	
Fund. English 11	1.0	FE 11		Honors Algebra 2	1.0	H ALG 2	
English 12	1.0	ENG 12		Transitions to College Math	1.0	TRANS	
Honors English 12	1.0	H ENG 12		Pre-Calculus	1.0	PCALC	
Fund. English 12	1.0	FE 12		Fund. Geometry	1.0	F IGA	
Language & Literacy	1.0	LL		Fund. Algebra 2	1.0	F ALG 2	
A or B	0.5	221 or		Fund. Transitions Math	1.0	F	
		222				TRANS	
Social Str	ıdies			Sc	cience		
Course	Credit	Code	Select	Course	Credit	Code	Select
Government	1.0	GOVT		Advanced Life Science	1.0	ALS	
Econ/Financial Literacy	0.5	521		Environmental Science	1.0	ENV	
Wld. Geog/Cultures	0.5	551		Anatomy & Physiology	1.0	AP	
Psychology	0.5	561		Chemistry	1.0	CHEM	
	•			Honors Chemistry	1.0	H CHEM	
				Core Physics	1.0	PHYS	
				Materials Science	1.0	MAT	
				Materials Science II *PreReq – Mat Sci	1.0	Н МАТ	
College Credit Plus (Dual	Enrollme	ent Courses)		Food Science *Reqd for Culinary 1	1.0	FOOD	
Additional Requirements N	lust Be M	let to Qualify		El	ectives		•
Course	Credit	Code	Select	Course	Credit	Code	Select
Anatomy & Physiology	1 HS	College					
(Hocking- BIOS-1113 – 4 sem. hrs.)		AP		Intervention	0	INT A INT B	
Algebra	1 HS	CALG					
(Clark State – MTH 1280 – 4 sem. hrs.)				Sr. Career Readiness	0.5	600	
Calculus (Clark State – MTH 2200 – 5 sem. Hrs.)	1 HS	352		Study Center A/B	0	SC A SC B	

Student Signature:______Date: _____



Academic Schedule Change Request 2021-2022

For Office Use Only:	
Date Recd:	
Date Chgd:	

Name:			Grade: _		
Career Tech Program:		Associate School:			
School Counselor: 🗆 Mr. H	ahn 🗌 Mrs. Mulio	chak	IEP or 504:	☐ IEP ☐ 504	
DROP Course(s):					
ADD Course(s)					
Please select the reason for y	our requested sched	dule change	to be considered. (You must select one	
☐ Graduation Requirement	S				
☐ Scheduling Error					
☐ Half/Full Day Schedule Pr	eference*				
Requesting: Half Day	Full Day	*Associa	ate School Counselor	r Signature Required	
☐ Adjustments for Educational Options* (504, IEP, Honors, CCP, Lab aide)		*Teacher and/or Director Signature Required			
☐ Special Circumstances* (writing to director)	*Director Signature Required				
Signatures Required					
PLEASE READ CAREFULLY: By may be jeopardizing my high s					
The master schedule is based to be fiscally responsible, cout an be difficult to make sched this form does not guarantee	rse offerings are base lule changes because	ed on these e many class	projections. Once cl ses may be at or near	asses are scheduled	
Parent Signature:			Date	e:	
Student Signature:			Date	۵۰	

Academic Course Descriptions

This document represents the planned course offerings for the coming school year. Please be aware that final decisions about course offerings are made each year based on student course requests, staffing, budgeting, and other considerations. The final availability of courses may change depending on any of these factors. If you request a course that is not offered, a school counselor will assist you in scheduling the best alternative course.

English Department

English 10A/B (225/226)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

English 10 is offered on a limited schedule primarily for students enrolled in the career exploration academy.

Finglish 11A/B (201/202)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

English 11 encourages development of student's mastery of reading, writing, and language in preparation for English 12, leading into college and career. Topics of study include novels and narratives, persuasive writing, research, grammar, and vocabulary development. Resources and reading materials feature American literature, poetry, fiction and nonfiction. Specific skills include independent reading of complex texts across genres; organizing, revising, and improving essays with thesis statements appropriate to the task; using evidence from a text to support ideas. Students will write formal and informal pieces, work with peers, and present findings and new information through technology and presentations.

Honors English 11A/B (203/204)

Course Format: Semester Credit (.5 +.5)
Prerequisites: suggested A or B in English 10

Honors English 11 encourages development of student's mastery of reading, writing, and language in preparation for Honors English 12, leading into college and career. Topics of study include novels and narratives, persuasive writing, poetry, research, grammar, and vocabulary development. Honors English 11 moves at a significantly faster pace while introducing further depth into the course material. Resources and reading materials feature American literature, with the course essential question: "What is My American Dream?" Students in Honors English 11 study an additional four novels, a play by an American dramatist, and Shakespeare. Specific

skills include independent reading of complex texts across genres; organizing, revising, and improving essays with thesis statements appropriate to the task; using evidence from a text to support ideas; analysis and literary criticism. Students will write formal and informal pieces, work with peers, present findings and new information through technology and presentations.

Fundamental English 11A/B (205/206)

Course Format: Semester Credit (.5 +.5)

Prerequisites: IEP team decision

Fundamental English 11 integrates all the English Language Arts skills in conjunction with the Ohio Common Core Standards (reading, writing, vocabulary, listening and speaking, and literature). Students will experience texts of different genres. Students will complete the writing process, learn reading and writing strategies, study focused grammar lessons, and acquire grade level vocabulary. Students will practice strategies to become better readers and expand their vocabulary. Research based reading interventions are widely used in this course. Throughout the year, students will compose a narrative essay and a persuasive essay. Students will create various presentations using apps such as Canva, Google Docs, Google Slides, and Blogger. Additionally, students will practice presentation and communication skills and complete a job application unit. Students will read in class at least 1 fiction and 1 nonfiction novel. These will be provided on audio. The first novel read will be selected by the instructor, and the second novel will be voted on by the class, but from School Board approved selections. Short stories from classic American Literature will also be incorporated.

Finglish 12A/B (211/212)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

English 12 encourages development of student's mastery of reading, writing, and language in preparation for college and career. Topics of study include fiction and nonfiction, business writing, argument writing, research, personal statement essays, grammar, and vocabulary development. Resources and reading materials feature a wide range of contemporary literature, largely student-selected. Specific skills include independent reading of complex texts across genres; organizing, revising, and improving essays with thesis statements appropriate to the task; using evidence from a text to support ideas; compiling a professional portfolio. Students will write formal and informal pieces, work with peers, and present findings and new information through technology and presentations, including a Digital Portfolio to showcase their work and employability upon leaving a career-technical high school.

Honors English 12A/B (213/214)

Course Format: Semester Credit (.5 +.5)

Prerequisites: Suggested A or B in Honors English 11 or A in English 11

Honors English 12 encourages development of student's mastery of reading, writing, and language in preparation for success at the collegiate level. Topics of study include novels and narratives, persuasive writing, poetry, research, grammar, and vocabulary development. Honors English 12 moves at a significantly faster pace while introducing further depth into the course material. Students in Honors English 12 read an additional four novels, a play by an American dramatist, and Shakespeare. Resources and reading materials feature literature of global consequence, both fiction and nonfiction, with the course theme: "Waiting on the World to Change." Specific skills include independent reading of complex texts across genres; organizing, revising, and improving essays with thesis statements appropriate to the task; using evidence from a text to support ideas; compiling a professional portfolio. Students will write formal and informal pieces, work with peers, and present findings and new information through technology and presentations, including a Digital Portfolio to showcase their work and employability upon leaving a career-technical high school.

Fundamental English 12A/B (215/216)

Course Format: Semester Credit (.5 +.5)

Prerequisites: IEP team decision

Students will write a resume and a cover letter in addition to creating a digital portfolio and participating in the Senior Interview Contest. Students will read Macbeth and analyze theme, figurative language, story elements and new vocabulary. They will read Tuesday's with Morrie and practice writing a 5 paragraph essay using textual evidence. Sentence/paragraph structure, word choice, grammar and supporting details will be emphasized. There will be group and individual activities throughout. Throughout the year students will read (on individualized levels) and analyze news articles using an online student program. Students will practice annotation and demonstrate understanding through short written responses and comprehension questions. US documents will be used to identify themes, vocabulary and make applications to their own lives. Each student will write their own farewell speech. A variety of units will include self-reflections.

▼ Language and Literature A/B (221/222)

Course Format: Semester Credit (.5 standalone or .5 + .5)

Prerequisites: None

Language and Literature is offered on a limited basis to assist students with recovering English credit or catching up on graduation requirements. Language and Literature encourages development of student's mastery of reading, writing, and language in preparation for college and career. Topics of study include fiction and nonfiction, novel study, research, personal statement essays, grammar, and vocabulary development. Resources and reading materials feature a wide range of contemporary literature, largely student-selected. Specific skills include independent reading of complex texts across genres; organizing, revising, and improving essays with thesis statements appropriate to the task; using evidence from a text to support ideas; compiling a professional portfolio. Students will write formal and informal pieces, work with peers, and present findings and new information through technology, public speaking, and presentations.

Mathematics Department

Geometry (331, 301*)

Course Format: Full Year Credit (1.0)

Prerequisites: Algebra 1 or equivalent coursework;
*Fundamental course available by IEP team decision

Geometry is the study of lines, angles and shapes. Students will explore geometric shapes, examine geometric relationships and study shapes in space. Attention will be given to transformations, geometric constructions and proofs. Students will explore complex geometric relationships, surface area and volume, and trigonometric relationships. Students will study, analyze, perform experiments, read, write, solve, create, and model geometric concepts.

Algebra 2 (341, 303*)

Course Format: Full Year Credit (1.0)

Prerequisites: Algebra 1 or equivalent coursework;
*Fundamental course available by IEP team decision

Algebra 2 is required for graduation. It will include the study of equations and inequalities, linear functions, systems of equations, quadratic functions, polynomial functions, inverse functions, radical functions, exponential functions, logarithmic functions, rational functions, sequences, series, statistics, probability, and trigonometry. The textbook may include Glenco Algebra 2 and its resources. Students will study, analyze, perform experiments, read, write, solve, create, and model equations, inequalities, and functions.

Transitions to College Mathematics (371, 373*)

Course Format: Full Year Credit (1.0)

Prerequisites: Algebra 2 or equivalent coursework; *Fundamental course available by IEP team decision

This course is designed for students to use mathematics in life, college and beyond. Topics include problem solving, numeration systems and algorithms, base number systems and their operations, consumer math (interest, installment buying, homeownership, etc.), dimensional analysis, measurement and conversions, probability, and statistics. This course uses a hands on approach for applying mathematics through many projects. Students will study, analyze, perform experiments, read, write, solve, create, and model real life situations.

College Algebra (361)

Course Format: Full Year Credit (1.0) with optional 4 semester hours of college credit

Prerequisites: Algebra 2 or equivalent coursework

College algebra is designed to be college level course with the option of college credit through Clark State Community College. College credit will be available to students who attain the required score on a course placement test. The course will include the study of expressions, coordinates and graphs, transformations and composition functions, inverse function, polynomial and rational functions, complex number, synthetic and long division, remainder and factor theorems, exponential and logarithmic functions, systems of equations and inequalities. The textbook include Wily College Algebra by Cynthia Young and its resources. Students will study, analyze, perform experiments, read, write, solve, create, and model equations/inequalities/functions.

Pre-Calculus (351)

Course Format: Full Year Credit (1.0)

Prerequisites: Mastery of Algebra 2 and Geometry

Pre-calculus is designed to provide college bound students with a strong background in polynomial, exponential, logarithmic, and rational functions, analytic geometry, trigonometry, and limits. And an introduction to the difference quotient. The textbook for the course is Pre-calculus with limits (2nd ed.) by Larson, R. (2011) Published by Brooks/Cole. A graphing calculator or graphing utility will be used extensively. Students will conduct graphical analyses of various functions, create and utilize the unit circle in problem solving, verify trigonometric identities, and evaluate limits.

College Calculus (352)

Course Format: Full Year Credit (1.0) with optional college credit

Prerequisites: Pre-Calculus or equivalent coursework

Calculus is designed to be college level course with the option of college credit through Clark State Community College. College credit will be available to students who attain the required score on a course placement test. The course will include the study of inverse functions, logarithmic functions, trigonometric functions, rates of change, limits, continuity, derivatives of functions, rules for derivatives of functions, applications of derivatives, the definite integral, applications of definite integrals, and L'Hospital's Rule. The textbook may include Pearson's Calculus. Students will study, analyze, perform experiments, read, write, solve, create, and model functions through change of rate, derivatives, antiderivatives, and definite integrals.

Science Department

Advanced Life Science (411/412)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

Advanced life science adds to the fundamentals of a basic biology class and allows students to participate in highly technical experimentation. Topics include the study of genetics, plants, animals, ecology, and natural history. Students will participate in laboratory activities both in and outside the class room. They will receive instruction regarding the content area, vocabulary development, and application of learning that occurs within the content of biological science. Investigations will include dissections, gel electrophoresis, and polymerase chaining reaction labs during the course of the year. This course is primarily intended to be a hands on extension of traditional biology curriculum. This course fulfills the graduation requirement for one unit of biological science as required by the Ohio Department of Education.

Chemistry A/B (421/422)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

This course introduces students to key concepts and theories that provide a foundation for further study in other sciences as well as advanced science disciplines. Chemistry comprises a systematic study of the predictive physical interactions of matter and subsequent events that occur in the natural world. The study of matter through the exploration of classification, its structure and its interactions is how this course is organized. Investigations are used to understand and explain the behavior of matter in a variety of inquiry and design scenarios that incorporate scientific reasoning, analysis, communication skills and real-world applications. An understanding of leading theories and how they have informed current knowledge prepares students with higher order cognitive capabilities of evaluation, prediction and applications. Course applies to state of Ohio graduation requirements as one of three required science credits; may qualify as an elective or a physical science credit (not a life science credit)

Honors Chemistry A/B (424/425)

Course Format: Semester Credit (.5 +.5)
Prerequisites: Physical Science, Algebra 1

Honors chemistry is a beginning chemistry course developed for students who wish to prepare for college level studies. Students will be required to do further study outside of class including

projects and videos. The course includes laboratory work, lecture, outside reading, class discussions, and extensive problem solving. It is intended for the serious student who wishes to obtain a strong background in chemistry. Topics for the year include; atomic structure, properties of matter, electron structure, periodic table, ionic and covalent bonding, nomenclature, balancing equations, reaction types, molecular structure and geometry, stoichiometry, gas laws, solutions, thermochemistry, acids and bases, oxidation and reduction, electrochemistry, and nuclear chemistry. Reading material outside the textbook may be used.

Anatomy & Physiology A/B (451/452)

Course Format: Semester Credit (.5 +.5)

Prerequisites: B or better in Biology or Chemistry recommended

A&P studies the major systems of the body with a focus on Anatomy. The Course not only gives students a solid foundation to succeed in a college level Anatomy course, but also puts emphasis on techniques to learn this challenging material. In addition to the use of IPad to access high quality visual resources, students also will have access to a large selection of models and are encouraged to handle them to help identify structures. In the second half of the year students complete several dissections, including different organs, and culminating with a dissection of a cat to examine details of muscle and organ systems. The class is intensive with new vocabulary and making connections between words and three dimensional concepts.

College Anatomy & Physiology A/B (455/456)

Course Format: Semester Credit (.5 +.5)

Prerequisites: A/B average in Biology and/or Chemistry, strong work ethic

The course is yearlong and covers the first semester of a Hocking State Community College (Bios 1113) course sequence. College credit will be available to students who attain the required score on a course placement test. In this course, human anatomy and physiology are studied using a body systems approach, with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Anatomy & Physiology I includes: basic anatomical and directional terminology; fundamental concepts and principles of cell biology; histology; the integumentary, skeletal, muscular, and nervous systems. Students must have time and be able to study on their own. The instructor teaches students how to learn the material but the pace is much faster and stringent than the standard Anatomy & Physiology course. If field trips, meetings, etc. interfere with a student coming to class, they are expected to keep up with the material as all information is posted online and can be accessed. It is strongly recommended to meet with the instructor and discuss the rigor of this course.

Core Physics A/B (461/462)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

This course will include phenomena associated with matter, energy, atomic structure, chemical and physical properties, motion, force, mechanics, heat, sound, electricity, magnetism, and light. Students will use scientific methods and will gather, analyze and represent data in a variety of ways. Instruction will also include parts of earth, space science, and current events/phenomena. The text book for this class is Conceptual Physics by Paul G. Hewitt. This course is taught using a variety of instructional methods including lab, class demonstrations, lecture, class discussions, small group work, project work, and digital research/work.

Environmental Science A/B (471/472)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

Environmental Science is the study of interactions among physical, chemical, and biological components of the environment. This course will focus on relationships between organisms and how humans specifically play a role in changing the world that we live in. Topics include population dynamics, water quality, climate change, and alternative energy. Students will participate in investigations that occur both in the classroom and in the outdoor land lab that exists on the school's property. The outdoor classroom experience includes an investigation of a local pond, stream, prairie and woodland that are all within walking distance of the building. Students will also have the chance to perform an independent study of the topic of their choosing that investigates a current topic in environmental science.

Food Science A/B (481/482)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

The first part of this class focuses on the National Restaurant Association Level 2 Manager Food Safety Training Program. If students pass the "ServSafe Test" they will receive an Ohio Department of Health Certificate in Level 2 Manager Food Safety Training, required by law, at any food service facility. The first quarter of the year focuses on food safety recommendations set forth by Center for Disease Control. The rest of the year focus is on the biological and chemical components of food, and how they contribute to food's makeup. Exploration of

proteins, carbohydrates, and lipids is followed by study of a variety of factors and processes involved with food, including fermentation, food additives, crystallization, and others.

Materials Science A/B (491/492)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

This course will include study of the composition, structure, and properties of various materials. Topics will include safe laboratory practices, matter and properties, crystal structure, metals, corrosion, ceramics, glass, polymers, and composites. Scientific methods will be used to gather, analyze and represent data in a variety of ways including topics from life science, physical science, and current events/phenomena. The principal means of learning will be laboratory investigations through creative and sometimes artistic hands-on activities.

Materials Science 2 A/B (495/496)

Course Format: Semester Credit (.5 +.5)

Prerequisites: Materials Science

This course will continue the foundation laid in the Materials Science Year I and will expand upon the study of the composition and structure of materials, properties and changes of matter and energy with projects, an emphasis on manufacturing and engineering processes, and examination of the relationships between structure, properties, processing and performance, and the development of improved materials and manufacturing in the future. Topics will include safe laboratory practice, matter and properties, crystal structure and geometries, metals, ceramics, polymers, and composites. Scientific methods will be used to gather, analyze, and represent data in a variety of ways including topics from life and physical science, current events/phenomena, and manufacturing and applications. Students will be required to do further study outside of class including homework, projects, and videos. The textbook used for the course is "Introduction to Materials Science: a Guided Inquiry" by Elliot Douglas.

Social Studies Department

American Government A/B (511/512)

Course Format: Semester Credit (.5 +.5)

Prerequisites: None

American Government is the study of how the American people govern themselves at national, state and local levels of government. This course includes the basis for how our government was created and structured. American Government will utilize various textbooks and reading materials as well as current event resources. Students will study, analyze, research, read and write as well as work in cooperative settings. Students will complete mock trials and debates based on past events as well as current topics of importance and relevance.

Economics and Financial Literacy (521)

Course Format: Semester Credit (.5)

Prerequisites: None

Economics and Financial Literacy is the study of the fundamentals that guide individuals and nations as they make choices about how to use limited resources to satisfy their needs and wants. More specifically, it examines the ability of individuals to use knowledge and skills to manage limited financial resources effectively for a lifetime of financial security. Economics and Financial Literacy will utilize various textbooks and reading materials as well as current event resources. Students will study, analyze, research, read and write as well as work in cooperative settings. Students will complete various projects related to real-world economic and financial situations.

World Geography (551)

Course Format: Semester Credit (.5)

Prerequisites: None

This course builds on students' understanding of geography and spatial thinking, as contemporary issues are explored through the lens of physical and human geography. Course content encompasses environmental issues, human settlement and movement, regional geographic issues, and globalization. Geography utilizes a variety of texts and multimedia resources. Students participate in explorative projects, debates, collaborative groups that sharpen their critical thinking and questioning skills.

Psychology (561)

Course Format: Semester Credit (.5)

Prerequisites: None

Psychology is the study of psychological theories put in terms that adolescents can understand, put into immediate use in dealing with problems in their real world, and take with them into their adult lives. This course will describe the role of family and peers, identify the structure and functions of the human brain, describe the principles of classical and operant conditioning, outline the principals involved in perception, identify the various sources of stress and methods to deal with stress, define psychological disorders and examine the goals of psychotherapy. Psychology will utilize various textbooks and readings as well as current event resources and videos. This course employs reading, writing, listening, and discussion techniques to encourage students to work out problems encountered in family, work and social environments. Problem solving skills and cooperative learning techniques are developed within the content of the course. Students will also participate in various projects including student-led learning.

Other/Elective Courses

Career Readiness (600)

Course Format: Semester Credit (.5)

Prerequisites: None

Career Readiness is the study of various topics that will prepare students for their next steps after graduation - workforce, college, or military. Topics of study will include: identifying personal strengths and weaknesses, communication skills, netiquette, teamwork, networking, taking initiative, goal setting, self-management, budgeting, critical thinking skills, problem solving, resume writing, interview tips and techniques, and job search skills. Students will begin applications (college and workforce) and prepare a plan for next steps after graduation. They will also practice presentation skills in presenting their plans.

▼Study Center (SC A, SC B)

Study hall periods are available for senior students only on a limited basis if all graduation requirements are met or in progress.