

# Tri-City High School Course Description Guide

All students must complete certain requirements (SEE BELOW) in order to graduate. In addition, parents and students should discuss and determine appropriate courses to fulfill their student's educational and career goals.

## ADDING/DROPPING COURSES:

Students will have the first 5 days of each semester to change their schedules. Required courses cannot be dropped. Students **MUST** bring a note from their parent/guardian stating they have permission to change classes. **The fee to change classes during the first 5 days is \$10.00.**

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## TRI-CITY HIGH SCHOOL GRADUATION REQUIREMENTS

### Class of 2010 and beyond

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4 credits	Physical Education
4 credits	English (includes 1 year of writing intensive coursework)
3 credits	Math (one must be Algebra, one must contain Geometry content)
2 ½ credits	History (including 1 year American History, ½ year Government, 1 year elective)
2 credits	Science (one must be Physical Science)
1 credit	Liberal Art credit (i.e. foreign language, art, music, vocational education)
½ credit	Driver's Education
½ credit	Health
½ credit	Economics (will fulfill State of IL Consumer Education requirement)

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18 credits	General Requirements
+ 6 credits	Electives

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24 credits to Graduate\*

\*If your student is considering pursuing a post-secondary education, they should be aware that many colleges require higher admission standards and that the *Tri-City High School Graduation Requirements* meet Illinois State Board of Education Standards and not necessarily all college admission requirements. **Below are suggested requirements for college-bound students:**

4 years English	3-4 years Science (laboratory sciences preferred)
4 years Math	2-3 years Foreign Language
3 years History	

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## **AGRICULTURE**

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### **Agriculture Business Management – 1 credit**

This course will provide students with the basic knowledge and skills necessary to manage personal finances and develop into a successful entrepreneur and/or business person. Instructional units include: business ownership types, starting an agribusiness, managing and operating an agribusiness, financing an agribusiness, managing personal finances, record keeping and financial management of an agribusiness, local, state and federal taxes, sales and marketing, economic principles, conduct meetings, public speaking, geometry content and concepts associated with agribusiness management, and developing employability skills. Student skills will be enhanced in geometry, writing, reading comprehension, and speech through agribusiness applications.

### **Agriculture Science – 1 credit**

Major units of instruction include plant science, soil science, animal science and environmental science. Applied science and math skills and concepts will be stressed throughout the course as they relate to each area.

### **Animal Science – ½ credit**

This course is designed to reinforce and extend students understanding of science by associating scientific principles and concepts with relevant applications in agriculture. Students will examine major phases of animal agriculture and specific biological science concepts that govern management decisions in the animal industry. The course will be valuable preparation for further education and will increase the relevance of science through the applied setting of agriculture by enhancing literacy in science and the scientific process.

### **Biotechnology – ½ credit**

This course examines the agricultural applications of biotechnology, the use of living organisms to solve problems or make useful products. Applications include technologies used in bioprocessing, cell/tissue culture, genetic and protein engineering. Specific units of instruction include: impact of biotechnology, genetics and biotechnology in plant, animal and microbial science. Students are provided with information needed for considering a career in the emerging occupation of agricultural biotechnology technician.

**Electrical – ½ credit**

This course will concentrate on expanding student's knowledge and experiences with electrical technologies utilized in the agricultural industry. Units of instruction included are: safety, wiring techniques, electrical tools, electrical schematics and the science of electricity.

**Horticulture – 1 credit**

This advanced course offers instruction in areas of horticulture. Units of study include plant anatomy and physiology, plant propagation, integrated pest management and fruit production. Agribusiness units will cover operating a horticultural business, pricing work, advertising and sales. Improving workplace skills will be a focus.

**Landscaping – ½ credit**

This course focuses on the landscape and nursery segments of the horticulture industry. Units of study include: identifying landscape plants, designing landscape plans, hardscape construction techniques, installing landscape plants and maintenance of existing landscapes.

**Turf Management – ½ credit**

This advanced course focuses on the turf segments of the horticulture industry. Units of study include: soil management, environmental factors affecting growth, establishing turf, identifying turfgrasses, classifying turfgrasses, selecting turfgrasses, growing turfgrasses and maintaining turfgrasses.

**Welding – ½ credit**

This course will concentrate on expanding student's knowledge and experiences with welding technologies utilized in the Agricultural Industry. Units of instruction included are: safety, SMAW welding, MIG welding and Oxyfuel welding.

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## **BUSINESS**

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**Economics – ½ credit**

*Prerequisite: JR/SR*

This course is designed to help students understand economic concepts necessary for participation in a global and domestic capitalist system as wage earners, business owners, producers, investors and consumers. Topics will include: fundamentals of economics, economic systems, supply & demand, consumer & economy, inflation, unemployment and distribution of income. Also, students will be introduced to several accomplished entrepreneurs of local, national, and global significance.

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## COMPUTERS

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### Graphics – 1 credit

This course allows students to explore the visual and technical aspect of Computer Graphic Design. In this class we primarily use Photoshop but also use various other drafting/drawing applications as well as digital media such as cameras and scanners. The goal is a basic understanding of common computer graphic design terms, styles and techniques.

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## ENGLISH

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### English I – 1 credit

This course covers basic grammar from parts of speech through sentence structure. We will study vocabulary in this class in conjunction with our grammar studies. Emphasis is placed on applying basic writing, sentence structure developed into a paragraph and essay writing. Elements of paragraphs that will be emphasized include: sentence development, coherence, organization, topic sentence ideas and syntax. Certain works of literature will also be covered in addition to the literature in the textbook. We will also study Theater using *Romeo and Juliet* as the basis of the unit.

### English II– 1 credit

This course covers essay writing through topic development. Special attention is given to bridging paragraphs and topic coherence. Writing skills will be emphasized through the practice of expository, persuasive and narrative essays. Several novels will be studied. We will incorporate Theater study using *Hamlet* as a basis for our unit. In addition, students will work on their public speaking and presentation skills by completing several speeches and/or presentations throughout the year. We will continue studying grammar and vocabulary in this course.

### English III – 1 credit

#### *Writing Intensive Course*

This course emphasizes American Literature by studying fiction, poetry, drama and nonfiction. Students will be expected to recall details, interpret meanings and extend the meaning into their own experiences. Beyond the text, students will read one additional novel and write a full-fledged research paper.

### English IV – 1 credit

This course will encompass and focus on three areas including Essay Writing, Exploratory Literature and Mythology. Essay writing is based on the provided prompts and will accompany the reading and will focus on

narrative, poetry and nonfiction. Emphasis will be on the focus, support and mechanics of the essay. Exploratory Literature will explore a classic selection of World Literature. Writing in this course will be based on the readings. Essays will reflect the study of analogy, satire, irony, symbolism, parody and other literary elements. Students are encouraged to think critically and participate in discussions. Mythology will explore Greek and Roman mythology. We will study the three epic poems; the Illiad, The Odyssey, and The Aenid. We will examine Joseph Campbell's *The Hero of a Thousand Faces* to compare mythical heroes as well as modern day heroes. We will also look at comparative mythologies in regards to flood myths, creation myths, and rebirth myths. In addition to these myths we will study vocabulary that comes to us from Greek and Roman etymology.

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## FINE ARTS

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### Drawing – ½ credit

This is a semester course offered to any high school student and will count as a liberal art credit. Students may continue their study after completing Drawing I at progressive levels to learn more skills as well as develop their own style. At the beginning level students will learn techniques, composition, and art history. Advanced levels continue with these skills in more depth and with more independence. All levels will experience traditional drawing mediums as well as develop digital communication skills.

### Painting – ½ credit

This is a semester course offered to any high school student and will count as a liberal art credit. Students may continue their study after completing Painting I at progressive levels to experience higher challenges. At the beginning levels, the emphasis is on technique, color theory, composition and art history. Advanced levels continue these skills in more depth and with more independence. Technique instruction is provided in tempera, watercolor, acrylics and a bit of oils, as well as development in digital communication skills.

### Pottery – ½ credit

This is a semester course offered to any high school student and will count as a liberal art credit. Students may continue their study after completing Pottery I with advanced skills and independence. All students will gain insight into historical and modern influences as they produce hand-built and wheel-thrown pieces. In addition to clay construction, students will develop digital methods of communication.

### 2D/3D Design – ½ credit

This is a semester course offered to any high school student and will count as a liberal art credit. Students may continue their study after completing Design I and begin to focus on areas of design connected with careers. Historical and modern enrichment is provided to help students solve design problems based on the elements and principles of design. A wide variety of art mediums are experienced as well as digital methods of communication.

### Visual Concepts: Understanding Art – 1 credit

This is a 2 semester online course, not a studio course, and will count as a liberal art credit. You will discover how art developed, evolved, and continues to adapt to the needs of our global world. While exploring the world of art, you will gain valuable digital skills.

### Visual Connections: Exploring Art & Society – 1 credit

*Prerequisite: JR/SR*

This is a 2 semester online course, not a studio course, and will count as a liberal art credit. As you discover how art communicates and functions within contemporary and historical cultures, you will gain a greater understanding of this imaginative global language. While analyzing the world of art, you will gain valuable digital skills. **WEIGHTED COURSE**

### Concentrated Art – ½ credit

*Prerequisite: Senior*

This semester course is offered to senior level students with a serious interest in a specific art form. Counting as a liberal art credit, admittance to this course must be approved by the instructor. The student will choose one major form of art and plan his/her projects to satisfy requirements set by the instructor. Emphasis is upon art production, theory, and creative/critical thinking.

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## FOREIGN LANGUAGE

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### Spanish I – 1 credit

This course provides training in the basic conversational skills: listening to the spoken language with understanding, correct pronunciation and intonation and the oral use of actual speech patterns necessary for effective communication. As the oral skills are being established, the basic language structure is presented through reading and composition exercises that focus on the Hispanic world and its culture.

### Spanish II – 1 credit

*Prerequisite: Spanish I*

This course gives a greater understanding of spoken and written Spanish. Students will possess the ability to express themselves in the Spanish language. Students will improve their listening, speaking, reading and writing skills.

Spanish III – 1 credit

*Prerequisite: Spanish II*

Students will be able to understand and express themselves in Spanish in a wide variety of areas. They will demonstrate their ability in written and oral expressions using basic and advanced grammar structures. **WEIGHTED COURSE**

Spanish IV – 1 credit

*Prerequisite: Spanish III*

Students in Spanish IV will be able to communicate in a wide variety of situations. Multiple projects are assigned to help students write, speak and translate Spanish. **WEIGHTED COURSE**

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## MATHEMATICS

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Algebra I – 1 credit

Students enrolling in Algebra will review working with positive and negative numbers. Class work will include simplifying expressions and solving equations containing variables. Inequalities, exponents, polynomials, rational numbers, and probability are also part of the curriculum in this class.

Geometry – 1 credit

*Prerequisite: Algebra I*

Concepts covered in Geometry include correct use of terminology, transformations, triangle relationships, measurements of plane and 3-D figures, relationships found among parallel lines, proofs, and congruent & similar plane figures.

Geometry Concepts – 1 credit

*Prerequisite: Algebra I*

Geometry Concepts covers the same concepts as Geometry except proofs. The concepts are met on a more basic format.

Algebra II – 1 credit

*Prerequisite: Geometry or Geometry Concepts*

This course offers students a rigorous study of Algebra II. Topics studied include equations with two or three variables, complex numbers, functions (linear, quadratic, rational, logarithmic, and radical), polynomials, and matrices. Problem solving and the use of the TI-83/84 and/or the TI-nspire graphing calculators are emphasized. Prerequisite courses are Algebra I and Geometry or permission of instructor.

Pre-Calculus – 1 credit

*Prerequisite: Algebra II*

This course is designed to prepare students for Calculus either in high school or college. Topics include functions, trigonometry, conic sections, vectors, and exponential and logarithmic functions. Pre-Calculus is a fast paced course. Because Pre-Calculus is a weighted class, the difficulty level

increases during the year. The TI-83/84 or TI-nspire calculator is encouraged. Prerequisite courses are Algebra I, Geometry, Advanced Algebra or permission of instructor. **WEIGHTED COURSE**

**Calculus – 1 credit**

*Prerequisite: Pre-Calculus*

This course is designed for students who intend to study math, science, and engineering or other math related field in college. Review of algebra, geometry, and trigonometry topics will begin the year followed by a study of limits, derivatives, and integrals. Students will also use TI-83/84 or TI-nspire graphing calculators. This course is a weighted class. Prerequisite courses are Algebra I, Geometry, Advanced Algebra, Pre-Calculus or permission of instructor. **WEIGHTED COURSE**

**Practical Mathematics – 1 credit**

*Prerequisite: Junior/Senior*

This is a junior/senior level course. Practical Math involves problem solving using Algebra, Geometry, and basic Trigonometry. Emphasis is placed on the use of these skills in a variety of 'real life' situations.

**Statistics – ½ credit**

*Prerequisite: Junior/Senior*

This course is a junior/senior level semester course. Topics include frequency distributions, measures of central tendency, measures of variation, correlation, regression lines, probability, permutations and combinations. The use of the TI-83/84 and/or the TI-nspire will be encouraged.

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## MUSIC

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**Band – 1 credit**

This advanced musical ensemble performs a wide variety of band literature and explores basic music theory concepts. The band performs 3 concerts over the course of the school year and also serves as a pep band for several girls and boys home basketball games. Band members also have the opportunity to perform at the annual IHSA Solo and Ensemble Contest and audition for the IMEA All-District and All-State Bands. Previous band experience is required.

**Choir – 1 credit**

Students pursue the fundamentals of vocal technique. A strong emphasis is placed on creating a positive group dynamic while developing the musical abilities of each individual. Students are required to rehearse two to three days per week and participate in 3 performances during the school year. Choir enrollment also makes students eligible to participate in extra-curricular musical activities such as IMEA District and State music festivals and IHSA and IESA Solo and Ensemble Contests.

Band/Choir – 1 credit

PLEASE SEE ABOVE COURSE DESCRIPTIONS

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## PHYSICAL EDUCATION

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Physical Education – 1 credit

This course is designed to improve the overall fitness level of the student and prepare them for lifetime activity. Students are instructed in a variety of team and individual sports and lifetime activities. Students are required to dress and participate daily.

Weights – 1 credit

This course is designed to improve physical fitness and enhance overall health and athletic performance. Students are instructed in proper warm-up and cool-down techniques. The course consists of strength training, agility, plyometrics, core training, aerobic and cardiovascular activity. Students are required to dress and participate daily.

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## SAFETY EDUCATION

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Driver Education – ½ credit

This course studies the physical, social and mental abilities needed to be a good driver. The class includes the rules of the road instruction and various subjects designed to make students safe and responsible drivers. The course consists of 30 hours in the classroom and 6 hours behind-the-wheel. The student will have 50 hours behind-the-wheel with parent/guardian. *Eligibility for Driver's Education is based on a student's birth date and students must be 15 years old BEFORE taking the class. In addition, state law requires that students pass 8 classes the previous 2 semesters in order to be eligible.*

Health – ½ credit

This course covers systems within the body, safety, alcohol & drug awareness, tobacco, nutrition, STDs, family life, sexuality and social health.

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## SCIENCE

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### Biology – 1 credit

This is an introductory course focusing on living things. Topics covered include ecology, genetics, plants, animals, and others. Labs and projects will be done on a regular basis.

### Chemistry in the Community – 1 credit

*Prerequisite: Junior/Senior*

The focus of this course is similar to the weighted Chemistry class but will focus on matter, elements, compounds, equations, acids and bases. The math requirement in this course is not as demanding. This is a lab-based class.

### Chemistry – 1 credit

*Prerequisite: Completion of Algebra II*

This is an in-depth study of basic chemistry principles. Topics covered include elements, writing and naming formulas, balancing equations, and states of matter. This is a weighted course, meaning that the coursework is challenging. Students must have completed Algebra II due to the math required. Students currently enrolled in Algebra II may take this class with teacher permission. **WEIGHTED COURSE**

### Earth Science – 1 credit

This class will encompass astronomy, geology, meteorology and environmental science. There will be fewer labs, but more projects in this class.

### Forensics – ½ credit

*Prerequisite: Junior/Senior*

This class is an application of biology, anatomy, and chemistry. Students will study basic crime scene techniques, such as fingerprints, DNA analysis and chromatography. This is a lab-based, project-based and web-based course.

### Human Anatomy & Physiology – 1 credit

*Prerequisite: Junior/Senior*

This is an in-depth study of the human body and how it functions. Topics will focus on various body systems. Labs and cat dissection are done during the course. This is a weighted course, meaning that the coursework is challenging. **WEIGHTED COURSE**

### Physical Science – 1 credit

This is an introductory course in earth science, chemistry, and physics. Each topic is covered for approximately one-third of the school year. Labs and projects are done regularly during the course of study. Basic problem solving is done during the physics unit.

**Physics – 1 credit**

*Prerequisite: Completion of Algebra II; JR/SR*

This is an in-depth study of motion and forces. A modified version of the modeling method will be used. Labs are an important part of this course. Computer probes will be used to collect data. This is a weighted course, meaning that the coursework is challenging. Due to the math required, students must have completed Algebra II. Students currently enrolled in Algebra II may take this class with teacher permission. **WEIGHTED COURSE**

**Zoology – ½ credit**

*Prerequisite: Junior/Senior*

This class will focus on vertebrates (fish, amphibians, reptiles, birds and mammals). There will be an emphasis on structural and functional similarities and behavior patterns. This is a lab-based class. **WEIGHTED COURSE**

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## **SOCIAL STUDIES**

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**Geography – 1 credit**

This course provides students with fundamental knowledge of cultural and physical geography. Specific areas studied will include: Europe, the Middle East, Latin America, Canada, Southern Asia, Africa and Antarctica.

**World History – 1 credit**

This course will trace history from the beginning (prehistoric man, earliest civilizations) through the classic civilizations (Greece, Rome, China & India). Students will learn about different eras including: the Renaissance, Age of Exploration, Reformation and the Scientific & Industrial Revolutions. World Wars I & II will also be studied.

**Sociology – ½ credit**

This course is designed for college-bound student. This class is a study of human behavior in groups and societies. Areas of study include human development in society, social groups and institutions, social status and class; and social movements and change.

**Psychology – ½ credit**

This course is designed for college-bound student. This class involves an in-depth study of individual human behavior. Areas studied are: the history and methods of psychology, physiological psychology, learning theory, human growth and development, personality formation, mental illness, and psychotherapy.

**American History – 1 credit**

*Writing Intensive Course*

This course focuses on the important people and topics in American History. First semester covers early American History such as the War of

Independence and leads up to the Civil War. Second semester covers topics including the Civil War and World Wars I and II.

**Government – ½ credit**

*Prerequisite: Senior*

This course focuses attention on the federal government and the state of Illinois. The class covers the U.S. Constitution, Illinois Constitution, Declaration of Independence and the United States Flag. Various current events items will be brought into class for discussion purposes.

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## MISCELLANEOUS

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**CACC - 3 credits per year**

*Prerequisite: Junior/Senior*

Capital Area Career Center (CACC) offers junior and senior high school students the opportunity to learn in an environment that is both unique and exciting. CACC students acquire knowledge and skills that are needed to move on to college and to enter the workforce by being taught by instructors that are experts in their fields in an environment that is safe and on the cutting edge of technology. *There is a separate application to enroll in CACC; additional fees will apply.*

**Online College Course – ½ to 1 credit**

*Prerequisite: Junior/Senior*

Students take college courses through LLCC or SCI. Students must apply and register for classes before the beginning of the semester. Students are responsible for completing all paperwork and requirements. The Guidance Office is responsible for scheduling the class time in the student's schedule. *Please visit Guidance Office if you wish to take an Online College Course.*

**WEIGHTED COURSE**