

Loudon County High School Scholars Prep Guide 2019-2020

Upcoming Course **Early Childhood Education Careers I** 6015

School **Loudon High School**

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Areas that might be challenging for students:

Early Childhood Education Careers I (ECEC I) is a foundational course in the Education and Training career cluster intended to prepare students for careers as childcare providers, nannies, preschool teachers, and more. Course content covers the foundation of childhood development services, careers, provider responsibilities and aptitudes, and fundamentals of child development.

This course satisfies one of three credits required for an elective focus when taken in conjunction with other Education and Training courses. This course is new information, however should not provide challenges for the student as long as they work and complete the coursework presented to them.

Suggestions on how students can prepare for the upcoming course:

In this class, we start with basic knowledge and development of children. This is the first in a series of three. There is no preparation needed to take this course. Just be willing to learn about the care of children in a day care center setting.

Suggested Activities or Resources (if applicable):

This is the foundational course in the *Early Childhood Education* program of study. For more information on the benefits and requirements of this program in full, please visit the Education and Training website at <https://www.tn.gov/education/career-and-technicaleducation/career-clusters/cte-cluster-education-training.html>

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Upcoming Course **Early Childhood Education Careers II 6016**

School **Loudon High School**

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Early Childhood Education Careers II (ECEC II) is an intermediate course for students interested in learning more about becoming an early childhood teacher, nanny, or childcare provider. This course covers the components of curriculum planning, learning, screening and assessing, special populations, and educational technology.

Suggestions on how students can prepare for the upcoming course:

Students must have taken Early Childhood Education Careers I (6015) in order to take the second classes in the series.
Requirements:
This course satisfies one of three credits required for an elective focus when taken in conjunction with other Education and Training courses.
This course is building on the information from ECED I. This course should not provide challenges for the student as long as they work and complete the coursework presented to them. This course provides hand-on application of the coursework learned in ECED I and ECED II

Suggested Activities or Resources (if applicable):

This is the second course in the Early Childhood Education program of study. For more information on the benefits and requirements of these programs in full, please visit the respective career cluster website at <https://tn.gov/education/article/cte-cluster-education-training>.

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Upcoming Course **Early Childhood Education Careers III**

School **Loudon High School**

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Early Childhood Education Careers III (ECEC III) is an applied-knowledge course for students interested in becoming an early childhood teacher, nanny, or childcare provider. This course covers the components of the learning environment, planning age appropriate activities, using activities for learning, and developing communication skills. If available, students may participate in a work-based learning component of instruction and add work products to a course portfolio.

Suggestions on how students can prepare for the upcoming course:

Students must have completed ECED I (6015) and ECED II (6016) to take this course. This course satisfies one of three credits required for an elective focus when taken in conjunction with other Education and Training courses. This course is building on the information from ECED I and ECED II. This course should not provide challenges for the student as long as they work and complete the coursework presented to them.

Suggested Activities or Resources (if applicable):

This is the third course in the Early Childhood Education program of study. For more information on the benefits and requirements of this program in full, please visit the Education and Training website at <https://www.tn.gov/education/career-and-technical-education/careerclusters/cte-cluster-education-training.html>.

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Upcoming Course: Principles of Manufacturing

School: Loudon High School

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Principles of Manufacturing is designed to provide students with exposure to various occupations and pathways in the Advanced Manufacturing career cluster, such as Machining Technology, Electromechanical Technology, Mechatronics, and Welding.

Areas that might be challenging for students:

Students can be challenged with the math that they need to operate in a manufacturing atmosphere. Fractions, geometry, and metric units are very common in the shop.

Suggestions on how students can prepare for the upcoming course:

Students need understand how to read a tape measure before they get to high school. This will be a big help for them moving forward. Also learning basic hand tools would be great and would get a great head start.

Suggested Activities or Resources (if applicable):

Any activities that relate to real world situations should help them understand better. Laying out pictures frames on a wall, draw a layout of a classroom with detailed measurements. Use an actual tape measure (ones without the fractions on them) around the house measuring different things. Have a parent or someone that knows how to read a tape measure, check them off for correctness. Research shop hand tools on-line or around the house. Learn what they are and what they do.

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Upcoming Course: Welding I

School: Loudon High School

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Welding I is designed to provide students with the skills and knowledge to effectively perform cutting and welding applications used in the advanced manufacturing industry. Proficient students will develop proficiency in fundamental safety practices in welding, interpreting drawings, creating computer aided drawings, identifying and using joint designs, efficiently laying out parts for fabrication, arc welding (SMAW), and quality control..

Areas that might be challenging for students:

Students may struggle a little with actual stick welding. Some seem to get frustrated at first. Layouts get a bit more detailed and the builds are more difficult.

Suggestions on how students can prepare for the upcoming course:

My goal is to have them prepared for Welding I by the time they complete Principles of Manufacturing. In saying that students can get more familiar with welding processes by job shadowing in the summer, watching videos, and reading content from books or the internet.

Suggested Activities or Resources (if applicable):

Not at this point, unless they no someone that is a certified welder outside of school.

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Upcoming Course: Welding II

School: Loudon High School

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Welding II is designed to provide students with opportunities to effectively perform cutting and welding applications of increasingly complexity used in the advanced manufacturing industry. Proficient students will build on the knowledge and skills of the Welding I course and apply them in novel environments, while learning additional welding techniques not covered in previous courses.

Areas that might be challenging for students:

Students may struggle a little with TIG welding and out of position welds.

Suggestions on how students can prepare for the upcoming course:

My goal is to have them prepared for Welding II by the time they complete Welding I. In saying that students can get more familiar with welding processes by job shadowing in the summer, watching videos, and reading content from books or the internet.

Suggested Activities or Resources (if applicable):

Not at this point, unless they know someone that is a certified welder outside of school.

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Upcoming Course structural elements 1

School Loudon High School

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Construction Mathematics , Framing, roofing, and sheathing are a basis of our curriculum for this semester.

Areas that might be challenging for students:

Applied geometry and algebra.

Suggestions on how students can prepare for the upcoming course:

Research construction on line. Review math courses.

Suggested Activities or Resources (if applicable):

Multitudes of on line articles.

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Upcoming Course __structural elements 2_____

School __Loudon high school_____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Studying truss construction and roof framing as well as roofing materials and the application thereof.
Building codes as they apply to our area as well as resisting or building for wind forces and earthquakes.

Areas that might be challenging for students:

Mathematics involved in calculating dead and live loads as well as rafter and truss lengths.

Suggestions on how students can prepare for the upcoming course:

Online research and research as well as reviewing mathematics courses, algebra and geometry especially.

Suggested Activities or Resources (if applicable):

There are numerous web sites relating to design and construction. The national center of construction research and development offers much information as well as links to other sites. Caution is recommended here because this area as well as all other areas can be fraught with much misleading information so a modicum of common sense is required.

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Upcoming Course _____ MLR 1 _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

MLR I is the first course in the Automotive Maintenance and Light Repair program of study and serves as a foundation of safety skills and knowledge on becoming a professional service technician. For more information on the benefits and requirements of implementing these programs in full, please see the program of study description documents found on the Transportation, Distribution, and Logistics website

Areas that might be challenging for students:

ASE Student Certification can be obtained any time during MLR III or MLR IV courses. There are no work experience requirements to sit for the exam.

Suggestions on how students can prepare for the upcoming course:

Automotive careers require you to have a strong mechanical ability. The nation's dependence on automobiles means the job demand will remain strong in the automotive fields.

Suggested Activities or Resources (if applicable):

Hours earned in the Maintenance and Light Repair courses may be used toward meeting National Automotive Technicians Education Foundation (NATEF) standards and Tennessee Department of Education standards. NATEF requires that 95% of the P-1 tasks, 80% of the P-2 tasks, and 50% of the P-3 tasks will be accomplished. These tasks are notated in these standards.

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Upcoming Course _____ MLR 1 _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

The Maintenance and Light Repair I (MLR I) course prepares students for entry into Maintenance and Light Repair II. Students explore career opportunities and requirements of a professional service technician. Content emphasizes beginning transportation service skills and workplace success skills. Students study safety, tools, equipment, shop operations, basic engine fundamentals, and basic technician skills. Upon completing all of the Maintenance and Light Repair courses, students may enter automotive service industry as an ASE Certified MLR Technician

Areas that might be challenging for students:

ASE Student Certification can be obtained any time during MLR III or MLR IV courses. There are no work experience requirements to sit for the exam.

Suggestions on how students can prepare for the upcoming course:

Automotive careers require you to have a strong mechanical ability. The nation's dependence on automobiles means the job demand will remain strong in the automotive fields.

Suggested Activities or Resources (if applicable):

Enrollment Opportunities:

Dual enrollment opportunities currently exist with specific Tennessee Colleges of Applied Technology. Reach out to local postsecondary institutions to identify current opportunities or establish new articulation agreements where needed.

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Upcoming Course _____ MLR 2 _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

The Maintenance and Light Repair II (MLR II) course prepares students for entry into Maintenance and Light Repair III. Students study automotive general electrical systems, starting and charging systems, batteries, lighting, and electrical accessories. Upon completing all of the Maintenance and Light Repair courses, students may enter automotive service industry as an ASE Certified MLR Technician.

Areas that might be challenging for students:

ASE Student Certification can be obtained any time during MLR III or MLR IV courses. There are no work experience requirements to sit for the exam.

Suggestions on how students can prepare for the upcoming course:

Automotive careers require you to have a strong mechanical ability. The nation's dependence on automobiles means the job demand will remain strong in the automotive fields.

Suggested Activities or Resources (if applicable):

Enrollment Opportunities:

Dual enrollment opportunities currently exist with specific Tennessee Colleges of Applied Technology. Reach out to local postsecondary institutions to identify current opportunities or establish new articulation agreements where needed.

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Upcoming Course _____ MLR 3 _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

The Maintenance and Light Repair III (MLR III) course prepares students for entry into Maintenance and Light Repair IV. Students study and service suspension and steering systems and brake systems. Upon completing all of the Maintenance and Light Repair courses, students may enter automotive service industry as an ASE Certified MLR Technician.

Areas that might be challenging for students:

ASE Student Certification can be obtained any time during MLR III or MLR IV courses. There are no work experience requirements to sit for the exam.

Suggestions on how students can prepare for the upcoming course:

Automotive careers require you to have a strong mechanical ability. The nation's dependence on automobiles means the job demand will remain strong in the automotive fields.

Suggested Activities or Resources (if applicable):

Enrollment Opportunities:

Dual enrollment opportunities currently exist with specific Tennessee Colleges of Applied Technology. Reach out to local postsecondary institutions to identify current opportunities or establish new articulation agreements where needed.

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Upcoming Course ____ MLR 4 _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

The Maintenance and Light Repair IV (MLR IV) course prepares students for entry into the automotive workforce or into post secondary training. Students study and service automotive HVAC systems, engine performance systems, automatic and manual transmission/transaxle systems, and practice workplace soft skills. Upon completing all of the Maintenance and Light Repair courses, students may enter automotive service industry as an ASE Certified MLR Technician.

Areas that might be challenging for students:

ASE Student Certification can be obtained any time during MLR III or MLR IV courses. There are no work experience requirements to sit for the exam.

Suggestions on how students can prepare for the upcoming course:

Automotive careers require you to have a strong mechanical ability. The nation's dependence on automobiles means the job demand will remain strong in the automotive fields.

Suggested Activities or Resources (if applicable):

Enrollment Opportunities:

Dual enrollment opportunities currently exist with specific Tennessee Colleges of Applied Technology. Reach out to local postsecondary institutions to identify current opportunities or establish new articulation agreements where needed.

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Upcoming Course _____ Agriscience _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Agriscience is a broad, introductory course in agriculture. This class will cover safety, advancements in agriculture, agriculture's impacts on society, environmental science, ecology, wildlife, natural resources, cell biology, genetics, anatomy and physiology, plant science, soil science, power systems, electricity, and engines.

Areas that might be challenging for students:

The most difficult unit in this course will involve environmental science, wildlife and natural resources. We will read "A Sand County Almanac" by Aldo Leopold while we complete this unit.

Suggestions on how students can prepare for the upcoming course:

To prepare for this course, students can familiarize themselves with common agricultural practices and topics. Information can be easily accessed on the news and internet.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Small Animal Care _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

This is an intermediate course in animal science and care for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of small animals, as well as careers, leadership, and history of the industry. Upon completion of this course, proficient students will be prepared for more advanced coursework in veterinary and animal science

Areas that might be challenging for students:

Students that are not used to medical terminology and Latin could encounter issues that will easily be overcome by staying attentive and being an active participant in class.

Suggestions on how students can prepare for the upcoming course:

Start looking into the daily interactions of a veterinarian and how they must maintain their level of professionalism and work ethic.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Large Animal Care _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

This is an applied course in veterinary and animal science for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of large animals, as well as careers, leadership, and history of the industry. Upon completion of this course, proficient students will be prepared for success in the level-four Veterinary Science course and further postsecondary training.

Areas that might be challenging for students:

Students that are not used to medical terminology and Latin could encounter issues that will easily be overcome by staying attentive and being an active participant in class.

Suggestions on how students can prepare for the upcoming course:

Start looking into the daily interactions of a veterinarian and how they must maintain their level of professionalism and work ethic.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Veterinarian Science _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

This is an advanced course in animal science and care for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers principles of health and disease, basic animal care and nursing, clinical and laboratory procedures, and additional industry-related career and leadership knowledge and skills. Upon completion of this course, students will be able to pursue advanced study of veterinary science at a postsecondary institution.

Areas that might be challenging for students:

Students that are not used to medical terminology and Latin could encounter issues that will easily be overcome by staying attentive and being an active participant in class.

Suggestions on how students can prepare for the upcoming course:

Start looking into the daily interactions of a veterinarian and how they must maintain their level of professionalism and work ethic.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Greenhouse Management _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

This is an applied-knowledge course designed to prepare students to manage greenhouse operations. This course covers principles of greenhouse structures, plant health and growth, growing media, greenhouse crop selection and propagation, and management techniques. Upon completion of this course, proficient students will be equipped with the technical knowledge and skills needed to prepare for further education and careers in horticulture production.

Areas that might be challenging for students:

Students will be required to dive into horticulture and the processes of starting and sustaining plant life. For some, this could be difficult without previous knowledge of plant life and what it takes to maintain it.

Suggestions on how students can prepare for the upcoming course:

Summer reading and visits to local greenhouses.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Construction Core _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Course Description Fundamentals of Construction is a foundational course in the Architecture & Construction cluster covering essential knowledge, skills, and concepts required for careers in construction. Upon completion of this course, proficient students will be able to describe various construction fields and outline the steps necessary to advance in specific construction careers. Students will be able to employ tools safely and interpret construction drawings to complete projects demonstrating proper Page 2 measurement and application of mathematical concepts. Standards in this course also include an overview of the construction industry and an introduction to building systems and materials.

Areas that might be challenging for students:

The involvement of math and measurements comes into play in Construction Core. Students must become comfortable in these transitions.

Suggestions on how students can prepare for the upcoming course:

Building small projects in the summer in which students are required to measure, cut and design items such as boxes, birdhouses, etc.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Digital Photography _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

An introduction to digital photography using digital cameras and basic image editing software. This course includes print production for making black-and-white and color photographs and studio techniques that include portrait lighting and still life photography. No prior photography experience is required. Students use digital photography for the production of a photographic portfolio.

Areas that might be challenging for students:

Learning the process of quality set up, action shots, and delayed movement.

Suggestions on how students can prepare for the upcoming course:

Continue taking photos on different settings and finding the differences between each.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ HVAC Core I and II _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Introduces students to basic skills and knowledge related to residential and commercial heating, ventilation, air conditioning, and refrigeration. Topics covered include electricity, thermodynamics, psychometrics, diagnostic, forced air furnaces, air distribution systems, and heating/cooling load analysis; course gives students a substantial skill and knowledge foundation typically required for apprentice HVAC/R technicians; provides school-based and work-based learning opportunities for students; and prepares students for entry level employment, advanced training in HVAC/R and entry into post-secondary education.

Areas that might be challenging for students:

Students will be required to understand the make up of HVAC units and what makes them work. They will also garner an understanding of simple troubleshooting items.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with HVAC units and what makes them work and what typical problems may look like.

Suggested Activities or Resources (if applicable):