

**LAMAR INSTITUTE
OF TECHNOLOGY**

Dual Credit Pathways

MEMBER THE TEXAS  STATE UNIVERSITY SYSTEM™

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LIT.edu



LAMAR INSTITUTE OF TECHNOLOGY

Accountability

LIT can help your district attain CCMR indicators by assisting districts with students meeting TSI criteria, completing CTE (9 hours) and/or ELA/Math courses (3 hours), attaining industry certification training, and earning an associate's degree while in high school.

In this guide, you will find 27 suggested pathways that span 12 different career clusters and 20 programs of study. These are suggested pathways and may be modified to meet the specific needs of your district. The crosswalks created within this guide are aligned with TEA's Programs of Study to give your district options for achieving CCMR indicators, as well as provide your students with an array of CTE options for beginning their post-secondary studies while still in high school. Many of these pathways even provide students the opportunity to complete a post-secondary credential before graduating from high school!

Flexibility

In this guide, you will see that courses can be offered in a variety of ways- at your campus, at LIT's campus, and many courses are offered online. In fact, we have several pathways that are offered completely online. Additionally, many of your teachers might currently meet the credentialing requirements to teach many of the courses offered at LIT. If you would like to utilize your current faculty to teach some of the courses in these pathways, we can evaluate credentials and discuss options with you.

If you are interested in adding any LIT Dual Credit pathways to your course offerings, please contact us and we will work with you to create pathways that are tailored to your district's needs.

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Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

Architectural Design Statewide Program of Study



The Architectural Design program of study explores the occupations and educational opportunities associated with developing, engineering, and designing building structures and facilities. This program of study may also include exploration into collecting and interpreting geographic information, researching and preparing maps, and interior design.

Secondary Courses for High School Credit

Level 1

- Principles of Architecture

Level 2

- Architectural Design I
- Interior Design I
- Computer Aided Drafting for Architecture

Level 3

- Architectural Design II
- Interior Design II
- Civil Engineering and Architecture (PLTW)

Level 4

- Practicum in Architectural Design
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Architecture
- Interior Design
- Civil Engineering, General
- Geographic Information Science and Cartography

Bachelor's Degrees

- Architecture
- Interior Design
- Civil Engineering, General
- Geographic Information Science and Cartography

Master's, Doctoral, and Professional Degrees

- Architecture
- Interior Architecture
- Civil Engineering, General
- Geographic Information Science and Cartography

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> Shadow an architect, interior designer or civil engineer Participate in SkillsUSA 	<ul style="list-style-type: none"> Intern at an architectural firm

Industry-Based Certifications

- Autodesk Associate (Certified User) 3ds MAX
- Autodesk Associate (Certified User) AutoCAD
- Autodesk Associate (Certified User) Fusion 360
- Autodesk Associate (Certified User) Revit Architecture
- Autodesk Associate (Certified User) Revit for Electrical
- Autodesk Associate (Certified User) Revit for Structural Design Autodesk Certified Professional Fusion 360
- Autodesk Certified Professional in AutoCAD for Design and Drafting
- Autodesk Certified Professional in Civil 3D for Infrastructure Design
- Autodesk Certified Professional in Revit for Architectural Design
- Autodesk Certified Professional in Revit for Electrical Design
- Autodesk Certified Professional in Revit for Structural Design
- LEED Green Associate

- Certified SOLIDWORKS Associate*
- Mastercam Associate Certification*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Architects	\$77,043	808	16%
Geographic Information Analysts and Surveyors	\$58,926	162	27%
Architectural/ Civil Drafters	\$50,170	1,068	9%
Construction Managers	\$87,402	2,401	14%

Successful completion of the Architectural Design program of study will fulfill requirements of the Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Suggested Drafting Crosswalk

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
Elective		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra 2		1		
Physics		1		
PE		1		
Arch. Design I	13004600	1	DFTG 1305 (F)	3
CAD for Architecture	N1300429	1	DFTG 1317 (F)	3
			DFTG 1309 (S)	3
TOTAL CREDITS		7		9

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
Elective		1		
4th Science		1		
Arch. Design II	13004700	2	DFTG 2319 (F)	3
			DFTG 2300 (S)	3
TOTAL CREDITS		7		6

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	15
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LIT Course	LIT Course Name
DFTG 1305	Technical Drafting
DFTG 1317	Architectural Drafting- Residential
DFTG 1309	Basic Computer Aided Drafting
DFTG 2319	Intermediate CAD Drafting
DFTG 2300	Intermediate Architectural Drafting

Endorsement: Business and Industry
Program of Study: Architectural Design
Cluster: Architecture and Construction

Program Information

Students completing this course of study will have completed 15 out of 60 hours of their AAS in Computer Drafting Technology at LIT. Arch. Design I and CAD for Architecture MUST be scheduled together as a block to accommodate lab requirements. All courses are taught in person. In some cases, ISD CTE instructors that are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. These courses will also prepare students to test for Autodesk Certified professional or User in AutoCAD.

Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

Electrical Statewide Program of Study



The Electrical program of study explores the occupations and educational opportunities associated with installing, maintaining, and repairing electrical wiring, equipment, and fixtures. This program of study may also include exploration into installing and repairing telecommunications cable including fiber optics.

Secondary Courses for High School Credit

Level 1

- Principles of Construction

Level 2

- Electrical Technology I

Level 3

- Electrical Technology II

Level 4

- Practicum in Construction Technology
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Electrician
- Communications Systems Installation and Repair Technology

Bachelor's Degrees

- Construction Science

Master's, Doctoral, and Professional Degrees

- Construction Management

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> Shadow an electrician or fiber optics line installer Participate in SkillsUSA 	<ul style="list-style-type: none"> Intern or shadow an electrician

Industry-Based Certifications

- C-200 Certified Industry 4.0 Automation Systems Specialist I - 201 Electrical Systems 1
- HBI Pre-Apprenticeship Certificate Training (PACT), Basic Electrical
- HBI Pre-Apprenticeship Certificate Training (PACT), Core
- NCCER Commercial Electrician
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Electrical Level I
- NCCER Electrical Level II
- NCCER Electronic System Technician Level I
- NCCER Electronic System Technician Level II

- Certified Electronics Systems Associate *
- Electrical Apprenticeship Certificate Level 1*
- ISCET Certified Electronics Technicians *
- OSHA 30 Hour Construction*
- OSHA 30 Hour General*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Electrical Linemen	\$54,184	1,314	28%
Electricians	\$44,013	8,460	21%
Electrical and Electronics Installers	\$37,544	245	19%
Security and Fire Alarm Installers	\$43,638	1,112	22%
Telecommunication Line Installers and Repairers	\$49,150	1,228	10%

Successful completion of the Electrical program of study will fulfill requirements of the Business and Industry endorsement and STEM endorsement if the math and science requirements are met. Revised – August 2022

Electrical Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Elective		0.5		
TOTAL CREDITS		7		1

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Elective		1		
Elective		0.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
PE		1		
Principles of Constr.	13004220	1	ELPT 1411 (F)	4
Electrical Tech. I	13005600	1	ELPT 1321 (S)	3
TOTAL CREDITS		7		7

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
Elective		1		
4th Science		1		
Electrical Technology II	13005700	2	ELPT 1325 (F)	3
			ELPT 1315 (F)	3
			ELPT 1329 (S)	3
			ELPT 2225 (S)	2
TOTAL CREDITS		7		11

LIT Course	LIT Course Name
ELPT 1411	Basic Electrical Theory
ELPT 1321	Intro to Electrical Safety and Tools
ELPT 1325	National Electrical Code-1
ELPT 1315	Electrical Calculations-1
ELPT 1329	Residential Wiring
ELPT 2225	National Electrical Code- 2
EDUC 1100	Learning Framework

EDUC 1100 is not required for the Electrical Level 1 Certificate. However, this is a transferrable credit that is recommended before beginning LIT's degree programs. This is a college readiness course that will prepare students for college coursework.

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	19
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Endorsement: Business and Industry
Program of Study: Electrical
Cluster: Architecture and Construction

Program Information

*Courses in the junior year must be scheduled together to permit adequate time for lab courses. Students completing this course of study will graduate from LIT with their Electrical Level 1 Certificate. This is a stackable credential that can be applied to the AAS in Electrical Technology.

Pre-Lineman Program Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Elective		0.5		
TOTAL CREDITS		7		1

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Elective		1		
Elective		0.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
PE		1		
Principles of Constr.	13004220	1	ELPT 1411 (F)	4
Electrical Tech. I	13005600	1	ELPT 1321 (S)	3
TOTAL CREDITS		7		7

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
Elective		1		
4th Science		1		
Electrical Tech. II	13005700	2	LNWK 1301 (F)	3
			CVOP 1201 (S)	2
TOTAL CREDITS		7		5

LIT Course	LIT Course Name
ELPT 1411	Basic Electrical Theory
ELPT 1321	Intro to Electrical Safety and Tools
LNWK 1301	Orientation and Line skill Fundamentals
CVOP 1201	Commercial License Driving Skills
EDUC 1100	Learning Framework

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	13
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EDUC 1100 is not required for the pre-lineman program. However, this is a transferrable credit that is recommended before beginning LIT's degree programs. This is a college readiness course that will prepare students for college coursework.

Endorsement: Business and Industry
Program of Study: Electrical
Cluster: Architecture and Construction

Program Information

*Courses in the junior year must be scheduled together to permit adequate time for lab courses. Students completing the pre-lineman program will have the opportunity to complete their program over the summer and subsequent fall following high school graduation at LIT.

Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

HVAC and Sheet Metal Statewide Program of Study



The HVAC and Sheet Metal program of study explores the occupations and educational opportunities associated with installing, serving, or repairing heating and air conditioning systems and also the fabrication, assembly, installation, and repair of sheet metal products and equipment, such as ducts, control boxes, drainpipes, and furnace casings. This program of study may also include exploration into preparing cost estimates for certain construction projects involving heating and air conditioning and sheet metal.

Secondary Courses for High School Credit

Level 1

- Principles of Construction

Level 2

- Heating, Ventilation Air Conditioning (HVAC) and Refrigeration Technology I

Level 3

- Heating, Ventilation Air Conditioning (HVAC) and Refrigeration Technology II
- Sheet Metal

Level 4

- Practicum in Construction Technology
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Business Administration and Management, General
- Mechanical Engineering
- Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/ Technician
- Business/ Commerce, General

Bachelor's Degrees

- Business Administration and Management
- Mechanical Engineering
- Construction Engineering Technology/ Technician
- Business/ Commerce, General

Master's, Doctoral, and Professional Degrees

- Business Administration and Management
- Mechanical Engineering
- Construction Engineering
- Business/Commerce, General

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> Shadow an HVAC worker or cost estimator Participate in SkillsUSA 	<ul style="list-style-type: none"> Intern with an HVAC and/or sheet metal company

Industry-Based Certifications

- HBI Pre-Apprenticeship Certificate Training (PACT), Core
- HBI Pre-Apprenticeship Certificate Training (PACT), Heating, Ventilation and Air Conditioning
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Heating, Ventilation, Air Conditioning Level I
- NCCER Sheet Metal Level I
- Refrigerant Handling (EPA 608)

- OSHA 30 Hour Construction*
- OSHA 30 Hour General*

*IBC sunsetting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Heating, Air Conditioning, and Refrigeration Mechanics	\$41,808	3,356	26%
Sheet Metal Workers	\$37,419	1,479	17%
Cost Estimators	\$63,939	2,239	21%

Suggested Crosswalk for HVAC Level 1 Certificate

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
Elective		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
PE		1		
Principles of Constr.	13004220	1	HART 1403 (F)	4
HVAC Tech. I	13005800	1	HART 1401 (S)	4
TOTAL CREDITS		7		8

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
Elective		1		
4th Science		1		
HVAC Tech II	13005900	2	HART 1407 (F) HART 2438 (S)	4 4
TOTAL CREDITS		7		8

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	16
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LIT Course	LIT Course Name
HART 1401	Basic Electricity for HVAC
HART 1403	Air Conditioning Control Principles
HART 1407	Refrigeration Principles
HART 2438	Air Conditioning Installation & Startup

Endorsement: Business and Industry
Program of Study: HVAC and Sheet Metal
Cluster: Architecture and Construction

Program Information

*Courses in the junior year must be scheduled together to permit adequate time for lab courses. Students completing this course of study will receive their Level 1 HVAC Certificate from LIT. This award be applied to the AAS of HVAC.

Arts, Audio/Video Technology, and Communications Career Cluster

The Arts, A/V Technology and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

Graphic Design & Multimedia Arts Statewide Program of Study



The Graphic Design and Multimedia Arts program of study explores the occupations and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. This program of study may also include exploration into designing clothing and accessories, and creating special effects, animation, or other visual images using film, video, computers, or other electronic tools and media, for use in computer games, movies, music videos, and commercials.

Secondary Courses for High School Credit

Level 1

- Principles of Arts, A/V Technology, and Communications
- Video Game Design
- Digital Media

Level 2

- Graphic Design and Illustration I/Lab
- Animation I/Lab
- Video Game Programming
- Commercial Photography I/Lab
- Fashion Design I/Lab
- Digital Design and Media Productions
- Game Programming and Design

Level 3

- Graphic Design and Illustration II/Lab
- Animation II/Lab
- Advanced Video Game Programming
- Commercial Photography II/Lab
- Fashion Design II/Lab
- Digital Arts and Animation
- 3-D Modeling and Animation
- Web Game Development

Level 4

- Practicum in Graphic Design and Illustration
- Practicum in Animation
- Practicum in Commercial Photography
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Game and Interactive Media Design

Bachelor's Degrees

- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Game and Interactive Media Design

Master's, Doctoral, and Professional Degrees

- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Intermedia/Multimedia

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> • Join a website development or coding club • Participate in SkillsUSA or TSA 	<ul style="list-style-type: none"> • Intern with a multimedia or animation studio • Obtain a certificate or certification in graphic design

Industry-Based Certifications

- Adobe Certified Professional in Digital Video Using Adobe Premiere Pro
- Adobe Certified Professional in Graphic Design and Illustration Using Adobe Illustrator
- Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign
- Adobe Certified Professional in Visual Design
- Adobe Certified Professional in Visual Design Using Adobe Photoshop
- Adobe Certified Professional In Visual Effects and Motion Graphics Using Adobe After Effects
- Audio-Visual Communications - Job Ready
- Autodesk Associate (Certified User) 3ds MAX
- Certified Professional Photographer
- Graphic Production Technology - Job Ready

- Adobe Certified Professional Animate*

*IBC Sunsetting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Graphic Designers	\$44,824	1,433	15%
Multimedia Artists and Animators	\$67,392	186	21%

Suggested Game Design Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
Video Game Design	13012100	1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Prin. of Information Technology	13027200	1	ITSC 1301 (F)	3
			ITSC 1305 (S)	3
Elective		0.5		
TOTAL Credits		7		6

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Video Game Programming	N1300994	1	ITSE 1302 (F)	3
			ITSE 2321 (S)	3
P.E. Credit		1		
Elective		1		
TOTAL CREDITS		7		6

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Game Program. & Design	03580380	1	GAME 1303 (F)	3
			GAME 1304 (S)	3
Adv Video Game Programming	N1300995	1	ITSE 1350 (F)	3
			ITSY 1300 (S)	3
Elective		1		
TOTAL CREDITS		7		12

LIT Course	LIT Course Name
ITSC 1301	Intro to Computers
ITSC 1305	Intro to PC Operating Systems
ITSE 1302	Computer Programming
ITSE 2321	Object-Oriented Programming
ITSE 1350	System Analysis & Design
ITSY 1300	Fundamentals of Information Security
GAME 1303	Intro to Game Design
GAME 1304	Level Design

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	24
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Endorsement: Business and Industry
Program of Study: Graphic Design and Multimedia Arts
Cluster: Arts, A/V Technology and Communications

Program Information

Students completing this course of study will graduate from LIT with their Game Design Level 1 Certificate. In most cases, ISD CTE Instructors who are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses.

Suggested Graphic Design Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Graphic Design and Illustration I	13008810	2	ARTC 1310 (F)	3
			ARTC 1313 (F)	3
			ARTC 1317 (S)	3
			ARTC 2313 (S)	3
Elective		1		
TOTAL CREDITS		7		12

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Graphic Design and Illustration II	13008910	2	ARTC 1302 (F)	3
			ARTC 2347 (F)	3
			ARTC 2305 (S)	3
			ARTC 2335 (S)	3
Elective		1		
TOTAL CREDITS		7		12

LIT Course	LIT Course Name
ARTC 1310	Design Concepts
ARTC 1313	Digital Publishing I
ARTC 1317	Design Communication I
ARTC 2313	Digital Publishing II
ARTC 1302	Digital Imaging I
ARTC 2347	Design Communication II
ARTC 2305	Digital Imaging II
ARTC 2335	Portfolio Dev. For Graphic Design

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	24
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Endorsement: Business and Industry
Program of Study: Graphic Design and Multimedia Arts
Cluster: Arts, A/V Technology and Communications

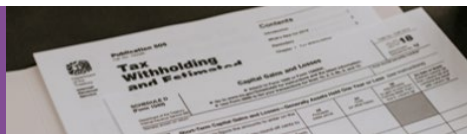
Program Information

Students completing this course of study will graduate from LIT with their Graphic Design Level 1 Certificate. In most cases, ISD CTE Instructors who are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. This award can be applied to the Associate of Graphic Design at LIT for those who wish to continue on this path. In most cases, ISD CTE instructors who are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. These courses will also prepare students to test for the following industry certifications: Adobe Photoshop ACA, Illustrator ACA

Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Accounting and Financial Services Statewide Program of Study



The Accounting and Financial Services program of study teaches CTE learners how to examine, analyze, and interpret financial records. Through this program of study, students will learn the skills necessary to perform financial services, prepare financial statements, interpret accounting records, give advice, or audit and evaluate statements prepared by others. This program of study will also introduce students to mathematical modeling tools.

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance
- Money Matters
- Business Information Management I/Lab

Level 2

- Accounting I
- Banking and Financial Services
- Financial Mathematics

Level 3

- Accounting II
- Financial Analysis
- Insurance Operations

Level 4

- Securities and Investments
- Practicum in Business Management
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Real Estate
- Financial, General
- Financial Planning and Services
- Certified Income Specialist

Bachelor's Degrees

- Accounting
- Financial, General
- Financial Planning and Services
- Certified Income Specialist

Master's, Doctoral, and Professional Degrees

- Financial Accounting
- Business Administration
- Financial Planning

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
------------------------	--------------------------------

- | | |
|---|---|
| <ul style="list-style-type: none"> • Participate in Business Professionals of America, Future Business Leaders of America, or DECA | <ul style="list-style-type: none"> • Intern with a local accounting firm • Earn Microsoft Office certifications |
|---|---|

Industry-Based Certifications

- Accounting - Basic
- Accounting Foundations
- Intuit QuickBooks Certified User
- MB-920: Microsoft Dynamics 365 Fundamentals Finance and Operations Apps
- Microsoft Office Specialist: Microsoft Access Expert (Access and Access 2019) Microsoft Office Specialist: Microsoft Excel Expert (Excel and Excel 2019)
- Volunteer Income Tax Assistance/Tax Counseling Certification: Advanced
- Volunteer Income Tax Assistance/Tax Counseling Certification: Basic
- Volunteer Income Tax Assistance/Tax Counseling Certification: Volunteer for Elderly

- Microsoft Office Specialist-Excel*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Accountants and Auditors	\$71,469	14,436	22%
Loan Officers	\$68,598	2,419	19%
Personal Financial Advisors	\$86,965	1,861	52%
Administrative service Managers	\$96,138	2,277	21%
Insurance Underwriters	\$66,206	594	14%

Suggested Accounting Technology Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Elective		0.5		
TOTAL CREDITS		7		1

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Principles of Business	13011200	1	BUSI 1301 (F)	3
Elective		0.5		
TOTAL Credits		7		3

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III	03220300	1	ENGL 1301 (F)	3
World History		1		
Algebra II		1		
Physics		1		
Bus. Info. Mgmt	13011400	1	ITSW 1304 (F)	3
			ITSW 1307 (S)	3
Accounting I	13016600	1	ACNT 1303 (F)	3
			ACNT 1311 (S)	3
PE Credit		1		
TOTAL CREDITS		7		15

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics	03310300	0.5	ECON 2301 (F)	3
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Elective		1		
Accounting II	13016700	1	ACNT 1331 (F)	3
			ACNT 1329 (S)	3
Elective		1		
TOTAL CREDITS		7		9

LIT Course	LIT Course Name
BUSI 1301 *	Business Principles
ITSW 1304 *	Introduction to Spreadsheets
ITSW 1307 *	Introduction to Databases
ACNT 1303 *	Introduction to Accounting I
ACNT 1311 *	Introduction to Computerized Accounting
ACNT 1331 *	Federal Income Tax
ACNT 1329 *	Payroll and Business Tax
ENGL 1301 **^	Composition I (TSI Reading/Writing)
EDUC 1100 **^	Learning Framework

* Denotes that course is offered online

^ Denotes that course is Open Source- No Textbook Cost

EDUC 1100 is not required for the Accounting Technology Level 1 Certificate. However, this is a transferrable credit that is recommended before beginning LIT's online degree programs. This is a college readiness course that will prepare students for online learning.

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	28
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Endorsement: Business and Industry
Program of Study: Accounting and Financial Services
Cluster: Business, Marketing & Finance

Program Information

Students completing this course of study will graduate from LIT with their Accounting Technology Level 1 Certificate, which can be applied to an AAS in Accounting Technology. The highlighted course has TSI requirements and is required for this degree. These courses will also prepare students to test for the following industry certifications: QuickBooks Certified User and Microsoft Office Specialist or Expert- Excel. **This entire program is offered online.**

Suggested Associate of Arts in Business Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Elective		0.5		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Art I	03500100	1	ARTS 1301 (F)	3
TOTAL CREDITS		7		4

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History	03340100	0.5	HIST 1301 (F)	3
		0.5	HIST 1302 (S)	3
Geometry		1		
Biology		1		
Foreign Language II		1		
Comm. Applications	03241400	0.5	SPCH 1318 (F)	3
Public Speaking	03240900	0.5	SPCH 1315 (S)	3
Principles of Bus.	13011200	1	BUSI 1301 (S)	3
TOTAL Credits		7		15

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III	03220300	0.5	ENGL 1301 (F)	3
		0.5		
World History		1		
Algebra II	03100600	1	MATH 1314 (F)	3
Physics		1		
BIM	13011400	1	BCIS 1305 (S)	3
Accounting 1	13016600	1	ACCT 2301 (S)	3
PE		1		
TOTAL CREDITS		7		12

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV	03220400	0.5	ENGL 2321 (F)	3
		0.5		
Economics	03310300	0.5	ECON 2301 (F)	3
US Government	03330100	0.5	GOVT 2305 (F)	3
Pre-Cal/ 4th Math		1	MATH 1325 (S)	3
Anatomy & Physiology	13020600	1	BIOL 2301/2101 (F)	4
			BIOL 2302/2102 (S)	4
Spec. Top. in SS 1	03380002	0.5	GOVT 2306 (S)	3
Accounting 2	13016700	1	ACCT 2302 (S)	3
Spec. Top. In SS 2	03380022	0.5	ECON 2302 (S)	3
Elective		1		
TOTAL CREDITS		7		29

Business Courses	LIT Business Course Names
BUSI 1301 *	Business Principles
BCIS 1305 *	Business Computer Applications
ACCT 2301 *	Principles of Financial Accounting
ACCT 2302 *	Principles of Managerial Accounting
MATH 1325 *	Calculus for Business
ECON 2302 *^	Principles of Microeconomics

* Denotes that the course is offered online

^ Denotes that course is Open Source- No Textbook Cost

LIT Core Courses	LIT Core Course Names
EDUC 1100 *^	Learning Framework
ARTS 1301 *^	Art Appreciation
HIST 1301/1302 *^	United States History I & II
SPCH 1315 *^	Public Speaking
SPCH 1318 *^	Interpersonal Communication
ENGL 1301 *^	Composition I
MATH 1314 *^	College Algebra
ENGL 2321 *^	British Literature
ECON 2301 *^	Principles of Macroeconomics
GOVT 2305 *^	Federal Government
GOVT 2306 *^	Texas Government
BIOL 2301/2101 *^	Anatomy and Physiology I
BIOL 2302/2102 *^	Anatomy and Physiology II

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	60
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Endorsement: Business and Industry
Program of Study: Accounting and Financial Services
Cluster: Business, Marketing and Finance

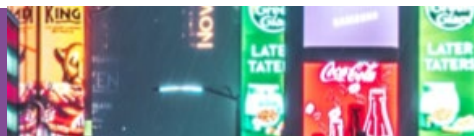
Program Information
These courses will also prepare students to test for the following industry certifications: QuickBooks certified user, Microsoft office Specialist or Expert-Excel. This entire program is offered online.

Students completing this course of study will graduate from Lamar Institute of Technology with an Associate of Arts in Business, which is designed for students who wish to take courses for academic transfer in business. This degree provides Core Curriculum that will transfer to four year institutions and coincides with the first two years of most baccalaureate business degree plans.

Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Marketing & Sales Statewide Program of Study



The Marketing and Sales program of study teaches CTE learners how to collect information to determine potential sales of a product or service and/or create a marketing campaign to market or distribute goods and services. Through this program of study, students will learn the skills necessary to understand and apply data on customer demographics, preferences, needs, and buying habits.

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance

Level 2

- Fashion Marketing
- Sports and Entertainment Marketing
- Virtual Business
- Marketing

Level 3

- Social Media Marketing
- Advertising
- Retail Management
- Sports and Entertainment Marketing II
- Statistics and Business Decision Making
- Fundamentals of Real Estate

Level 4

- Advanced Marketing
- Practicum in Marketing
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Marketing/ Marketing Management, General
- Consumer Merchandising/ Retailing Management
- International Marketing
- Business

Bachelor's Degrees

- Marketing/ Marketing Management, General
- Business Administration
- Applied Economics
- Marketing Research

Master's, Doctoral, and Professional Degrees

- Marketing
- Business Administration
- Applied Economics
- Advertising

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Business Professionals of America, Future Business Leaders of America, or DECA

Work-Based Learning Activities

- Intern with a local marketing firm
- Shadow a real estate agent
- Operate a school store on campus

Industry-Based Certifications

- Certified Insurance Service Representative
- Entrepreneurship and Small Business
- Facebook Digital Marketing Associate Certification
- Real Estate Sales Agent License
- Retail Merchandising - Job Ready
- Stukent Social Media Marketing Certification

- Google Analytics Individual Qualification*
*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Marketing Research Analysts and Marketing Specialists	\$70,346	4,664	40%
Insurance Sales Agent	\$43,181	5,886	30%
First-Line Supervisors of Retail Sales Workers	\$72,550	2,826	15%
Wholesale and Retail Buyers	\$51,106	1,229	19%

Successful completion of the Marketing and Sales program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Suggested Real Estate Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
PE Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Prin. of Business	13011200	1		
Elective		0.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Fundamentals of Real Estate	N1301120	2	RELE 1301 (F)	3
			RELE1311 (F)	3
			RELE 1338 (S)	3
			RELE 1300 (S)	3
Elective		1		
TOTAL CREDITS		7		12

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Practicum in Marketing	13034800	2	RELE 2301 (F)	3
			RELE 1319 (F)	3
			RELE 1315 (S)	3
			RELE 1303 (S)	3
Elective		1		
TOTAL CREDITS		7		12

LIT Course	LIT Course Name
RELE 1301 *	Principles of Real Estate
RELE 1311 *	Law of Contracts
RELE 2301 *	Law of Agency
RELE 1300 *	Contract Forms and Addenda
RELE 1315 *	Property Management
RELE 1319 *	Real Estate Finance
RELE 1338 *	Principles of Real Estate II
RELE 1303 *	Real Estate Appraisal

*Denotes that the course is available online.

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	24
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Endorsement: Business and Industry
Program of Study: Marketing and Sales
Cluster: Business, Marketing & Finance

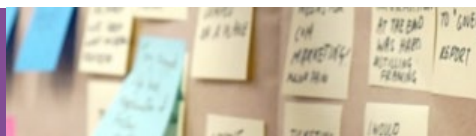
Program Information

Students completing this course of study will graduate from LIT with their Real Estate Level 1 Certificate. These courses satisfy the educational requirements for the Texas Real Estate Commission for salespersons' licenses and renewals and the requirements for the Texas Appraisal Licensing and Certification Board. **This entire program is available online. ALL courses are 8 week courses.**

Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Business Management Statewide Program of Study



The Business Management program of study teaches CTE learners how to plan, direct, and coordinate the administrative services and operations of an organization. Through this program of study, students will learn the skills necessary to formulate policies, manage daily operations, and allocate the use of materials and human resources. This program of study will also introduce students to mathematical modeling tools and organizational evaluation methods.

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance
- Business Information Management I/Lab

Level 2

- Business Law
- Virtual Business
- Business Information Management II/Lab

Level 3

- Business Management
- Global Business
- Human Resources Management

Level 4

- Statistics and Business Decision Making
- Practicum in Business Management
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Business Administration
- Business/Commerce
- Public Administration
- Business Management

Bachelor's Degrees

- Business Administration
- Business/Commerce
- Public Administration
- Management Science

Master's, Doctoral, and Professional Degrees

- Business Administration
- Business Management
- Public Administration
- Management Science

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> • Participate in Business Professional of America, Future Business Leaders of America, or DECA 	<ul style="list-style-type: none"> • Intern with a local business or chamber of commerce

Industry-Based Certifications

- Administrative Assisting
- Certified Associate in Project Management (CAPM)
- Entrepreneurship and Small Business
- MB-920: Microsoft Dynamics 365 Fundamentals Finance and Operations Apps
- Microsoft Office Specialist 2016 Master
- Microsoft Office Specialist: Microsoft Access Expert (Access and Access 2019)
- Microsoft Office Specialist: Microsoft Excel Expert (Excel and Excel 2019)
- Microsoft Office Specialist: Microsoft Word Expert (Word and Word 2019)
- Project Management Institute (PMI) Project Management Ready

- Microsoft Office Specialist-Excel*
- Microsoft Office Specialist-Word*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Administrative Service Managers	\$96,138	2,277	21%
Management Analysts	\$87,651	4,706	32%
General and Operations Managers	\$107,640	18,679	20%
Supervisors of Administrative Support Works	\$57,616	14,982	20%

Successful completion of the Business Management program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Management Development Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Elective		0.5		
TOTAL CREDITS		7		1

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Principles of Business	13011200	1	BUSI 1301 (F)	3
			MRKG 1311 (S)	3
Elective		0.5		
TOTAL Credits		7		6

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III	03220300	1	ENGL 1301 (F)	3
World History		1		
Algebra II		1		
Physics		1		
Business Management	130121100	1	BMGT 1341 (F)	3
			BUSI 2301 (S)	3
Accounting I	13016600	1	ACCT 2301 (F)	3
P.E. Credit		1		
TOTAL CREDITS		7		12

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics	03310300	0.5	ECON 2301 (F)	3
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Hum. Res. Mgmt.	13011900	0.5	HRPO 2301 (F)	3
Business Mgmt.	13012100	1	BMGT 1327 (F)	3
			BUSG 2309 (S)	3
Elective		1		
Elective		0.5		
TOTAL CREDITS		7		12

LIT Course	LIT Course Name
BUSI 1301 *	Business Principles
MRKG 1311 *	Principles of Marketing
ACCT 2301 *	Principles of Financial Accounting
BUSI 2301 *	Business Law
BMGT 1341 *	Business Ethics
HRPO 2301 *	Human Resource Management
BMGT 1327 *	Principles of Management
BUSG 2309 *	Small Business Management
ENGL 1301 **	Composition I (TSI Reading/Writing)
ECON 2301 **	Macroeconomics (TSI Reading/Writing)
EDUC 1100 **	Learning Framework

* Denotes that course is offered online.

** Denotes that course is Open Source- No Textbook Cost

EDUC 1100 is not required for the Management Development Level 1 Certificate. However, this is a transferrable credit that is recommended before beginning LIT's online degree programs. This is a college readiness course that will prepare students for online learning.

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	31
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Endorsement: Business and Industry
Program of Study: Accounting and Financial Services
Cluster: Business, Marketing & Finance

Program Information

Students completing this course of study will graduate from LIT with their Management Development Level 1 Certificate, which can be applied to an AAS in Management Development. The two highlighted courses have TSI requirements and are required for this degree. These courses will also prepare students to test for the following industry certifications: Microsoft Office Specialist or Expert- Excel. **This entire program is offered online.**

Education and Training Career Cluster

The Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster.

Early Learning Statewide Program of Study



The Early Learning program of study focuses on early childhood education, which consists of instructing and supporting preschool and early elementary school students in activities that promote social, physical and intellectual growth as well as in basic elements of science, art, music, and literature. This program of study introduces CTE learners to tasks necessary for planning, directing, and coordinating activities for young children.

Secondary Courses for High School Credit

Level 1

- Principles of Education and Training
- Principles of Human Services

Level 2

- Child Development
- Child Development Associate Foundations

Level 3

- Child Guidance

Level 4

- Practicum in Early Learning
- Project Based Research
- Career Preparation I

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in the Texas Association of Future Educators or Family, Career, and Community Leaders of America

Work-Based Learning Activities

- Teach a community education class
- Volunteer as a teaching assistant

Industry-Based Certifications

- Child Development Associate (CDA)
- Early Childhood Education and Care – Advanced
- Early Childhood Education and Care – Basic
- Pre-Professional Certification in Early Childhood Education

Postsecondary Opportunities

Associates Degrees

- Early Childhood Education and Teaching
- Multicultural Early Childhood Development
- Kindergarten/Preschool Education and Training
- Psychology/Sociology

Bachelor's Degrees

- Early Childhood Education and Teaching
- Multicultural Early Childhood Development
- Early Childhood
- Psychology/Sociology

Master's, Doctoral, and Professional Degrees

- Early Childhood Education and Teaching
- Multicultural Early Childhood Development
- Educational, Instructional, and Curriculum Supervision
- Educational Leadership and Administration



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Kindergarten Teachers, except Special Education	\$53,310	1,848	17%
Preschool Teachers	\$27,851	4,330	17%
Elementary School Teachers	\$54,140	13,121	16%
Education Administrators, Elementary and Secondary School	\$79,830	2407	16%

Successful completion of the Early Learning program of study will fulfill requirements of the Public Service endorsement.

Revised – August 2022

Suggested CDA Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Child Development				
Elective		0.5		
TOTAL Credits		6		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Elective		1		
Child Guidance	13024800	2	CDEC 1417 (F)	4
			CDEC 2422 (S)	4
TOTAL CREDITS		7		8

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Practicum in Early Learning	TBD	1	CDEC 1319 (F)	3
		2	CDEC 2424 (F)	4
			CDEC 1164 (S)	1
TOTAL CREDITS		7		8

ISD Total Credits	27	LIT TOTAL Semester Credit Hours	16
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LIT Course	LIT Course Name
CDEC 1417	CDA I
CDEC 2422	CDA II
CDEC 2424	CDA III
CDEC 1164	Practicum/Field Experience in Child Development (7 hrs./wk.)
CDEC 1319	Child Guidance

Endorsement: Public Service
Program of Study: Early Learning
Cluster: Education and Training

Program Information

Students completing this course of study will graduate from LIT with their Level 1 CDA Certificate. These courses may be used as academic instruction in working toward National Child Development Association (CDA) requirements. This crosswalk is designed to allow time for practical application of skills in the classroom setting. In most cases, ISD teachers can be credentialed as LIT adjuncts to teach these courses. *CDEC 1319 could be offered in 10th grade or in 12th (with practicum). This will depend on how your district chooses to design the pathway.

Education and Training Career Cluster

The Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster.

Teaching and Training Statewide Program of Study



The Teaching and Training program of study prepares CTE learners for careers related to teaching, instruction, and creation of instructional and enrichment materials. The program of study introduces CTE learners to a wide variety of student groups and their corresponding needs. It familiarizes them with the processes for developing curriculum, coordinating educational content, and coaching groups and individuals.

Secondary Courses for High School Credit

Level 1

- Principles of Education and Training
- Principles of Human Service

Level 2

- Human Growth and Development
- Child Development
- Communication and Technology in Education

Level 3

- Instructional Practices
- Teaching Strategies for Special Populations (TBD)

Level 4

- Practicum in Education and Training
- Project Based Research
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Teacher Education
- Education, General (or specific subject area)
- Special Education
- Health and Physical Education/Fitness

Bachelor's Degrees

- Bilingual and Multilingual Education
- Education, General (or specific subject area)
- Special Education
- Health and Physical Education/Fitness

Master's, Doctoral, and Professional Degrees

- Instruction and Learning
- Educational Leadership and Administration, General
- Special Education
- Social and Philosophical Foundations of Education

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in the Texas Association of Future Educators or Family, Career, and Community Leaders of America

Work-Based Learning Activities

- Teach a community education class
- Intern as a teaching assistant or tutor
- Serve as a camp counselor

Industry-Based Certifications

- Educational Aide I



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Adult Basic and Secondary Education and Literacy Teachers and Instructors	\$48,069	862	17%
Middle School Teachers, Except Special and Career/Technical Education	\$54,510	6,407	15%
Career and Technical Education Teachers, Secondary School	\$56,360	719	9%
Special Education Teachers, Secondary School	\$56,720	980	18%

Successful completion of the Teaching and Training program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Suggested Associate of Arts in Teaching Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Elective		0.5		
Art I	03500100	1	ARTS 1301 (F)	3
Public Speaking	03240900	0.5	SPCH 1315 (S)	3
TOTAL CREDITS		7		6

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History	03340100	0.5	HIST 1301 (F)	3
		0.5	HIST 1302 (S)	3
Geometry		1		
Biology		1		
Foreign Language II		1		
Prin. of Education and Training	13024200	1	EDUC 1100 (F)	1
Psychology	03350100	0.5	PSYC 2301 (S)	3
Elective		0.5		
TOTAL Credits		7		10

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III	03220300	0.5	ENGL 1301 (F)	3
		0.5	ENGL 1302 (S)	3
World History		1		
Algebra II	03100600	1	MATH 1314 (F)	3
Physics	03050000	1	PHYS 1305 (S)	3
Instructional Practices	13024200	2	EDUC 1301 (F)	3
			EDUC 2301 (S)	3
PE		1		
TOTAL CREDITS		7		18

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV	03220400	0.5	ENGL 2321 (F)	3
		0.5		
US Government	03330100	0.5	GOVT 2305 (F)	3
Spec. Top. in SS 1	03380002	0.5	GOVT 2306 (S)	3
Pre-Cal/ 4th Math		1	MATH 1350 (F)	3
			MATH 1351 (S)	3
Anatomy & Physiology	13020600	1	BIOL 2301/2101 (F)	4
			BIOL 2302/2102 (S)	4
Economics		0.5		
Practicum in Education and Training	13014500	2		
Lifetime Nutrition and Wellness	13024500	0.5	BIOL 1322 (S)	3
TOTAL CREDITS		7		26

LIT Core Courses	LIT Core Course Names
EDUC 1100 *^	Learning Framework
ARTS 1301 *^	Art Appreciation
HIST 1301/1302 *^	United States History I & II
SPCH 1315 *^	Public Speaking
PSYC 2301 *^	General Psychology
ENGL 1301/1302 *^	Composition I & II
MATH 1314 *^	College Algebra
ENGL 2321 *^	British Literature
GOVT 2305 *^	Federal Government
GOVT 2306 *^	Texas Government
BIOL 2301/2101 *^	Anatomy and Physiology I
BIOL 2302/2102 *^	Anatomy and Physiology II

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	60
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EDUC 1100 is not required for the Associates of Arts in Teaching. However, this is a transferrable credit that is recommended before beginning LIT's online degree programs. This is a college readiness course that will prepare students for online learning.

Courses	LIT Courses to Complete Teaching AS
EDUC 1301 *	Introduction to Education
EDUC 2301 *^	Special Populations
BIOL 1322 *^	Nutrition & Diet Therapy
PHYS 1305 *^	Elementary Physics I
MATH 1350 *^	Math for Teachers
MATH 1351 *	Math for Teachers

Endorsement: Public Service
Program of Study: Early Learning
Cluster: Education and Training

* Denotes courses that are offered online.

^ Denotes that course is Open Source- No Textbook Cost

Program Information

Students completing this course of study will graduate from Lamar Institute of Technology with an Associate of Arts in Teaching, which is designed for students who wish to take courses for academic transfer in education. This degree provides Core Curriculum that will transfer to four year institutions and coincides with the first two years of most baccalaureate education degree plans. **This entire plan is offered online.**

Energy Career Cluster

The Energy Career Cluster prepares individuals for careers in the designing, planning, maintaining, generating, transmission, and distribution of traditional and alternative energy.

Refining and Chemical Processes Statewide Program of Study



The Refining and Chemical Processes program of study helps CTE learners discover how to monitor, adjust, and control different equipment housed in petrochemical plants and refineries. It introduces students to the computer technology and instrumentation used to operate a variety of equipment systems and industrial processes, helping students build the skills needed to operate these systems.

Secondary Courses for High School Credit

Level 1

- Foundations of Energy

Level 2

- Introduction to Process Technology
- Introduction to Instrumentation and Electrical

Level 3

- Petrochemical Safety, Health, and Environment
- Advanced Instrument and Electrical

Level 4

- Project-Based Research
- Applied Mathematics for Technical Professionals
- Practicum in Energy

Postsecondary Opportunities

Associates Degrees

- Process Technology
- Process Operating Technology
- Logistics, Material, and Supply Chain Management
- Petroleum Technology/ Technician

Bachelor's Degrees

- Business Administration and Management, General
- Business/Commerce, General
- Industrial Engineering
- Petroleum Engineering

Master's, Doctoral, and Professional Degrees

- Business Administration and Management, General
- Business/Commerce, General
- Industrial Engineering
- Petroleum Engineering

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Tour a power plant or refinery

Work-Based Learning Activities

- Attend student summer conferences

Industry-Based Certifications

- NCCER Instrumentation Level I
- ISA Certified Control Systems Technician*
- OSHA 30 Hour General*

*IBC Sunsetting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Gas Plant Operators	\$62,650	312	9%
Petroleum Pump System Operators, Refinery Operators, and Gaugers	\$71,488	1,181	9%
Power Plant Operators	\$71,635	309	9%

Successful completion of the Refining and Chemical Processes program of study will fulfill requirements of the Business and Industry endorsement or STEM endorsement if the math and science requirements are met.. Revised – August 2022

Suggested Crosswalk for Process Technology Level 1 Certificate

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
Elective		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
PE		1		
Introduction to Process Technology	N1300262	1	PTAC 1302 (F)	3
			PTAC 2314 (F)	3
Petro, Safety Health & Envir	N1300264	1	PTAC 1408 (S)	4
TOTAL CREDITS		7		10

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
Elective		1		
4th Science		1		
Practicum in Energy		2	PTAC 1410 (F)	4
			PTAC 1332 (S)	3
TOTAL CREDITS		7		7

LIT Course	LIT Course Name
PTAC 1302 *	Intro to Process Technology
PTAC 1408 *	Safety Health and Equipment
PTAC 2314 *	Quality
PTAC 1410	Process Technology I- Equipment
PTAC 1332	Instrumentation

* Denotes that the course is offered online.

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	17
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Endorsement: Business and Industry
Program of Study: Refining and Chemical Processes
Cluster: Energy

Program Information

Students completing this course of study will graduate from LIT with their Process Operating Technology Level 1 Certificate, which can be applied to an AAS in Process Operating Technology. Courses taken in year one of this program are offered online. However, courses taken during the senior year have a heavy lab component and arrangements must be made to attend LIT for lab days.

Suggested Crosswalk for Instrumentation

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
Elective		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech/Elective		1		
Electives		1.5		
TOTAL Credits		7.5		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
PE		1		
Foundations of Energy	N1300263	1	CETT 1403 (F)	4
Intro. Instrumentation & Electrical	N1303900	1	CETT 1405 (S)	4
TOTAL CREDITS		7		8

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
Elective		1		
4th Science		1		
Adv. Instrumentation & Electrical	TBD	2	CETT 1415 (F)	4
			CETT 1441 (S)	4
TOTAL CREDITS		7		8

ISD Total Credits	28.5	LIT TOTAL Semester Credit Hours	16
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LIT Course	LIT Course Name
CETT 1403	DC Circuits
CETT 1405	AC Circuits
CETT 1415	Digital Applications
CETT 1441	Solid State Circuits

Endorsement: Business and Industry
Program of Study: Refining and Chemical processes
Cluster: Energy

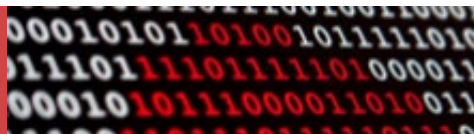
Program Information

Students completing this course of study will have four courses left to complete to obtain their Level 1 Instrumentation Certificate from LIT. This can be completed in one semester - and in some cases the summer following graduation. This award can be applied to the AAS of Instrumentation. Foundations of Energy and Intro. Instrumentation & Electrical MUST be scheduled together as a block to accommodate lab requirements. All courses are taught in person. The ISD instructor may be able to be credentialed to teach these courses.

Health Science Career Cluster

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Health Informatics Statewide Program of Study



The Health Informatics program of study focuses on exposing students to the management and use of patient information in the healthcare field. Students may learn about and research recent modifications of computerized healthcare and the process of creating and maintaining hospital and patient records in accordance with regulatory requirements of the healthcare system. Students may also practice writing and interpreting medical reports.

Secondary Courses for High School Credit

Level 1

- Principals of Health Science
- Medical Terminology
- Principles of Health Informatics

Level 2

- Business Information Management I/Lab
- Medical Intervention Evaluation and Research

Level 3

- Health Informatics
- Healthcare Administration and Management

Level 4

- Mathematics for Medical Professionals
- World Health Research
- Project-Based Research

Postsecondary Opportunities

Associates Degrees

- Health Information/Medical Records Technology/Technician

Bachelor's Degrees

- Medical and Health Service Managers

Master's, Doctoral, and Professional Degrees

- Medical and Health Service Managers

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Health Occupations Students of America

Work-Based Learning Activities

- Volunteer at a community wellness center, hospital, assisted living center, or nursing home

Industry-Based Certifications

- Certified Coding Associate
- Certified Billing and Coding Specialist (CBCS)
- Insurance and Coding Specialist
- Medical Coding and Billing Specialist
- Nationally Certified Medical Coding and Billing Specialist



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical Records and Health Information Technician	\$35,922	1,588	24%
Medical and Health Service Managers	\$93,995	2,562	29%
Billing and Posting Clerks	\$35,485	5,775	25%

Successful completion of the Health Informatics program of study will fulfill requirements of a Public Service endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Health Informatics Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Elective		0.5		
TOTAL CREDITS		7		1

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Med. Terminology	13020300	1	HITT 1305 (F)	3
			HITT 1253 (S)	2
Elective		0.5		
TOTAL Credits		7		5

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
BIM	13011400	1	BCIS 1301 (F)	3
			HITT 1211 (S)	2
Principles of Health Informatics	N1302108	1	HITT 1301 (F)	3
			HITT 1213 (S)	2
PE		1		
TOTAL CREDITS		7		10

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
*Health Informatics	13020960	1	HITT 1345 (F)	3
*Project-Based Res.	12701500	1	HITT 1266 (S)	2
Elective		1		
TOTAL CREDITS		7		5

LIT Course	LIT Course Name
HITT 1305 *	Medical Terminology I
HITT 1345 *	Health Care Delivery Systems
HITT 1301 *	Health Data Content and Structure
BCIS 1301 *	Business Computer Applications
HITT 1211 *	Computers in Health Care
HITT 1213 *	Coding and Insurance
HITT 1253 *	Legal and Ethical Aspects of Health Info.
HITT 1266 *	Practicum- Health Information Tech.
EDUC 1100 *	Learning Frameworks

*Denotes that the course is offered online

EDUC 1100 is not required for the Health Informatics Level 1 Certificate. However, this is a transferrable credit that is recommended before beginning LIT's online degree programs. This is a college readiness course that will prepare students for online learning.

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	21
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Endorsement: Public Service
Program of Study: Health Informatics
Cluster: Health Science

Program Information

*Courses in the senior year must be scheduled together to permit adequate time for spring semester practicum. Students completing this course of study will graduate from LIT with their Health Informatics Level 1 Certificate. This is a stackable credential that can be applied to the AAS in Health Information Technology.

Health Science Career Cluster

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Healthcare Therapeutic Statewide Program of Study



The Healthcare Therapeutic program of study introduces students to occupations and educational opportunities related to diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study also includes an introduction to the opportunities associated with providing treatment and counsel to patients as well as rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

Secondary Courses for High School Credit

Level 1

- Principles of Health Science
- Principles of Therapeutic Healthcare
- Introduction to Pharmacy Science
- Introduction to Dental Science

Level 2

- Medical Terminology
- Dental Anatomy and Physiology
- Pharmacy I

Level 3

- Anatomy and Physiology
- Health Science Theory/Health Science Clinical
- Medical Microbiology
- Pharmacy II
- Medical Assistant
- Dental Equipment and Procedures

Level 4

- Pathophysiology
- Pharmacology
- Practicum in Health Science

Postsecondary Opportunities

Associates Degrees

- Dental Hygienist
- Medical/Clinical Assistant

Bachelor's Degrees

- Dental Hygienist

Master's, Doctoral, and Professional Degrees

- Dentist
- Physician Assistant
- Family and General Practitioners
- Pharmacist

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in SkillsUSA or Health Occupation Students of America

Work-Based Learning Activities

- Volunteer at a community wellness center, hospital, assisted living, or nursing home

Industry-Based Certifications

- Certified Clinical Medical Assistant
- Certified Dental Assistant
- Certified EKG Technician
- Certified Nurse Aide (CNA)
- Certified Occupational Therapy Assistant
- Certified Patient Care Technician (CPCT)
- ECG Technician
- Medical Assistant
- Medical Laboratory Assistant
- Nationally Registered Certified EKG Technician
- Patient Care Technician
- Pharmacy Technician
- Phlebotomy Technician
- Registered Dental Assistant X-Ray Certification

- Certified Ophthalmic Technician*
- Certified Surgical Technologist*
- Licensed Dental Hygienist*
- Orthopedic Technologist*

*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical Assistants	\$29,598	8,862	30%
Surgical Technologists	\$45,032	1,150	20%
Dental Hygienists	\$73,507	1,353	38%
Physicians and Surgeons	\$213,071	1,151	30%

Successful completion of the Healthcare Therapeutic program of study will fulfill requirements of a Public Service endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Suggested Pharmacy Tech Crosswalk

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
PE		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Intro to Pharmacy Science	N1302103	1	PHRA 1301 (F)	3
			PHRA 1202 (S)	2
Pharmacy I	TBD	1	PHRA 1240 (F)	2
			PHRA 1209 (S)	2
Elective		1		
TOTAL CREDITS		7		9

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Elective		1		
Pharmacy II		2	PHRA 1313 (F)	3
			PHRA 1160 (S)	1
TOTAL CREDITS		7		4

LIT Course	LIT Course Name
PHRA 1301	Introduction to Pharmacy
PHRA 1202	Pharmacy Law
PHRA 1240	Pharmacy 3rd Party Payment
PHRA 1209	Pharmaceutical Mathematics I
PHRA 1313	Community Pharmacy Practice
PHRA 1160	Clinical- Pharmacy Tech/Assistant

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	13
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Endorsement: Public Service
Program of Study: Healthcare Therapeutic
Cluster: Health Science

Program Information

Students completing this course of study will have completed the first semester of the Pharmacy Technician program at LIT. * Intro to Pharm. and Pharm. I MUST be scheduled together as a block to accommodate lab requirements. All courses are taught in person and can be taken at LIT. In some cases, ISD CTE instructors who are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses.

Health Science Career Cluster

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Nursing Science Statewide Program of Study



The Nursing Science program of study introduces students to the knowledge and skills related to patient care. CTE learners may learn about or practice caring for patients, routine procedures such as monitoring vital signs, development and implementation of care plans, maintenance of medical records, and disease or pain management. Students may focus on the healthcare system and research system designs and make recommended modifications.

Secondary Courses for High School Credit

Level 1

- Principles of Health Science
- Principles of Nursing

Level 2

- Medical Terminology
- Science of Nursing

Level 3

- Medical Microbiology
- Anatomy and Physiology
- Clinical Ethics
- Leadership and Management in Nursing

Level 4

- Pathophysiology
- Pharmacology
- Practicum in Nursing (TBD) 23/24

Postsecondary Opportunities

Associates Degrees

- Registered Nursing/Registered Nurse

Bachelor's Degrees

- Informatics Nurse Specialists

Master's, Doctoral, and Professional Degrees

- Nurse Practitioner
- Nursing Administration
- Nurse Anesthetist

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Health Occupation Students of America

Work-Based Learning Activities

- Volunteer at a community wellness center, hospital, assisted living center, or nursing home

Industry-Based Certifications

- Certified Clinical Medical Assistant
- Certified Nurse Aide (CNA)
- Certified Patient Care Technician (CPCT)
- Licensed Vocational Nurse
- Medical Assistant
- Patient Care Technician
- Phlebotomy Technician
- Registered Nurse



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Licensed Vocational Nurses	\$45,178	7,186	21%
Registered Nurses	\$68,682	17,493	26%
Nurse Practitioners	\$107,827	977	50%
Nurse Anesthetists	\$154,856	357	23%

Successful completion of the Nursing Science program of study will fulfill requirements of a Public Service endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Associate of Science in Health Science (Nursing Track)

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Elective		0.5		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Art I	03500100	1	ARTS 1301 (F)	3
TOTAL CREDITS		7		4

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History	03340100	0.5	HIST 1301 (F)	3
		0.5	HIST 1302 (S)	3
Geometry		1		
Biology		1		
Foreign Language II		1		
Elective		0.5		
Public Speaking	03240900	0.5	SPCH 1315 (F)	3
Prin. of Health Sci	13020200	1	HPRS 1204 (F)	2
TOTAL Credits		7		11

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III	03220300	0.5	ENGL 1301 (F)	3
		0.5	ENGL 1302 (S)	3
World History		1		
PE		1		
Algebra II	03100600	1	MATH 1314 (F)	3
Psychology	03350100	0.5	PSYC 2314	3
Anatomy & Physiology	13020600	1	BIOL 2301/2101 (F)	4
			BIOL 2302/2102 (S)	4
Electives		1.5		
TOTAL CREDITS		7		20

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV	03220400	0.5	ENGL 2321 (F)	3
		0.5		
Economics	03310300	0.5	ECON 2301 (F)	3
US Government	03330100	0.5	GOVT 2305 (F)	3
Electives		1.5		
Statistics	03102530	1	MATH 1342 (F)	3
AP Chemistry	A3040000	1	CHEM 1306/1106 (S)	4
Spec. Top. in SS 1	03380002	0.5	GOVT 2306 (S)	3
Medical Microbiology	13020700	1	BIOL 2320/2120 (F)	4
			BIOL 1332 (S)	3
TOTAL CREDITS		7		26

LIT Core Courses	LIT Core Course Names
EDUC 1100*^	Learning Framework
ARTS 1301*^	Art Appreciation
HIST 1301/1302*^	United States History I & II
SPCH 1315*^	Public Speaking
ENGL 1301/1302*^	Composition I & II
MATH 1314*^	College Algebra
ENGL 2321*^	British Literature
ECON 2301*^	Principles of Macroeconomics
GOVT 2305*^	Federal Government
GOVT 2306*^	Texas Government
BIOL 2301/2101*^	Anatomy and Physiology I
BIOL 2302/2102*^	Anatomy and Physiology II

LIT Courses	LIT Courses to Complete Biological Sciences AS
BIOL 1306/1106	Biology for Science Majors I
BIOL 1307/1107	Biology for Science Majors II
BIOL 2320/2120	Microbiology
MATH 1342	Elementary Statistics
HPRS 1204	Basic Health Professions Skills
BIOL 1332	Principles of Nutrition
PSYC 2314*^	Lifespan Growth & Development
CHEM 1306/1106	Intro to Chemistry I/Lab

* Denotes that course is offered online

^ Denotes that course is Open Source- No Textbook Cost

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	61
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Endorsement: Public Service
Program of Study: Healthcare Therapeutic
Cluster: Health Science

Program Information
Students completing this course of study will graduate from Lamar Institute of Technology with an Associate of Science in Health Science-Nursing Track, which is designed for students who wish to take courses for academic transfer into a nursing program. This degree provides Core Curriculum that will transfer to four year institutions and coincides with the first two years of most baccalaureate nursing programs.

Human Services Career Cluster

The Human Services Career Cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services.

Cosmetology and Personal Care Services Regional Program of Study



The Cosmetology and Personal Care Services regional program of study introduces CTE learners to knowledge and skills related to providing beauty and personal care services. CTE concentrators may learn about or practice managing personal care facilities and coordinating or supervising personal service workers.

Secondary Courses for High School Credit

Level 1

- Principles of Cosmetology Design and Color Theory
- Microbiology and Safety for Cosmetology Careers

Level 2

- Introduction to Cosmetology
- Nail Care, Enhancements, and Spa Services
- Esthetics

Level 3

- Cosmetology I/Lab
- Barbering I

Level 4

- Cosmetology II/Lab
- Barbering II

Postsecondary Opportunities

Certificate/License

- Certified Aesthetic Laser Operator
- Cosmetologist
- Certified Spa Supervisor
- Nail Technician/Specialist and Manicurist

Associates Degrees

- Cosmetology/Cosmetologist, General
- Aesthetics/Esthetician and Skin Care Specialist
- Salon/Beauty Salon Management/Manager
- Cosmetology, Barber/Styling, and Nail Instructor

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

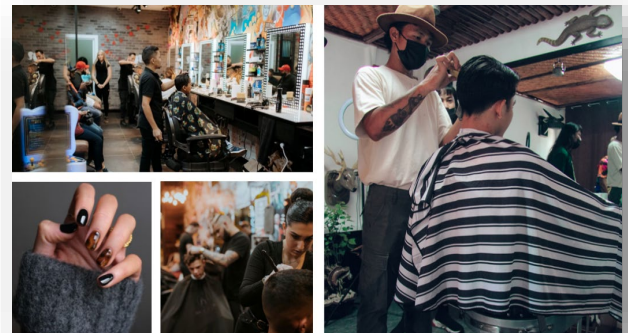
- Participate in TIVA or SkillsUSA

Work-Based Learning Activities

- Job shadow a cosmetologist
- Work part-time at a salon, spa, or barbershop

Industry-Based Certifications

- Cosmetology Operator License
- Cosmetology Esthetician Specialty License
- Cosmetology Manicurist Specialty License
- Barber Operating License



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
First-Line Supervisors of Personal Service Workers	\$36,941	1,634	24%
Barbers	\$28,267	348	14%
Hairdressers, Hairstylists, and Cosmetologists	\$21,507	3,489	22%
Manicurists and Pedicurists	\$21,715	418	45%
Shampooers	\$18,720	139	24%
Skincare Specialists	\$26,437	637	22%

Successful completion of the Cosmetology and Personal Care Services regional program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Suggested Cosmetology Operator Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Principles of Cosmetology	13025050	1	CSME 1401 (F)	4
			CSME 1354 (F)	3
Introduction to Cosmetology	13025100	1	CSME 1410 (S)	4
			CSME 1453 (S)	4
Elective		1		
TOTAL CREDITS		7		15

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Cosmetology I/ Lab	13025200	2	CSME 2310 (F)	3
			CSME 2501 (F)	5
			CSME 1355 (S)	3
			CSME 2441 (S)	4
Elective		1		
TOTAL CREDITS		7		15

LIT Course	LIT Course Name
CSME 1401	Orientation to Cosmetology
CSME 1354	Artistry of Hair Design
CSME 1410	Introduction to Haircutting and Related Theory
CSME 1453	Chemical Reformation and Related Theory
CSME 2310	Advanced Haircutting and Related Theory
CSME 2501	Principles of Hair Coloring and Related Theory
CSME 1355	Artistry of Hair Design II
CSME 2441	Preparation for the State Licensing Examination

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	30
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Endorsement: Public Service
Program of Study: Cosmetology and Personal Care Services
Cluster: Human Services

Program Information

Students completing this course of study will graduate from LIT with their Cosmetology Operator Level 1 Certificate. In most cases, ISD CTE Instructors who are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses.

Hospitality and Tourism Career Cluster

The Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services. Students acquire knowledge and skills focusing on communication, time management, and customer service that meet industry standards. Students will explore the history of the hospitality and tourism industry and examine characteristics needed for success.

Culinary Arts Statewide Program of Study



The Culinary Arts program of study introduces CTE learners to occupations and educational opportunities related to the planning, directing, or coordinating activities of a food and beverage organization or department. This program of study also explores opportunities involved in directing and participating in the preparation and cooking of food.

Secondary Courses for High School Credit

Level 1

- Introduction to Culinary Arts
- Principles of Hospitality and Tourism

Level 2

- Culinary Arts
- Foundations of Restaurant Management

Level 3

- Advanced Culinary Arts

Level 4

- Food Science
- Practicum in Culinary Arts
- Practicum in Entrepreneurship
- Career Preparation I

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Family, Career, and Community Leaders of America, SkillsUSA, American Culinary Federation, or the Texas Restaurant Association

Work-Based Learning Activities

- Plan a catering event or work for a catering company
- Participate in a cooking course
- Work in a restaurant

Postsecondary Opportunities

Associates Degrees

- Hotel and Restaurant Management
- Restaurant Culinary and Catering Management
- Hospitality Administration/ Management, General
- Culinary Arts/ Chef Training

Bachelor's Degrees

- Hotel and Restaurant Management
- Food Service Systems Administration/ Management
- Hospitality Administration/ Management, General
- Culinary Science and Food Service Management

Master's, Doctoral, and Professional Degrees

- Hotel and Restaurant Management
- Food Service Systems Administration/ Management
- Hospitality Administration/ Management, General
- Business Administration Management, General

Industry-Based Certifications

- Certified Fundamentals Cook
- Certified Fundamentals Pastry Cook
- Certified Hospitality & Tourism Management Professional
- Commercial Foods
- Culinary Meat Selection & Cookery Certification
- Food Protection Manager Certification
- Food Safety & Science Certification
- ManageFirst Professional
- Pre-Professional Certification in Culinary Arts
- Pre-Professional Certification in Food Science Fundamentals
- ServSafe Manager



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Food and Beverage Managers	\$55,619	1,561	28%
Chef and Head Cooks	\$43,285	1,366	25%
Food Science Technicians	\$34,382	236	11%

Successful completion of the Culinary Arts program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Suggested Culinary Arts Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language 2		1		
Speech		0.5		
Elective		0.5		
Intro to Culinary Arts	13022550	1	CHEF 1205 (F)	2
TOTAL Credits		7		2

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra 2		1		
Physics		1		
Elective		1		
Culinary Arts	13022600	2	CHEF 1401 (F) IFWA 1318 (S)	4 3
TOTAL CREDITS		7		7

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Advanced Culinary Arts	13022650	2	PSTR 1301 (F) RSTO 1313 (S)	3 3
Elective		1		
TOTAL CREDITS		7		6

LIT Course	LIT Course Name
CHEF 1205	Sanitation and Safety
CHEF 1401	Basic Food Preparation
PSTR 1301	Fundamentals of Baking
IFWA 1318	Nutrition for Food Service Professionals
RSTO 1312	Hospitality Supervision

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	15
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Endorsement: Business and Industry
Program of Study: Culinary Arts
Cluster: Hospitality and Tourism

Program Information

All courses are taught in person. Students completing this course of study will graduate from LIT with their Culinary Arts Level 1 Certificate. Students will also earn their ServSafe certificate while in this course. All courses are taught in person. In some cases, ISD CTE instructors that are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. These courses will also prepare students to test for several ASE industry certifications. NOTE: There is a heavy equipment requirement for this program. Please contact LIT for details of equipment needs if you would like to offer this program at your site. * For a 2-year program option, CHEF 1205 can be taught with CHEF 1401 in first semester of program.

Information Technology Career Cluster

The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

Networking Systems Statewide Program of Study



The Networking Systems program of study explores the occupations and educational opportunities associated with designing and implementing computer and information networks, such as local area networks (LAN), wide area networks (WAN), intranets, extranets, and other data communications networks. This program of study may also include exploration into analyzing science, engineering, and other data processing problems to implement and improve computer systems.

Secondary Courses for High School Credit

Level 1

- Computer Science I
- Principles of Information Technology

Level 2

- Internetworking Technologies I
- Computer Maintenance/Lab
- AP Computer Science Principles

Level 3

- Internetworking Technologies II
- Networking/Lab
- Advanced Cloud Computing

Level 4

- Practicum in Information Technology
- Practicum in Entrepreneurship
- Independent Study in Technology Applications
- Independent Study in Evolving/Emerging Technologies
- Project Based Research
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Computer and Information Sciences, General
- Computer Systems Networking And Telecommunications
- Information Technology
- Network and System Administration/ Administrator

Bachelor's Degrees

- Computer and Information Sciences, General
- Computer Systems Networking And Telecommunications
- Computer and Information Systems Security/ Information Assurance
- Computer Engineering, General

Master's, Doctoral, and Professional Degrees

- Computer and Information Sciences, General
- Information Technology
- Computer and Information Systems Security/ Information Assurance
- Computer Engineering, General

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join TSA
- Job shadow a computer network architect or support specialist

Work-Based Learning Activities

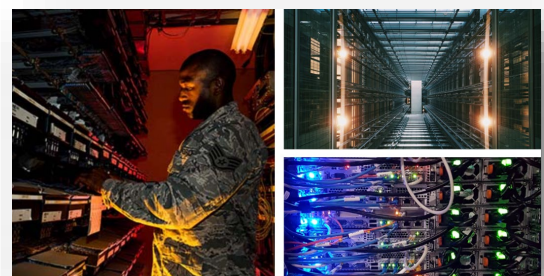
- Earn an IT certification

Industry-Based Certifications

- Cisco 100-490 RSTECH Supporting Cisco Routing and Switching Network Devices
- Cisco CCNA (200-301) Implementing and Administering Cisco Solutions
- CompTIA A+ Certification
- CompTIA Network+
- CompTIA Server+
- Computer Networking Fundamentals - Job Ready
- Google Cloud Certified Professional - Cloud Architect

- Associate of (ISC)*

*IBC sunsetting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Computer Network Architects	\$111,633	1,082	23%
Computer Systems Analysts	\$87,568	5,937	29%
Computer Network Support Specialists	\$68,037	1,824	19%

Successful completion of the Networking Systems program of study will fulfill requirements of the Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Suggested Computer Support Technology Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Computer Maintenance/Lab	13027310	2	CPMT 1311 (F) ITNW 1308 (F) ITSY 1342 (S) ITNW 1313 (S)	3 3 3 3
Elective		1		
TOTAL CREDITS		7		12

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
Networking/Lab	13027410	2	ITCC 1314 (F) CPMT 2333 (F) ITCC 1340 (S) ITMT 1305 (S)	3 3 3 3
4th Science		1		
Elective		1		
TOTAL CREDITS		7		12

LIT Course	LIT Course Name
CPMT 1311	Introduction to Computer Maintenance
ITNW 1308 *	Implementing and Supporting COS
ITSY 1342 *	Information Technology Security
ITNW 1313	Computer Virtualization
ITCC 1314	CCNA 1: Intro to networks
CPMT 2333 *	Computer Integration
ITCC 1340	CCNA 2: Routing and Switching
ITMT 1305	Configuring Advanced Windows OS

* Denotes that course is offered online.

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	24
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Endorsement: Business and Industry
Program of Study: Networking Systems
Cluster: Information Technology

Program Information

Students completing this course of study will graduate from LIT with their Level 1 Computer Support Technology Certificate. This award can be applied to the AAS of Computer Networking and Troubleshooting Technology at LIT for those who wish to continue on this path. In most cases, ISD CTE instructors who are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. These courses will also prepare students to test for the following industry certifications: Cisco Certified Entry Networking Technician, Comp TIA A+, Comp TIA Net+, and Comp TIA Net+

Suggested Networking (Online only) Crosswalk

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL CREDITS		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Elective		1		
Computer Maintenance/Lab	13027310	2	CPMT 2333 (F) ITNW 1308 (S)	3 3
TOTAL CREDITS		7		6

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Networking/Lab	13027410	2	ITNW 2335 (F) ITSY 1342 (S)	3 3
Elective		1		
TOTAL CREDITS		7		6

LIT Course	LIT Course Name
CPMT 2333*	Computer Integration
ITNW 1308	Implementing and Supporting COS
ITSY 1342	Information Technology Security
ITNW 2335	Network Troubleshooting

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	12
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Endorsement: Business and Industry
Program of Study: Networking Systems
Cluster: Information Technology

Program Information
Students completing this course of study will have 12 hours that can be applied to the AAS of Computer Networking and Troubleshooting Technology or the AAS of Cyber Security at LIT for those who wish to continue on this path. In most cases, ISD CTE instructors who are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. These courses will also prepare students to test for the following industry certifications: Comp TIA Net+ and Comp TIA Security +

Law and Public Service Career Cluster

The Law and Public Service Career Cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and fire and emergency services.

Emergency Services Statewide Program of Study



The Emergency Services program of study focuses on training CTE learners to respond to emergency situations, such as medical emergencies and fire-based emergencies. Students will learn how to prevent emergencies, respond appropriately and in accordance with rules and regulations during crises, and investigate and delineate the source of the emergency.

Secondary Courses for High School Credit

Level 1

- Principles of Law, Public Safety, Corrections, and Security

Level 2

- Disaster Response

Level 3

- Firefighter I
- Emergency Medical Technician – Basic
- Anatomy and Physiology
- National Security
- Counseling and Mental Health

Level 4

- Firefighter II
- Practicum in Law, Public Safety, Corrections, and Security
- Project-Based Research

Postsecondary Opportunities

Associates Degrees

- Emergency Medical Technology/Technician (EMT Paramedic)
- Fire Prevention and Safety Technology/Technician
- Fire Science/Firefighting

Bachelor's Degrees

- Emergency Medical Technology/Technician (EMT Paramedic)
- Natural Resources Law Enforcement and Protective Services

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Attend local emergency awareness events
- Join the Texas Public Service Association

Work-Based Learning Activities

- Volunteer at a hospital or a fire station

Industry-Based Certifications

- Basic Structure Fire Protection
- Emergency Medical Responder
- Emergency Medical Technician - Basic
- IAED Emergency Telecommunicator

- OSHA Hazardous Waste Operations and Emergency Response*

*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Firefighters	\$50,149	2,309	13%
Fire Inspectors and Investigators	\$54,787	161	14%
Emergency Medical Technicians	\$34,091	1,880	31%

Successful completion of the Emergency Services program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Suggested EMT Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
Principles of Law	13029200	1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Elective		0.5		
Medical Terminology	13020333	1	HITT 1305 (F)	3
			HITT 1253 (S)	2
TOTAL Credits		7		5

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
P.E. Credit		1		
Anatomy and Physiology	13020600	1	BIOL 2301/2101 (F)	4
TOTAL CREDITS		7		4

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
EMT Basic	N1303015	2	EMSP 1501 (F)	5
			EMSP 1260 (S)	2
Elective		1		
TOTAL CREDITS		7		7

LIT Course	LIT Course Name
HITT 1305*	Medical Terminology
HITT 1253*	Legal and Ethical Aspects of Health Information
BIOL 2301/2101*^	Anatomy and Physiology I
EMSP 1501	EMT Basic
EMSP 1260	Clinical EMT

* Denotes that course is offered online

^ Denotes that course is Open Source- No Textbook Cost

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	16
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Endorsement: Public Service
Program of Study: Emergency Services
Cluster: Law and Public Service

Program Information

Upon completion of this program, students will be eligible to take the national certification exam by the National Registry of EMTs and then receive certification by the TX Dept. of State Health Services. Students completing this course of study will graduate from LIT with their Emergency Medical Technician Level 1 Certificate. Courses taken in 10th and 11th grade can be taken online and can also be taken simultaneously in the 11th grade if your school desires to shorten the program. Senior year courses will need to be taken at LIT or at an approved off-site location that can accommodate EMT Clinical Equipment. Principles of Law must be taken in 9th or 10th grade to meet program of study requirements- but is not required as a Dual Credit course for this pathway.

Law and Public Service Career Cluster

The Law and Public Service Career Cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and fire and emergency services.

Law Enforcement Statewide Program of Study



The Law Enforcement program of study teaches CTE learners about the development of, adherence to, and protection of various branches of law. Students will learn how to appropriately and legally respond to breaches in the law according to statutory rules and regulations as well as investigate how and why the breaches occurred.

Secondary Courses for High School Credit

Level 1

- Principles of Law, Public Safety, Corrections, and Security

Level 2

- Law Enforcement I
- Federal Law Enforcement and Protective Services
- Criminal Investigation

Level 3

- Law Enforcement II
- Correctional Services
- Forensic Psychology

Level 4

- Counseling and Mental Health
- Forensic Science
- Practicum in Law, Public Safety Corrections, and Security

Postsecondary Opportunities

Associates Degrees

- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Criminal Justice/Police Science
- Corrections
- Criminalistics and Criminal Science

Bachelor's Degrees

- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Criminal Justice/Police Science
- Juvenile Corrections
- Cyber/Computer Forensics and Counterterrorism

Master's, Doctoral, and Professional Degrees

- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Natural Resources
- Law Enforcement and Protective Services

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join the Texas Public Service Association or local criminal justice clubs

Work-Based Learning Activities

- Attend court hearings and other legal procedures

Industry-Based Certifications

- Non-Commissioned Security Officer Level II



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Police and Sheriff's Patrol Officers	\$60,112	5,241	13%
Probation Officers and Correctional Treatment Officers	\$44,054	793	9%
Correctional Officers and Jailers	\$40,186	4,683	9%
Immigration and Customs Inspectors	\$78,104	1,236	9%
First-Line Supervisors of Police and Detectives	\$91,312	253	25%

Successful completion of the Law and Public Service program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Associate of Science in Criminal Justice Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Elective		0.5		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Art I	03500100	1	ARTS 1301 (F)	3
TOTAL CREDITS		7		4

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History	03340100	0.5	HIST 1301 (F)	3
		0.5	HIST 1302 (S)	3
Geometry		1		
Biology		1		
Foreign Language II		1		
Comm. Applications	03241400	0.5	SPCH 1318 (F)	3
Public Speaking	03240900	0.5	SPCH 1315 (S)	3
PE		1		
TOTAL Credits		7		12

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III	03220300	0.5	ENGL 1301 (F)	3
		0.5		
World History		1		
Algebra II	03100600	1	MATH 1314 (F)	3
Physics		1		
Prin. Of Law & PS	13029200	1	CRIJ 1301 (F)	3
Law Enforcement I	13029300	1	CRIJ 1310 (F)	3
			CRIJ 2323 (S)	3
Elective		1		
TOTAL CREDITS		7		15

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV	03220400	0.5	ENGL 2321 (F)	3
		0.5		
Economics	03310300	0.5	ECON 2301	3
US Government	03330100	0.5	GOVT 2305 (F)	3
Pre-Cal/ 4th Math		1		
Anatomy & Physiology	13020600	1	BIOL 2301/2101 (F)	4
			BIOL 2302/2102 (S)	4
Spec. Top. in SS 1	03380002	0.5	GOVT 2306 (S)	3
Crim. Investigation	13029550	1	CRIJ 2314 (F)	3
Law Enforcement 2	13029400	1	CRIJ 2313(F)	3
			CRIJ 2328 (S)	3
Elective		0.5		
TOTAL CREDITS		7		29

LIT Core Courses	LIT Core Course Names
EDUC 1100 *^	Learning Framework
ARTS 1301 *^	Art Appreciation
HIST 1301/1302 *^	United States History I & II
SPCH 1315 *^	Public Speaking
SPCH 1318 *^	Interpersonal Communication
ENGL 1301 *^	Composition I
MATH 1314 *^	College Algebra
ENGL 2321 *^	British Literature
ECON 2301 *^	Principles of Macroeconomics
GOVT 2305 *^	Federal Government
GOVT 2306 *^	Texas Government
BIOL 2301/2101 *^	Anatomy and Physiology I
BIOL 2302/2102 *^	Anatomy and Physiology II

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	60
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CJ Courses	LIT Criminal Justice Course Names
CRIJ 1301 *	Introduction to Criminal Justice
CRIJ 1310 *	Fundamentals of Criminal Law
CRIJ 2323 *	Legal Aspects of Law Enforcement
CRIJ 2314 *	Criminal Investigation
CRIJ 2313 *	Correctional Systems and Practices
CRIJ 2328 *	Police Systems and Practices

* Denotes that the course is offered online.

^ Denotes that course is Open Source- No Textbook Cost

Students completing this course of study will graduate from Lamar Institute of Technology with an Associate of Arts in Criminal Justice, which is designed for students who wish to take courses for academic transfer in criminal justice. This degree provides Core Curriculum that will transfer to four year institutions and coincides with the first two years of most baccalaureate criminal justice degree plans. **This entire degree is offered online.**

Endorsement: Public Service
Program of Study: Law Enforcement, Security and Corrections
Cluster: Law and Public Service

Program Information
The courses in this crosswalk can also be applied to either an AAS in Security Threat Groups or an AAS in Crime Scene Technician at Lamar Institute of Technology.

Suggested Crime Scene Technician Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Elective		0.5		
Law Enforcement I	13029300	1	CJSA 1322 (F)	3
			CJLE 1327 (S)	3
TOTAL Credits		7		6

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Elective		1		
Criminal investigation	13029550	1	CJSA 1342 (F)	3
Law Enforcement II	13029400	1	CJLE 2345 (F)	3
			CJSA 1313 (S)	3
TOTAL CREDITS		7		9

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Practicum in Law	13030100	2	CJSA 1308 (F)	3
			CJSA 2323 (F)	3
			CJSA 2332 (S)	3
TOTAL CREDITS		7		9

LIT Course	LIT Course Name
CJSA 1322	Introduction to Criminal Justice
CJLE 1327	Interview and Report Writing
CJSA 1342	Criminal Investigation
CJLE 2345	Vice and Narcotics Investigation
CJSA 1313	Court Systems and Practices
CJSA 1308	Criminalistics I
CJSA 2323	Criminalistics II
CJSA 2332	Criminalistics III

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	24
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Endorsement: Public Service
Program of Study: Law Enforcement, Security and Corrections
Cluster: Law and Public Service

Program Information

A student who takes all of the courses in this crosswalk will graduate from Lamar Institute of Technology with a Level 1 Certificate in Crime Scene Technician. The courses in this crosswalk are all WECM courses. In most cases, ISD Criminal Justice instructors can be credentialed and mentored to teach these courses. This Level 1 Certificate is stackable and can be applied to the Crime Scene Technician certificate and can be applied to the Associate of Applied Science in Crime Scene Technician. LIT also has a 2X2 Articulation with SFA by which students can transfer their AAS in Crime Scene tech to a BAAS in Public Administration.

Suggested Crime Scene Tech/Security Threat Groups Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Elective		0.5		
Principles of Law	13029200	1	CJSA 1322 (F)	3
TOTAL Credits		7		3

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Elective		1		
Elective		1		
Law Enforcement I	13029200	1	CJSA 1327 (F) CJSA 2300 (S)	3 3
TOTAL CREDITS		7		6

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Law Enforcement I	13029200	1	CJSA 1359 (F) CJSA 1342 (S)	3 3
Correctional Services	13029700	1	CJCR 1307 (F)	3
Elective		1		
TOTAL CREDITS		7		9

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	18
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LIT Course	LIT Course Name
CJSA 1322	Introduction to Criminal Justice
CJLE 1327	Interview and Report Writing
CJCR 1307	Correctional Systems and Practices
CJSA 1359	Police Systems and Practices
CJSA 1342	Criminal Investigation
CJSA 2300	Legal Aspects of Law Enforcement

Endorsement: Public Service
Program of Study: Law Enforcement, Security and Corrections
Cluster: Law and Public Service

Program Information

The courses in this crosswalk can all be applied to either an AAS in Security Threat Groups or an AAS in Crime Scene Technician. The courses in this crosswalk are all WECM courses. In most cases, ISD Criminal Justice instructors can be credentialed and mentored to teach these courses. These courses are not transferrable to 4 year universities, but are applied to the two AAS degrees listed above. LIT also has a 2X2 Articulation with SFA by which students can transfer their AAS in Crime Scene tech to a BAAS in Public Administration.

Criminal Justice WECM to ACGM Crosswalk

ACGM Course		WECM Course
CRIJ 1301	Intro. to Criminal Justice	CJSA 1322
CRIJ 1306	Court Systems & Practices	CJSA 1313
CRIJ 1310	Fund. Of Criminal Law	CJSA 1327
CRIJ 2313	Correctional Systems & Practices	CJRE 1307
CRIJ 2314	Criminal Investigations	CJSA 1342
CRIJ 2323	Legal Aspects of Law Enforcement	CJSA 2300
CRIJ 2328	Police Systems and Practices	CJSA 1359
SOCI 2336	Criminology	CJSA 1325

Manufacturing Career Cluster

The Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

Welding Statewide Program of Study



The Welding program of study focuses on the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. CTE learners will learn how to modify parts to make or repair machine tools or maintain individual machines, and how to use hand-welding or flame-cutting equipment.

Secondary Courses for High School Credit

Level 1

- Introduction to Welding

Level 2

- Welding I
- Introduction to Film Interpretation of Weldments

Level 3

- Welding II/Lab

Level 4

- Practicum in Manufacturing
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Certified Welder or Welder Inspector
- Machine Shop Technology/Assistant
- Operations Management and Supervision
- Occupational Safety and Health Technology/Technician

Bachelor's Degrees

- Welding Engineering Technology/Technician
- Biomedical Technology/Technician
- Operations Management and Supervision
- Environmental Health

Master's, Doctoral, and Professional Degrees

- Welding Engineering Technology/Technician
- Occupational Health and Industrial Hygiene
- Operations Management and Supervision
- Environmental Health

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate and compete in SkillsUSA
- Job shadow a machinist

Work-Based Learning Activities

- Work in a local business or industry apprenticeship
- Join the American Welding Society

Industry-Based Certifications

- API 1104 Welding Pipelines and Related Facilities
- AWS Certified Welder
- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding
- AWS SENSE Level 1: Entry Welder
- Industrial Technology Maintenance (ITM) - Maintenance Welding
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Welding Level I
- Welding - Job Ready

- OSHA 30 Hour General*
*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Welders, Cutters, Solderers, and Brazers	\$41,350	6,171	9%
Welding Soldering and Brazing Machine Setters, Operators and Tenders	\$40,040	280	9%

Successful completion of the Welding program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Suggested Welding Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Elective		0.5		
Introduction to Welding	13032250	1	WLDG 1323 (F)	3
			WLDG 1327 (S)	3
TOTAL Credits		7		6

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Elective		1		
Welding I	13032300	2	WLDG 1428 (F)	4
			WLDG 1407 (S)	4
TOTAL CREDITS		7		8

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Welding II	13032400	2	WLDG 1457 (F)	4
Elective		1		
TOTAL CREDITS		7		4

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	18
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LIT Course	LIT Course Name
WLDG 1323 *	Welding Safety, Tools & Equipment
WLDG 1327 *	Welding Codes
WLDG 1428	Intro to SMAW
WLDG 1407	Intro to Welding- Multi Processes
WLDG 1457	Intermediate SMAW

*Denotes that the course is offered online.

Endorsement: Business and Industry
Program of Study: Welding
Cluster: Manufacturing

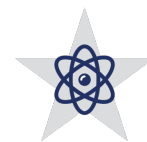
Program Information

Students completing this course of study will complete their Level 1 Certification in Welding Technology and walk in LIT's graduation if they choose. This award can be applied to the Welding Level II Certificate and the AAS of Welding Technology for students wishing to continue their education . All lab courses are taught in person. In most cases, ISD welding teachers can be credentialed as LIT adjuncts to teach these courses. However, the WLDG 1323 and WLDG 1327 lecture courses are also taught online and ISDs can utilize LIT instructors to teach these courses and leave their own ISD instructor free to teach the lab courses. All of these courses will also prepare students to test for the following industry certifications: AWS Certified Welder, D1.1, D9.1

Science, Technology, Engineering, and Mathematics Career Cluster

The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Cybersecurity Statewide Program of Study



The Cybersecurity program of study includes the occupations and educational opportunities related to planning, implementing, upgrading, or monitoring security measure for the protection of computer networks and information. This program of study may also include exploration into responding to computer security breaches and virus and administering network security measures.

Secondary Courses for High School Credit

Level 1

- Principles of Information Technology
- Fundamentals of Computer Science
- Foundations of Cybersecurity

Level 2

- Internetworking Technologies I
- Computer Science I
- AP Computer Science Principles
- Computer Maintenance/Lab

Level 3

- Engineering Applications of Computer Science Principles
- Networking/Lab
- Digital Forensics
- Internetworking Technologies II
- AP Computer Science A-Math
- AP computer Science B-LOTE
- IB Computer Science Standard Level
- Discrete Mathematics for Computer Science

Level 4

- Cybersecurity Capstone
- Practicum in Information Technology
- Practicum in STEM
- Project-Based Research
- Independent Study in Technology Applications
- Independent Study in Evolving/Emerging Technologies
- IB Computer Science Higher Level- Math
- IB Computer Science Higher Level-LOTE

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
------------------------	--------------------------------

- | | |
|--|--|
| <ul style="list-style-type: none"> Join TSA Job shadow a computer system analyst or information security analyst | <ul style="list-style-type: none"> Obtain a cybersecurity IBC |
|--|--|

Industry-Based Certifications

- Cisco 200-201 CBROPS - Understanding Cisco Cybersecurity Operations Fundamentals
- CompTIA A+ Certification
- CompTIA Network+
- CompTIA Security+
- Cybersecurity Fundamentals
- CyberSecurity Fundamentals: An ISACA Certificate
- Oracle Certified Associate Java SE 8 Programmer

- Associate of (ISC)*
*IBC sunseting 8/31/24

Postsecondary Opportunities

Associates Degrees

- System Networking, and LAN/WAN Management
- Information Technology
- Computer and Information Sciences, General
- Computer Science

Bachelor's Degrees

- Computer Systems Networking and Telecommunications
- Computer Systems Networking and Telecommunications
- Computer and Information Sciences, General
- Computer Science

Master's, Doctoral, and Professional Degrees

- Computer Systems Analysis/Analyst
- Information Technology
- Computer Information Sciences, General
- Computer Science



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Information Security Analysts	\$91,915	814	29%
Network and Computer System Administrators	\$82,597	2,814	19%
Computer System Analysts	\$87,568	5,937	29%

Successful completion of the Agribusiness program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Suggested Cyber Defense Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
P.E. Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Elective		0.5		
Foundations of Cybersecurity	03580850	1	CPMT 2333 (F)	3
			ITSY 1342 (S)	3
TOTAL Credits		7		6

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Elective		1		
Networking	13027400	1	ITCC 1314 (F)	3
			ITCC 1340 (S)	3
Elective		1		
TOTAL CREDITS		7		6

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Elective		1		
Digital Forensics	03580360	1	ITDF 1300 (F)	3
			ITSY 2330 (S)	3
Cybersecurity	3580855	1	ITSC 1316 (F)	3
			ITSY 2301 (S)	3
TOTAL Credits		7		12

LIT Course	LIT Course Name
CPMT 2333 *	Computer Integration
ITSY 1342 *	Information Technology Security
ITCC 1314	CCNA 1: Intro to Networks
ITCC 1340	CCNA 2: Routing and Switching
ITDF 1300	Introduction to Digital Forensics
ITSY 2330	Intrusion Detection
ITSC 1316	Linux Installation and Configuration
ITSY 2301	Firewalls and Security

* Denotes that the course is available online.

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	24
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Endorsement: STEM
Program of Study: Cybersecurity
Cluster: STEM

Program Information

Students completing this course of study will graduate from LIT with their Level 1 Cyber Defense Technology Certificate. This award can be applied to the AAS of Cyber Security Technology at LIT for those who wish to continue on this path. In most cases, ISD CTE instructors who are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. These courses will also prepare students to test for the following industry certifications: Cisco Certified Entry Networking Technician, Comp TIA Security + **NOTE:** There is a heavy equipment requirement for this program. Please contact LIT for details of equipment needs if you would like to offer this program at your site

Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Automotive Statewide Program of Study



The Automotive program of study teaches CTE learners how to repair and refinish automobiles and service various types of vehicles. CTE learners may learn to collect payment for services or supplies and perform typical vehicle maintenance procedures such as lubrication, oil changes, installation of antifreeze, or replacement of accessories like wiper blades or tires.

Secondary Courses for High School Credit

Level 1

- Principles of Transportation Systems
- Small Engine Technology I
- Basic Collision Repair and Refinishing

Level 2

- Automotive Basics
- Introduction to Transportation Technology
- Small Engine Technology II
- Collision Repair/Lab
- Occupational Safety and Environmental Technology I

Level 3

- Automotive Technology I
- Energy and Power of Transportation Systems
- Paint and Refinishing/Lab

Level 4

- Automotive Technology II/Lab
- Practicum in Transportation Systems
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Autobody/ Collision and Repair Technology/Technician
- Medium/Heavy Vehicle and Truck Technology/Technician
- Mechanical Engineering/ Mechanical Technology/ Technician

Bachelor's Degrees

- Mechanical Engineering/ Mechanical Technology/ Technician

Master's, Doctoral, and Professional Degrees

- Mechanical Engineering

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join SkillsUSA or the Automotive Service Association

Work-Based Learning Activities

- Work at a local automotive repair or body shop

Industry-Based Certifications

- ASE Entry Level Automobile Maintenance and Light Repair (MR)
- ASE Entry-Level Automobile Automatic Transmission/Transaxle (AT)
- ASE Entry-Level Automobile Brakes (BR)
- ASE Entry-Level Automobile Electronic/Electrical Systems (EE)
- ASE Entry-Level Automobile Engine Performance (EP)
- ASE Entry-Level Automobile Engine Repair (ER)
- ASE Entry-Level Automobile Heating and Air Conditioning (AC)
- ASE Entry-Level Automobile Manual Drive Train and Axles (MD)
- ASE Entry-Level Automobile Service Technology
- ASE Entry-Level Automobile Suspension and Steering (SS)
- ASE Entry-Level Collision Mechanical and Electrical Components (ME)
- ASE Entry-Level Collision Non-Structural Analysis and Damage Repair (SR)
- ASE Entry-Level Collision Painting and Refinishing (PR)
- ASE Entry-Level Collision Structural Analysis and Damage Repair
- Principles of Small Engine Technology Certification
- Small Engine Technology

- OSHA 30 Hour General*
- ASE Suspension and Steering*
- ASE Structural Analysis Damage Repair*
- ASE Painting & Refinishing*
- ASE Non-Structural Analysis Damage Repair*
- ASE Mech Elec Components*
- ASE Manual Drive Train Axles*
- ASE Maintenance Light Repair*
- ASE Heating, Ventilation, AC (HVAC)*
- ASE Auto Transmission*
- ASE Automobile Service Technology*
- ASE Brakes*
- ASE Electrical/Electronic Systems*
- ASE Engine Performance*
- ASE Engine Repair*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Automotive Body and Related Repairers	\$40,144	1,456	25%
Automotive Service Technician and Mechanics	\$38,459	5,557	18%

Successful completion of the Automotive program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Suggested Automotive Technology Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
PE Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Elective		0.5		
Auto Basics	13039550	1	AUTM 2305 (F)	3
TOTAL Credits		7		3

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Elective		1		
Auto Technology I	13039600	2	DEMR 1401 (F)	4
			DEMR 1306 (S)	3
TOTAL CREDITS		7		7

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Auto Technology II	13039700	2	DEMR 1329 (F)	3
			DEMR 1313 (S)	3
Elective		1		
TOTAL CREDITS		7		6

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	16
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LIT Course	LIT Course Name
AUTM 2305	Automotive Engine Theory
DEMR 1401	Shop Safety and Procedures
DEMR 1313	Fuel Systems
DEMR 1306	Diesel Engines I
DEMR 1329	Preventative Maintenance

Endorsement: Business and Industry
Program of Study: Automotive
Cluster: Transportation, Distribution, and Logistics

Program Information

All courses are taught in person. Students completing this course of study will graduate from LIT with their Automotive Technology Level 1 Certificate, which can be applied to an AAS in Advanced Engine Technology. All courses are taught in person. In some cases, ISD CTE instructors that are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. These courses will also prepare students to test for several ASE industry certifications. NOTE: There is a heavy equipment requirement for this program. Please contact LIT for details of equipment needs if you would like to offer this program at your site.

Suggested Automotive Collision Level 1 Certificate Degree Plan

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Fine Arts Credit		1		
PE Credit		1		
TOTAL CREDITS		7		0

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History		1		
Geometry		1		
Biology		1		
Foreign Language II		1		
Speech		0.5		
Electives		1.5		
TOTAL Credits		7		0

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III		1		
World History		1		
Algebra II		1		
Physics		1		
Elective		1		
Collision Repair	13039800	2	ABDR 1455 (F)	4
			ABDR 1431 (S)	4
TOTAL CREDITS		7		8

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV		1		
Economics		0.5		
US Government		0.5		
Pre-Cal/ 4th Math		1		
4th Science		1		
Paint/Refinishing Lab	13039900	2	ABDR 2449 (F)	4
			ABDR 1349 (S)	4
Elective		1		
TOTAL CREDITS		7		8

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	16
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LIT Course	LIT Course Name
ABDR 1455	Non-Structural Metal Repair
ABDR 1431	Basic Refinishing
ABDR 2449	Advanced Refinishing I
ABDR 1349	Auto Plastic & Sheet Molded Comp. Repair

Endorsement: Business and Industry
Program of Study: Automotive
Cluster: Transportation, Distribution, and Logistics

Program Information

All courses are taught in person. Students completing this course of study will graduate from LIT with their Automotive Collision Level 1 Certificate. All courses are taught in person. In some cases, ISD CTE instructors that are currently teaching these courses can be credentialed as LIT adjuncts to teach these courses. These courses will also prepare students to test for several ASE industry certifications. NOTE: There is a heavy equipment requirement for this program. Please contact LIT for details of equipment needs if you would like to offer this program at your site.

The following courses are listed in the Technical Program crosswalks but are fully transferrable to 4-year Universities.

ACGM - Transferrable Technical Course Listing		
Course	Course Name	SCH
ACCT 2301	Principles of Financial Accounting	3
ACCT 2302	Principles of Managerial Accounting	3
BCIS 1301	Business Principles	3
BIOL 2301	Anatomy & Physiology Lecture	3
BIOL 2101	Anatomy & Physiology Lab	1
BUSI 1301	Business Principles	3
BUSI 2301	Business Law	3
CRIJ 1301	Introduction to Criminal Justice	3
CRIJ 1310	Fundamentals of Criminal Law	3
CRIJ 2313	Correctional Systems and Practices	3
CRIJ 2314	Criminal Investigation	3
CRIJ 2328	Police Systems and Practices	3
CRIJ 2323	Legal Aspects of Law Enforcement	3
ECON 2301	Principles of Macroeconomics	3
ECON 2302	Principles of Microeconomics	3
EDUC 1301	Introduction to Teaching	3
EDUC 2301	Special Populations	3
EDUC 1100	Learning Frameworks	1
PSYC 2301	General Psychology	3

Suggested Core Complete Crosswalk (7 Period Day)

9th Grade				
ISD	Service ID	CR	LIT	SCH
English I		1		
W. Geography		1		
Algebra I		1		
IPC		1		
Foreign Language I		1		
Elective		0.5		
College Readiness	03270100	0.5	EDUC 1100 (S)	1
Art I	03500100	1	ARTS 1301 (F)	3
TOTAL CREDITS		7		4

10th Grade				
ISD	Service ID	CR	LIT	SCH
English II		1		
US History	3340100	0.5	HIST 1301 (F)	3
		0.5	HIST 1302 (S)	3
Geometry		1		
Biology		1		
Foreign Language II		1		
Comm. Applications	03241400	0.5	SPCH 1318 (F)	3
Public Speaking	03240900	0.5	SPCH 1315 (S)	3
Elective		1		
TOTAL Credits		7		12

11th Grade				
ISD	Service ID	CR	LIT	SCH
English III	3220300	1	ENGL 1301 (F)	3
World History		1		
Algebra 2	03100600	1	MATH 1314 (F)	3
Physics		1		
Elective		1		
Elective		0.5		
Elective		0.5		
PE		1		
TOTAL CREDITS		7		6

12th Grade				
ISD	Service ID	CR	LIT	SCH
English IV	3220400	1	ENGL 2321 (F)	3
Macroeconomics	3310300	0.5	ECON 2301	3
US Government	3330100	0.5	GOVT 2305 (F)	3
Pre-Cal/ 4th Math		1		
Anatomy & Physiology	13020600	1	BIOL 2301/2101 (F)	4
			BIOL 2302/2102 (S)	4
Elective		1		
Social Stu. Adv. Stu.	03380001	0.5	GOVT 2306 (S)	3
Elective		0.5		
Elective		1		
TOTAL CREDITS		7		20

ISD Total Credits	28	LIT TOTAL Semester Credit Hours	42
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The courses suggested in this crosswalk will satisfy the requirements for a student to graduate "Core Complete" from high school and also graduate from LIT with a Core Complete Institutional Award. It is state law that students who complete the Core Curriculum with at least a 2.0 GPA are guaranteed that their courses will transfer as a block of credit to any Texas public college or university. Other courses may be substituted for Core Curriculum. ALL courses in this crosswalk can be taken online and all courses listed in this crosswalk have an open source text- NO COST for Textbook. In some cases, the ISD teacher of record may be credentialed to teach these courses.

Teacher Credentialing Requirements for Dual Credit

Technical Courses:

Faculty teaching technical courses at the undergraduate level must have a degree, industry certifications, or work experience that is relevant to their subject matter. Typically, the requirements for teaching in secondary CTE programs are similar to the post-secondary technical course requirements.

General Education Courses:

Faculty teaching academic courses at the undergraduate level must have a master's degree in the teaching discipline or a master's degree with a concentration in the teaching discipline (a minimum of 18 graduate semester hours in the teaching discipline).

(Excerpt of Policy 4.13, Section 1.1 in the LIT Policy & Procedure Handbook). This is in compliance with SACS requirements.

ARTS	Art, Art History
EDUC	Any Master's Degree
ENGL	English, Reading, Writing
GOVT	Government, Public Administration, Political Science
HIST	History
HUMA	English, Theater, Drama, Speech, Art, Music, Dance, Philosophy
MATH	Mathematics*
PHIL	Philosophy, Biblical Studies
PSYC	Psychology
SOCI	Sociology
SPCH	Speech, Communication
ECON	Economics
BIOL	Biology

Programs that wish to credential ISD teachers for the purposes of offering face-to-face courses for either technical or general education courses must have their instructors apply here:

<https://jobs.lit.edu/postings/530>

Once the application is submitted, please send an email notification to dualcredit@lit.edu stating your name, ISD and school, and the subject that you are teaching. If the applicant is credentialed, we will inform them of the next steps that will ensue. These next steps may require additional paperwork, including the submission of an official transcript from every college attended.

Benefits Include:

- A \$250 stipend per course section
- TRS-eligible
- Potential opportunities to teach adult sections
- Teach from your home campus

TSI Admission Standards

TSI requirements for dual credit do not differ from traditional students in that they must meet the standards that any core course requires. Included is a list of courses with their required TSI scores.

TSI Exemptions

There are various exemptions for the TSI, including SAT, ACT, as well as STAAR EOC score exemptions. Below are the PSAT, SAT, ACT, and STAAR exemptions. Students may use an individual verbal or math score from any test. A student can use ACT English in combination with SAT Math to be TSI ready.

Required TSIA2 Scores

ELAR

CRC score of 945-990 with an Essay of 5-8 or,

CRC of a 910-944 with a Diagnostic Level of 5-6 and an Essay of 5-8

MATH

CRC score of 950-990 or,

CRC score of 910-949 with a Diagnostic Level of 6

Required PSAT/NMSQT Scores (Dual Credit Only)

English 460

Math 510

Required ACT Scores (updated 2/15/2023)

Math 22

English & Reading 40

Required SAT Scores:

Verbal 480

Math 530 *exempts math*

STAAR/EOC Scores:

Lvl 1 English II EOC **Meets Grade Level Performance** (4000 or higher)

Lvl 1 Algebra I EOC **Meets Grade Level Performance** (4000 or higher) and passed Alg

*STAAR score exemptions only apply to dual credit students. Once a student graduates, the other exemptions may apply, but they may not use the STAAR EOC exemption. If a student successfully completes a course that requires TSI readiness as a dual credit student, then they become TSI exempt in that subject. For example completion of ENGL 1301 with a "C" or better as a dual credit student will exempt the student once they graduate.

GEDS Course Inventory with Prerequisites

Course	TSIA 2			Prerequisites with "C" or better in:	
	None	ELAR	Essay		Math
ARTS 1301					
BIOL 2301		945			
BIOL 2302		945			
ECON 2301		945	5		
ECON 2301		945	5		
EDUC 1100					
ENGL 1301		945	5		
ENGL 1302		945	5		ENGL 1301
ENGL 2321		945	5		ENGL 1301
ENGL 2326		945	5		ENGL 1301
GOVT 2305		945			
GOVT 2306		945			
HIST 1301		945			
HIST 1302		945			
HUMA 1315					
MATH 1314				950	
MATH 1325				950	MATH 1314
MATH 1332				950	
MATH 1342				950	
MATH 2312				950	MATH 1314
PHIL 1301		945			
PSYC 2301		945			
PSYC 2314		945			
SOCI 1301					
SPCH 1315					
SPCH 1318					

Alternate passing scores utilizing diagnostic scores

ELAR		910-944	5	Diagnostic score of 5-6
Math		910-944	5	Diagnostic score of 5-6

Open Educational Resource Listing – No Cost Textbooks

In an effort to reduce textbook costs for students and district partners, LIT has adopted open resource content for many courses. The courses listed below do NOT require the student or district to purchase a textbook. There are a few noted exceptions that require low-cost novels.

Course	Full Course Name
ARTS 1301	Art Appreciation
BIOL 2301/2101	Anatomy and Physiology I & Lab
BIOL 2302/2102	Anatomy and Physiology II & Lab
ECON 2301	Principals of Macroeconomics
ECON 2302	Principals of Microeconomics
EDUC 1100	Learning Framework
EDUC 1301	Introduction to Education
EDUC 2301	Special Populations in Education
ENGL 1301	Composition I
ENGL 1302	Composition II
ENGL 2307	Creative Writing
ENGL 2311	Technical and Business Writing
ENGL 2321	British Literature
ENGL 2326	American Literature
GOVT 2305	Federal Government
GOVT 2306	Texas Government
HIST 1301 *	United States History I
HIST 1302*	United States History II
HUMA 1315	Fine Arts Appreciation
PHIL 1301	Introduction to Philosophy
PSYC 2301	General Psychology
PSYC 2314	Lifespan Growth & Development
SOCI 1301	Introduction to Sociology
SPCH 1315	Public Speaking
SPCH 1318	Interpersonal Communications

* This course uses OER for the main text but requires two novels. Total expense is under \$20.