CTE Approval Self-Study Report

Geospatial Technology

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Self-study

> *Self-study is the first step in the career and technical education approval process. The self-study review is required for all existing programs and new programs seeking approval. Its purpose is to bring together partners to review the CTE program, propose relevant modifications, and evaluate the degree to which the program meets the policy requirements approved by the Board of Regents on February 6, 2001.*

Self-study review will include:

Curriculum review

Benchmarks for student performance and student assessment

Teacher certification and highly-qualified status of instructional staff

Work-based learning opportunities

Teacher and student schedules

Resources, including staff, facilities, and equipment

Accessibility for all students

Work skills employability profile

Professional development plans

Projected number of students to be served

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

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Geospatial Information Scientists and Technologists

*Quick Facts: Geospatial Information Scientists and Technologists	
2020 Median Pay	$92,870 annual $44.65 hourly
Typical Entry-Level Education	Most of these occupations require a four-year bachelor's degree, but some do not.
Work Experience in a Related Occupation	Less than 5 years
On-the-job Training	3 years
Number of Jobs, 2020	442,200
Job Outlook, 2020-30	Average (5% to 10%)
Employment Change, 2020-30	37,500

What Geospatial Information Scientists and Technologists Do

Research or develop geospatial technologies. May produce databases, perform applications programming, or coordinate projects.

Work Environment

May specialize in areas such as agriculture, mining, health care, retail trade, urban planning, or military intelligence.

How to Become a Geospatial Information Scientists and Technologists

Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Pay

The median annual wage for geospatial information scientists and technologists was $92,870 annually in 2020.

Job Outlook

Varies. See below.

Related Occupations

Occupational Title	SOC Code	Employment, 2020	Projected Employment, 2030	Change, 2020-30	
				Percent	Numeric
****Cartographers and photogrammetrists**	17-1021	13,200	13,900	5	700
****Geographers**	19-3092	1,600	1,700	1	0
****Surveying and mapping technicians**	17-3031	54,800	56,900	4	2,000
****Computer systems analysts**	15-1211	607,800	650,600	7	42,800
***Geographic Information Systems Technicians**	15-1199	442,000	37,500	N/A	N/A
***Intelligence Analysts**	**33**-9021	33,700	38,100	13	4,400

* Estimates based on O*NET *15-1199.00 - Computer Occupations, All Other* category. There is no data available for this specific field. On the internet at https://www.onetonline.org/link/summary/15-1199.04 (visited April 14, 2022). Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Private Detectives and Investigators, on the Internet at https://www.bls.gov/ooh/protective-service/private-detectives-and-investigators.htm (visited April 14, 2022).

**Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Information Security Analysts, on the Internet at https://www.bls.gov/ooh/architecture-and-engineering/cartographers-and-photogrammetrists.htm (visited April 14, 2022)

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A. Curriculum Review

> *The curriculum review is a step in the self-study process. It is an opportunity for members of the self-study team to evaluate the proposed curriculum for completeness in terms of the knowledge, skills, and competencies required in the program field. The team reviews the curriculum to ensure that course content in the career and technical education program meets State Education Department regulations, contributes to achievement of state and industry standards, and prepares students for successful completion of a technical assessment. Approved curriculum content is nonduplicative, challenging, organized along a continuum of difficulty, and free of bias.*
>
> *CTE program approval does not constitute Department approval or endorsement of proprietary curriculum or related curriculum products. Program approval indicates only that a school district or BOCES has provided the Department with assurances that the curriculum review has been completed.*

Process

- The school district or BOCES identifies the faculty members and other individuals who will be involved in conducting the curriculum review
- The school district or BOCES determines the procedures used in completing the curriculum review
- Reviewers confirm that CTE program content aligns with state CDOS standards, relevant state academic standards, and related business and industry standards
- Reviewers confirm that CTE program content includes integrated or specialized units of credit
- Reviewers confirm that the CTE program meets unit of credit and other distributive requirements
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Documentation

Documentation of the curriculum review is maintained by the school district or BOCES and is updated whenever modifications are made to the approved CTE program. Recommendations from curricular review should be included in the self-study report and reviewed by the external committee.

Resources

New York State graduation requirements

http://www.emsc.nysed.gov/part100/pages/1005.html

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

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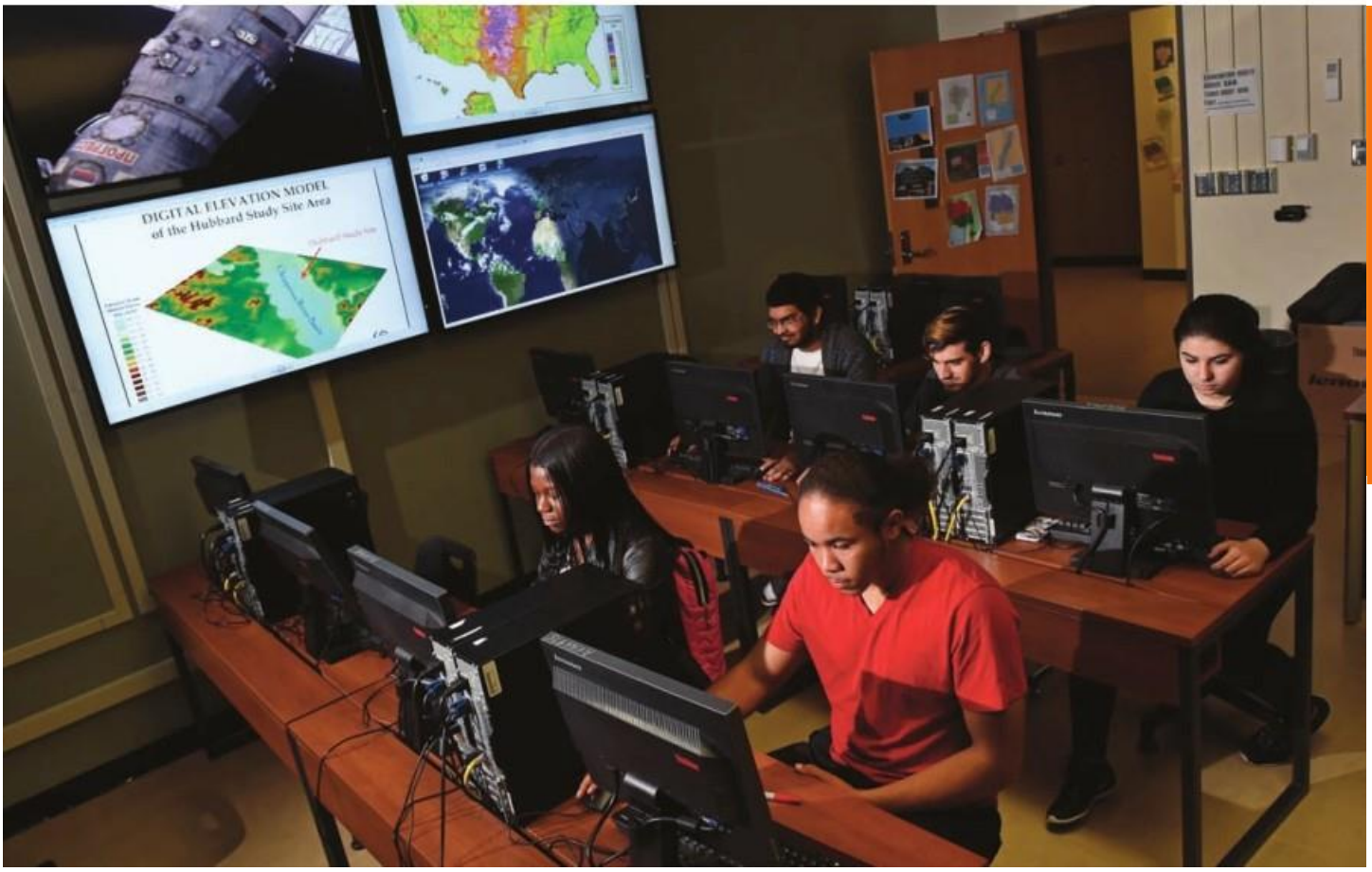

Geospatial Technology

Geospatial analysis has existed as long as humans have made and studied maps – but its importance to the intelligence community has skyrocketed in the past several years, with Unmanned Aerial Vehicles and drones increasingly being used to both gather intelligence and take down enemy targets.

Would you like to be the eyes of the intelligence community? Then consider a job in one of the fastest-growing arenas of national security – geospatial intelligence.

In this program at the Public Service Leadership Academy at Fowler, you will build strong foundations in:

- Mathematics and science
- Computer skills and broad research
- Writing and analysis skills

If you're the kind of student who has always been good with maps, you know how to get the most from your GPS device or Google Earth, and possibly have a background in Geographic Information Systems (GIS) – then GEOINT might be the perfect fit for you.

Career Opportunities:

Advanced Visualization Specialist, Aeronautical Analyst, Geodetic Surveyor, Military Analyst, Earth and Orbit Scientist, Radar Image Scientist, Thermal Infrared Image Scientist, Geospatial Data Steward

Syracuse City School District
Career and Technical Education Program
Course Syllabus
GIT100: Geospatial Technology 100

Program Overview

At the completion of this program, students will understand and be able to apply the fundamentals of geospatial technology, geographic information science, remote sensing, global positioning systems (GPS) and spatial data analysis. Students will complete hands-on, real-world projects, develop critical thinking, analysis and problem-solving skills. This course will contribute to the preparation of students for post-secondary education and a wide range of careers using GIS, GPS, spatial analyses, remote sensing, and digital mapping. Students will also have the opportunity to receive integrated academic and college credits.

Course Description

In this course, students will define and understand the basic concepts of Geospatial Technology, Geographic Information Systems (GIS), identify career opportunities in the field of GIS, and learn key tools used by GIS specialists. Students will participate in hands-on activities and lessons that use professional-level ESRI software to create and analyze maps and display mapping data. This course will contribute to the preparation of students for a wide range of careers using GIS, GPS, spatial analyses, remote sensing, and digital mapping.

Work-Based Learning

Students will be connected with professionals in the geospatial technology field through field trips, job shadowing and career coaching, leading to opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their experiences to document the development of their skills, including a professional resume.

Pre-Requisites

N/A

Course Objectives

- Students will define GIS and explain its application in a variety of career fields.
- Students will learn how to identify spatial datasets, understand the basic toolsets used in geospatial technology, and apply basic cartography principles.
- Students will learn basic network, computer, file management and file formatting skills.
- Students will understand the Global Positioning System (GPS) and how it works.
- Students will discover the many career opportunities within the field of Geospatial Technology, including education requirements, potential salary and job outlook.
- Students will be able to use basic ESRI ArcGIS online software to manipulate geographic data, create maps and digital datasets.
- Students will be able to use ESRI ArcGIS software to perform basic analyses of geographic data; they will have the opportunity to learn the outdoor, GPS-based treasure hunt called ‘Geocaching’.

Integrated Academics

1. Integrated CTE ELA Credit – Students will earn one English 12 credit after completion of their GIT 400 course.
2. Integrated CTE Science Credit – Students will earn one Science credit after completion of their GIT 300 course.

Dual Enrollment College Credit

Successful completion of the 4-course CTE Geospatial Technology sequence will provide students an opportunity to earn up to nine (9) SUNY college credits in Geospatial studies from Mohawk Valley Community College (MVCC).

Equipment and Supplies

- **School will provide:** All necessary lab and classroom equipment.
- **Student will provide:** A notebook for taking and saving notes, pen/pencils, USB thumb drive to save/transfer data.

Textbook

N/A

Grading

25% Class attendance/ Participation
35% Lab Assignments
10% Quizzes (Practical)
30% Project Work (Practical)

Additional Course Policies

- Students are required to follow all classroom professionalism and safety procedures.
- Please review class policies.
- All work is due at the time and day specified when the assignment is given. Submission details for work to be graded will be given at the time the work is assigned.
- Late Work: Late work will be accepted up to one week past the assigned date. An entire marking period worth of work the day before the marking period ends will not be accepted.

Course Calendar

Quarter	Units of Study
1	● Getting Started in Our Classroom ● SMART Goal Setting ● What is GIS? ● Basic Principles of GIS, Mapping and GPS
2	● Introduction to ESRI ArcGIS Online ● Cartography with Map Layouts ● Symbology and Classification
3	● Selection and Queries ○ SQL ○ Attribute Tables
4	● Final Project ● Career Interest Surveys and Personality Type ● Career Exploration in Geospatial Technology

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
GIT100: Geospatial Technology 100

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 1-4 **Getting Started in Our Classroom** **SMART Goal Setting** **What is GIS?**	● What are the expectations for students in the Geospatial Technology program? ● What are SMART Goals? ● What is GIS and what is it used for? ● What is the history of Geospatial Technology? ● What kinds of careers are available in the Geospatial field?	● Develop classroom rules and establish relationships. ● Define SMART goals. ● Create personal SMART goals. ● Create a definition for GIS. ● Identify the G.I.S. in Geographic Information Systems. ● Identify three types of Geospatial Technologies. ● Explain how GIS can be used to solve real-world problems. ● Explain how GIS was developed and early historical applications. ● Describe career opportunities in the geospatial field.	**Independent Assignments:** ● Data sources quiz ● Class participation ● GIS worksheet assignments ● Virtual job shadow assignments ● Infographic for career choices.	**Career Ready Practices** CRP 2,4,5 **Cluster Standards** ST 2,5 **Pathway Standards** ST-ET 2 ST-SM 3	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **4, 8**
Weeks 6-10 **Basic Principles of GIS, Mapping and GPS**	● How is data stored and retrieved? ● How does Geography fit into GIS? ● What is a topographic map? ● What is the Global Positioning System and how does it work? ● What is geocaching? ● How is GPS used to geocache?	● Use computer files, folders and network drives effectively and efficiently. ● Explain the concepts of latitude and longitude. ● Read topographic maps and explain what they represent. ● Define the basic principles of photogrammetry and why it is important in GIS. ● Create a pair of 3D anaglyph glasses.	**Exercises:** ● Topics quiz ● Class work ● Successful field trip to geocache ● Completed anaglyph assignment ● Geocache survey	**Career Ready Practices** CRP 2,4,5,7,8,11 **Cluster Standards** ST 2,4,6 IT 2 **Pathway Standards** ST-SM 2,4	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **1,3,4,8**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	● How do we use a scale?	● Define GPS and how it works. ● Identify uses for GPS. ● Describe and demonstrate how to use handheld Garmin GPS receivers. ● Describe and demonstrate how to geocache. ● Identify two types of data used in GIS. ● Identify three different types of Vector Data and their uses. ● Identify three types of Raster Data and their uses.			
Weeks 11-14 **Introduction to ESRI ArcGIS Online** **Cartography with Map Layouts**	● What is ESRI? ● What are the basic tools of ESRI's software? ● What is the difference between points, lines, and polygons? ● What is ArcCatalog? ● What can ArcGIS be used for? ● How do we add data? ● What is a basemap? ● How does ArcGIS Online work? ● How does one create a map layout?	● Define what ESRI stands for. ● Describe the difference between ArcGIS Online and ArcGIS Pro. ● Operate the ArcGIS interface. ● Compare and contrast points, lines, and polygons. ● Describe ArcCatalog and uses. ● Identify, select and locate ArcGIS's menus and toolbars. ● Illustrate how to add data to ArcGIS (including BaseMaps). ● Explain different geospatial file formats such as: Shapefiles, Geodatabases, Coverages and Raster. ● Describe the difference between Windows Explorer and ArcCatalog	**Exercises:** ● Introduction to ArcGIS ● Introduction to ArcCatalog ● Shapefile formats exercise ● Map layout vs. map view lab ● Map document lab exercise ● Inset map exercise ● Map template lab exercise **Independent Assignments:** ● Cartography with map layouts ● Complete map layout ● Vocabulary quiz ● Performance quiz	**Career Ready Practices** CRP 2,8,11 **Cluster Standards** ST 2,4 IT 2 **Pathway Standards** ST-ET 2,3	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **2, 4, 6**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	● What elements need to be included in a map layout?	● Recognize data view versus map view. ● Identify the common map elements to a map layout. ● Create a blank map document that can be populated with geospatial data for analysis. ● Create an inset map with an extent indicator to provide the spatial context for the main data frame. ● Demonstrate the use of a map template to create uniform looking maps. ● Set up a map page layout, determine the legend content and settings, choose which map elements to include, and export the map to share with others.			
Weeks 16-20 **Symbology and Classification**	● What is symbology? ● How can we use ArcGIS to predict deforestation?	● Explain symbology and how it is used. ● Describe the various methods for symbolizing data. ● Choose an appropriate method of symbology for any given circumstance. ● Explain what layer files are and how they can be useful.	**Exercises:** ● Single symbol classification ● Quantities – graduated colors and symbols ● Categories – unique values **Independent Assignments:** ● Symbology quiz	**Career Ready Practices** CRP 2,11 **Cluster Standards** ST 2,4,6 **Pathway Standards** ST-ET 6	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **1, 2, 4, 6**
Week 21-30 **Selection and Queries** **SQL** **Attribute Table**	● How is data organized in ArcGIS? ● How do we manipulate attribute tables?	● Identify how data is organized and stored in ArcGIS. ● Retrieve stored information on geographic features. ● Illustrate the proper approach to creating a new field to store data.	**Exercises:** ● Exploring coordinate systems ● Measuring tools ● Projection corrections ● Attribute tables	**Career Ready Practices** CRP 2,4,7,8,11 **Cluster Standards** ST 2,4,6 **Pathway Standards** ST-ET 2 ST-SM 2,4	**ELA** **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	● How do we apply GIS to a real-world, crime mapping analysis? ● What is Structured Query Language (SQL)? ● What is Structured Query Language (SQL)? ● How does all of this fit together? ● How can we apply our knowledge in a specific area of discipline within our school (i.e., work in conjunction with another course)?	● Select the appropriate data type to use when adding a field to an attribute table. ● Perform text and mathematical operations with the field calculator to manipulate data stored in an attribute table. ● Evaluate the appropriate use of the summarize and statistical functions within the attribute table. ● Demonstrate selection by attributes. ● Demonstrate selection by location. ● Apply knowledge and skills to a project, including collaborating with team members to identify a specific project of interest, implementing the project plan and analyzing results, and creating a final output (map, poster display, presentation, etc.) which assimilates the findings.	● Data manipulation ● Select by attributes ● Select by location **Independent Assignments:** ● Data frames and coordinate systems ● Information fundamentals ● Selections and queries ● Quiz **Project:** ● Crime mapping analysis project in collaboration with Forensic Science class. ● Project outputs include group discussion, student-led inquiry, hypothesis development, research, evaluation of findings, technology/oral presentations to an authentic audience, and reflection.		**1, 2, 3, 4, 5, 8** **HS-ETS1-4**
Weeks 31-33 **Final Project**	● How does all of this fit together? ● How can we apply our knowledge in a specific area of discipline within our school (i.e., work in conjunction with another course)?	● Apply knowledge and skills to a final project. ● Collaborate with team members to identify a specific project of interest. ● Implement the project plan and analyze results. ● Create a final output (map, poster display, presentation, etc.) which assimilates the findings.	**Final Project** ● Project plan assessment ● Project plan implementation ● Final output creation ● Collaborative and peer review	**Career Ready Practices** CRP 2,4,6,7,8,11,12 **Cluster Standards** ST 1,2,3,6 **Pathway Standards** ST-SM 1,2,4 ST-ET 1,2,3,5,6	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **1, 2, 4, 5, 8**
Week 34-40 **Career Interest and Personality Type**	● How does personality affect career choice?	● Determine personal strengths, weaknesses, likes and dislikes	**Personality Surveys** ● Myers-Briggs assessment.	**Career Ready Practices** CRP 1,2,4,6,7,8,10,11	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Career Exploration in Geospatial Technology	● What types of careers and opportunities are available within the field of geospatial technology? ● Why is knowing your own personality, likes and dislikes important to being successful in the future?	through personality and career choice surveys. ● Research the wide variety of Geospatial Technology career pathways. ● Research the education requirements, job outlook and salary for different careers. ● Investigate careers and college programs that align and are of interest based on surveys and career research.	● Holland code assessment. ● Virtual job shadow assignments and career survey. ● Complete career choice research and essay. ● Complete a career choice infographic.	**Cluster Standards** ST 2,4,5 **Pathway Standards** ST-ET 2 ST-SM 4	**Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science**

Syracuse City School District
Career and Technical Education Program
Course Syllabus
GIT200: Geospatial Technology 200

Program Overview

At the completion of this program, students will understand and be able to apply the fundamentals of geospatial technology, geographic information science, remote sensing, global positioning systems (GPS) and spatial data analysis. Students will complete hands-on, real-world projects, develop critical thinking, analysis and problem-solving skills. This course will contribute to the preparation of students for post-secondary education and a wide range of careers using GIS, GPS, spatial analyses, remote sensing, and digital mapping. Students will also have the opportunity to receive integrated academic and college credits.

Course Description

In this course, students will define and understand the basic concepts of Geospatial Technology, Geographic Information Systems (GIS), identify career opportunities in the field of GIS, and learn key tools used by GIS specialists. Students will participate in hands-on activities and lessons that use professional-level ESRI software to create and analyze maps and display mapping data. This course will contribute to the preparation of students for a wide range of careers using GIS, GPS, spatial analyses, remote sensing, and digital mapping.

Work-Based Learning

Students will be connected with professionals in the geospatial technology field through field trips, job shadowing and career coaching, leading to opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their experiences to document the development of their skills, including a professional resume.

Pre-Requisites

GIT 100: Geospatial Technology 100

Course Objectives

- Describe the fundamental concepts and applications of geographic information science and technology and their use in collecting, analyzing, and displaying geospatial data.
- Students will understand the basic concepts of remote sensing, Global Positioning Systems and satellite imaging.
- Describe and explain the principles of mapping, spatial analysis and coordinate systems.
- Describe different sources of spatial data and demonstrate how to acquire spatial data, including the fundamental concepts and use of Global Positioning Systems (GPS).
- Discuss the fundamental principles of remote sensing and image analysis.
- Identify remote sensing platforms and their respective functions.
- Discuss and demonstrate fundamental cartographic concepts and principles.

Integrated Academics

1. Integrated CTE ELA Credit – Students will earn one English 12 credit after completion of their GIT 400 course.
2. Integrated CTE Science Credit – Students will earn one Science credit after completion of their GIT 300 course.

Dual Enrollment College Credit

Successful completion of the 4-course CTE Geospatial Technology sequence will provide students an opportunity to earn up to nine (9) SUNY college credits in Geospatial studies from Mohawk Valley Community College (MVCC).

Equipment and Supplies

- **School will provide:** All necessary lab and classroom equipment.
- **Student will provide:** A notebook for taking and saving notes, pen/pencils, USB thumb drive to save/transfer data.

Textbook

N/A

Grading

20% Class attendance/ Participation
10% Oral Presentation
30% Assignments
20% Mid-Term Exam (Practical)
20% Final Exam (Practical)

Additional Course Policies

- Students are required to follow all classroom professionalism and safety procedures. Please review specific classroom policies.
- All work is due at the time and day specified when the assignment is given. Submission details for work to be graded will be given at the time the work is assigned.

Course Calendar

Quarter	Units of Study
1	● Getting Started in our Classroom ● Introduction to Intermediate Geospatial Technology ● Labels and Annotation ● Digitizing and Geocoding
2	● Geoprocessing Basics ● Joining, Relating and Relationship Classes ● Data Frames and Coordinate Systems
3	● Geodatabases II ● Working with Rasters ● Georeferencing ● Spatial Adjustment
4	● Digitizing II ● Georeferencing II ● Classification ● Review ● Final Project Assignment (To be completed in conjunction with affiliate course – i.e., Forensic Science, Global Studies, Economics, Living Environment, etc.)

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
GIT200: Geospatial Technology 200

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 1-2 **Getting Started in our Classroom** **Introduction to Intermediate GIS**	• What activities and cooperative strategies build a solid team? • What are the expectations for students in the Geospatial Technology program? • What is GIS and what is it used for? • What kinds of careers are available in the Geospatial Technology field?	• Develop classroom rules and re-establish relationships. • Review the G.I.S. in Geographic Information Systems. • Identify three types of Geospatial Technologies. • Create a definition for GIS. • Explain how GIS can be used to solve real-world problems. • Describe career opportunities in the geospatial field.	Assignments Participation grades Team building activity grade Classwork/review Quiz	**Career Ready Practices** CRP 2 **Cluster Standards** ST 2,6 IT 2 **Pathway Standards** ST-ET 2,3	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **HS-ESS3-6** **HS-ESS3-3**
Weeks 3-5 **Labels and Annotation**	How are features labeled? When is labeling appropriate? How can a labeling schema be saved? How can labels change the highlighted features of the map?	Add dynamic labels to a map using data layers attribute information. Make custom labels using expressions that can combine multiple fields. Change the appearance of a label using symbol selector. Convert dynamic labels to an annotation. Explain the circumstances that would require the establishment of an annotation feature class vs annotations within the map document. Add graphic text labels to a map using the drawing toolbar.	Exercises: labels and annotations Independent assignment: labels and annotations Guided Lab Exercises: data download file; dynamic hyperlinking file; field-based hyperlinking file; geodatabase hyperlinking file Participation lab exercise Classwork/participation Quiz	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** ST 2,6 IT 2 **Pathway Standards** ST-ET 2,3	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **1,4, 5**
Weeks 6-10	What is digitizing?		Guided lab exercises: points file, lines file,	**Career Ready Practices** CRP 2,5,8,11	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Digitizing and Geocoding	Why is it necessary to digitize? How is a feature digitized? What are land use and land cover classifications and what are they used for? What is geocoding and why is it important? What is geocoding used for?	Explain and demonstrate basic digitizing concepts. Create new vector data layers and edit them. Digitize and manipulate points, lines, and polygons. Explain how to add aerial imagery. Explain the difference between land use and land cover and how to use the land-based classification standards through advanced digitizing. Explain geocoding and its application. List the steps involved in converting a descriptive location to geographic coordinates.	polygons file, data download file, introduction to geocoding file, geocoding using XY coordinates file,; iMAP ServerFile Participation assignments: points, lines, polygons, introduction to geocoding, geocoding using XY coordinates, iMAP Server Independent assignments Quizzes		9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards ST 2,6 IT 2	**Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7
				Pathway Standards ST-ET 2,3	**Math**
					Science **NGSSP** **2, 4, 5**
Weeks 11-12 **Geoprocessing Basics**	What are geoprocessing tools and how are they used? How are geoprocessing tools used to answer a real-world question (ArcGIS Lesson Gallery example)? How can geoprocessing be used to analyze geographic data?	● Locate and use different Geoprocessing tools, including: - Clip. - Dissolve. - Intersect. - Buffer. - Multiple Ring Buffer. - Merge. - Append. ● Determine the appropriate tool for different situations. ● Determine the appropriate workflow for each tool to complete a given task.	Guided lab exercise: geoprocessing Exercises: clipping; dissolve and intersect; buffer and multiple ring buffer; merge and append Independent assignments: geoprocessing basics Quiz Build a graphic organizer Complete the ArcMap deforestation project (lesson gallery)	**Career Ready Practices** CRP 2,4,5,8,11	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards ST 2,6 IT 2	**Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7
				Pathway Standards ST-ET 2,3,6 ST-SM 2,4	**Math**
					Science **NGSSP** **2, 4, 8**
Weeks 13-15				**Career Ready Practices**	**ELA** 9-10R 1,2,4,7,8,9

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Joining, Relating, and Relationship Classes	What are the join, relate and relationship classes and what are they used for? How are these tools different? When should these tools be used?	Understand how to use join, relate, and relationship tools to simplify and improve data management. Identify which tool is best under which circumstance by matching a tool to a scenario. Create and save a map with joins and relates. Create a relationship class.	Guided lab exercise: joining, relating and relationship classes file Participation assignment: joining, relating and relationship classes Independent assignment: joins and relates Performance quiz Student choice mid-term project to run concurrently until end of quarter	CRP 2,4,8,11 **Cluster Standards** ST 2,6 IT 2 **Pathway Standards** ST-ET 2,6 ST-SM 2,4	9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science**
Weeks 16-20 **Data Frames and Coordinate Systems**	What are data frames? How does projection affect map making?	Identify the data frame within ArcMap. Locate the map projection within the data frame properties. Recognize the map unit. Demonstrate use of the measure tool. Identify the projection of a shapefile by exploring the layer properties. Interpret the projection of a shapefile with an unknown projection. Locate and complete the use of the project and define projection tools. Explain the difference between “on-the-fly” projection and defining projection.	Guided lab exercise: data download file Exercises: exploring coordinate systems; measuring tools; projection corrections; attribute tables; data manipulation Independent assignments: data frames and coordinate Systems Quiz	**Career Ready Practices** CRP 2,4,5,8,11 **Cluster Standards** ST 2,4,6 IT 2 **Pathway Standards** ST-ET 2,6 ST-SM 2,4	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **4, 5**
Weeks 21-23 **Geodatabases II**	What is a geodatabase and how is it used?	Identify how data is organized and stored in ArcGIS.	Exercises Guided lab exercise: geodatabases II File	**Career Ready Practices** CRP 2,4,5,8,11 **Cluster Standards**	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	How are geodatabases manipulated? How do geodatabases work in ArcCatalog?	Retrieve stored information on geographic features. Illustrate the proper approach to creating a new field to store data. Select the appropriate data type to use when adding a field to an attribute table. Perform text and mathematical operations with the field calculator to manipulate data stored in an attribute table. Evaluate the appropriate use of the summarize and statistic functions within the attribute table.	Participation assignment: geodatabases II-personal geodatabase JPEG Participation assignment: geodatabases II-geodatabase map Quiz	ST 2,4,6 IT 2 **Pathway Standards** ST-ET 2,3,6 ST-SM 2,4	9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **2, 4, 5, 6**
Weeks 24-27 **Working with Rasters** **Georeferencing**	What is a raster image? What does the resolution mean? What is georeferencing and what is it used for? How is georeferencing applied to raster imagery?	Explain what raster imagery is, the types of raster imagery, and raster resolution. Outline the steps of aligning a raster image to a map coordinate system. Describe process of georeferencing. Create a personal geodatabase. Create a georeferenced image.	Guided lab exercises: raster imagery; geodatabases II file Classwork Raster quiz Participation assignment: geodatabases II-personal geodatabase JPEG Independent assignment: geodatabases II-geodatabase map Georeferencing quiz	**Career Ready Practices** CRP 2,8,11 **Cluster Standards** ST 1 IT 2 **Pathway Standards** ST-ET 2,3,6 ST-SM 2,4	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **2, 5**
Weeks 28-31 **Spatial Adjustment**	What is a map projection? What does transformation mean? When are spatial adjustments	Explain map projection and describe different types of projections. Explain and use coordinate systems and transformations.	Guided lab exercise: spatial adjustments Participation assignment: map projections and coordinate systems	**Career Ready Practices** CRP 2,8,11 **Cluster Standards** ST 4,6 IT 2 **Pathway Standards**	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	performed and why are they necessary? What are potential sources of error?	Apply transformations and transformation methods. Create displacement links and use rubbersheeting techniques. Analyze work for potential errors.	Independent assignment: transformation Performance quiz	ST-ET 2,3,6 ST-SM 2,4	**Science** **NGSSP** **1, 2, 3, 5, 8**
Weeks 32-36 **Digitizing II**	How can digitizing be used in relation to spatial adjustment and georeferencing? What are the downsides of digitizing?	Explain and demonstrate basic digitizing concepts. Describe the uses of digitizing in relation to spatial adjustment and georeferencing concepts. Explain digitizing sources of error and limitations. Apply digitizing concepts to specific, real-world examples. Begin final quarter project utilizing techniques from the entire year.	Guided lab exercise: Digitizing II; Digitizing II File Participation assignments #1 and #2 Performance quiz Student-choice project selected to run concurrently until the end of the quarter	**Career Ready Practices** CRP 2,8,11 **Cluster Standards** ST 4,6 IT 2 **Pathway Standards** ST-ET 2,3,5 ST-SM 2,4	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science**
Weeks 37-40 **Georeferencing II** **Classification** **Review** **Final Project Assignment**	How can georeferencing be used for a scanned map? What are classifications in geospatial terms? What are the different types of classification schemas? How does the classification and symbology change the viewer perspective of the data?	Create a georeferenced image from a scanned paper map. Describe the classification methods available to sort data for visual representation in a map. Explain and demonstrate concepts behind standard classification methods. Identify scenario/usage of each classification method. Customize and manipulate symbology in a map. Explain when and how to use categories, quantiles and other symbology schemas. Present and evaluate final projects.	Guided lab exercises: single symbol classification file, quantities-graduated colors and symbols file, categories-unique values file Participation assignments: hospital symbology, graduated colors, graduated symbols, unique value assignment Final project presentations and review Final exam (includes practical portion)	**Career Ready Practices** CRP 2,4,8 **Cluster Standards** ST 1 **Pathway Standards** ST-ET 2,3,5 ST-SM 2,4	**ELA** 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,4,6,7,8,9 9-10WHST 2,4,5,6,7 **Math** **Science** **NGSSP** **1, 2, 4, 5, 8**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	What did you learn over the course of the year?	Demonstrate and apply knowledge and skills learned throughout the year.			

Syracuse City School District
Career and Technical Education Program
Course Syllabus
GIT300: Geospatial Technology 300

Program Overview

At the completion of this program, students will understand and be able to apply the fundamentals of geospatial technology, geographic information science, remote sensing, global positioning systems (GPS) and spatial data analysis. Students will complete hands-on, real-world projects, develop critical thinking, analysis and problem-solving skills. This course will contribute to the preparation of students for post-secondary education and a wide range of careers using GIS, GPS, spatial analyses, remote sensing, and digital mapping. Students will also have the opportunity to receive integrated academic and college credits.

Course Description

In this course, students will continue to build on the basic concepts of Geospatial Technology as they collect, analyze and display geospatial data, and use the data to answer authentic questions. Students will learn about the electromagnetic spectrum and how sensors can show very different images using wavelengths beyond the visible spectrum. Students will have the opportunity to analyze remote sensing platforms and use Landsat imagery, and use it for change detection and analysis. Students will participate in hands-on activities and lessons that use professional-level software to create and analyze maps and display mapping data. Geospatial Technology students will also work collaboratively with students in the RPAS (Remotely Piloted Aircraft System) Pathway on a long-term project combining the two disciplines. Finally, students will also work to prepare for the STARS Geospatial Certification Exam.

Work-Based Learning

Students will be connected with professionals in the geospatial technology field through field trips, job shadowing and career coaching, leading to opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their experiences to document the development of their skills, including a professional resume.

Pre-Requisites

GIT 100: Geospatial Technology 100
GIT 200: Geospatial Technology 200

Course Objectives

By the end of this course, students will be able to:

- Describe and perform the fundamental concepts and applications of geographic information science and technology and their use in collecting, analyzing, and displaying geospatial data.
- Describe and explain how Geospatial Technologies can be utilized for decision-making across a wide variety of disciplines and industries.
- Explain what the electromagnetic spectrum is and how sensors can take advantage of the different wavelengths beyond what we can see.
- Identify and analyze remote sensing platforms and their respective functions.
- Describe Landsat imagery and how to use it for change detection and analysis.
- Create a research poster including an abstract, references and figures.
- Use data from the RPAS program in a combined project.

Integrated Academics

1. Integrated CTE ELA Credit – Students will earn one English 12 credit after completion of their GIT 400 course.
2. Integrated CTE Science Credit – Students will earn one Science credit after completion of their GIT 300 course.

Dual Enrollment College Credit

Successful completion of the 4-course CTE Geospatial Technology sequence will provide students an opportunity to earn up to nine (9) SUNY college credits in Geospatial studies from Mohawk Valley Community College (MVCC).

Equipment and Supplies

- **School will provide:** All necessary lab and classroom equipment.
- **Student will provide:** A notebook for taking and saving notes, pen/pencils, USB thumb drive to save/transfer data.

Textbook

N/A

Grading

20% Class attendance/ Participation
10% Oral Presentation
30% Assignments
20% Mid-Term Exam (Practical)
20% Final Exam (Practical)

Additional Course Policies

- Students are required to follow all classroom professionalism and safety procedures. Please review specific classroom policies.
- All work is due at the time and day specified when the assignment is given. Submission details for work to be graded will be given at the time the work is assigned.

Course Calendar

Quarter	Units of Study
1	● Getting Started in our Classroom: SMART Goals ● Geospatial Technology Skills Review ● Geospatial Technology for Problem-Solving and Decision-Making ● Overview of STARS (or other Industry) Geospatial Certification and Capstone Project ● Technical Skills Review
2	● Remote Sensing and the Electromagnetic Spectrum ● Landsat Imagery and Change Detection
3	● Preparing for STARS (or other Industry) Certification: o Understanding Geospatial Data and ArcGIS Software o GIS Tools and Processes o Georeferencing, Map Projections and Reprojecting o Symbology and Classification
4	● STARS Certification (or other Industry) Exam for Eligible Juniors ● Collaborative Geospatial Mapping Project in Conjunction with Drone Technology/RPAS Program using ArcGIS Pro ● College Planning, Research and Preparedness

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
GIT300: Geospatial Technology 300

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 1-5 **Getting Started in our Classroom: SMART Goals** **Geospatial Technology Skills Review** **Geospatial Technology for Problem-Solving and Decision-Making**	• How can we track our SMART goals for the future? • What are the key vocabulary terms and concepts used in geospatial technology? • What skillsets are used in ArcGIS to perform spatial analysis? • Why is geospatial technology important and how is it used in our everyday lives? • How is geospatial technology applied to solve problems and inform decision-making processes?	• Describe a variety of disciplines and career pathways that geospatial technology skills can be applied to. • Describe how geospatial technology is used to: analyze data, perform spatial analyses, visualize information, and answer questions. • Define key geospatial terms and concepts, and explain how they are related. • Perform basic and some advanced geospatial analyses using ESRI ArcGIS software. • Define academic and career goals.	• Current events article summary from ArcNews, ArcUser or similar trade journal • Vocabulary exam • Key concept exam • Computer application performance task: quiz for key ArcMap functions/tools • SMART goals poster and presentation	**Career Ready Practices** CRP 1,2,4,7,11 **Cluster Standards** ST 2,5 IT 11 **Pathway Standards** ST-SM 3 ST-ET 2	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP 4, 8
Week 6-7 **Overview of STARS (or other) Geospatial Certification and Capstone Project**	• What is the STARS Geospatial Certification Program and why is it beneficial? • What is the Geospatial Project Management Model? • What is the process for becoming STARS certified? • What is URISA and the code of ethics for GIS professionals?	• Explain the STARS certification process. • Explain the prerequisites and benefits of STARS certification. • Describe the Geospatial Project Management Model. • Explain the assessment and points system for evaluation. • Identify and describe the files and reports required for submission.	• Signature of acceptance to acknowledge certification requirements • Quiz on STARS certification procedures	**Career Ready Practices** CRP 2,10,11 **Cluster Standards** ST 4 **Pathway Standards** ST-SM 3	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
		• Describe the procedure and schedule for filing an application. • Examine the GIS professional code of ethics.			
Weeks 8-10 **Technical Skills Review**	• What are the basic and most frequent tools used in ArcGIS Pro? • Why is file management and data organization important? • How are project activity, errors, and accuracy tracked to improve future efficiency?	• Explain what network drives, shared folders, Windows Explorer, ArcCatalog, and files do. • Apply common file management protocols. • Identify different file formats and extensions and know what data they represent. • Apply appropriate Geospatial tools in ArcGIS Pro for the correct functions. • Utilize Geospatial tools for projected outcomes.	• Geospatial terms and file extensions vocabulary quiz • Tools prediction worksheet • File management and organization activity • Data log and activity tracking spreadsheet development • Review test	**Career Ready Practices** CRP 2,4,7,9 **Cluster Standards** ST 1,6 **Pathway Standards** ST-SM 2 ST-ET 1,2	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** **NGSSP-1**
Weeks 11-15 **Remote Sensing and the Electromagnetic Spectrum**	• What is remote sensing and why is it important? • What is the electromagnetic spectrum? • How can energy be transmitted? • What is the relationship between the energy, wavelength and frequency of a wave? • How do sensors on satellites take advantage of the electromagnetic spectrum? • What can be 'seen' using wavelengths outside of the visible range?	• Define remote sensing and applications. • Define the electromagnetic spectrum. • Explain the relationship between the size of a wave and frequency. • Explain the transmission of energy. • Explain the relationship between a wave's energy and wavelength. • Compare all EM waves in terms of their energy and wavelengths. • Describe how sensors on satellites can take advantage of the electromagnetic spectrum. • Explain the differences in wavelengths and how they are used.	• Video with discussion worksheet • Hands on flashlight and use of prism activity • Self-assessment checklist • Complete a graphic organizer • Unit test	**Career Ready Practices** CRP 1,4,5,6,7,8,11 **Cluster Standards** ST 2,6 **Pathway Standards** ST-SM 1,2 ST-ET 2,4,5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSS-2,3,4,5 **HS-PS4-2** **HS-PS4-3** **HS-PS4-4** **HS-PS4-5**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
		• Define spectral imagery and bands in Rasters.			
Weeks 16-20 **Landsat Imagery and Change Detection**	• What is the Landsat satellite program and why is it important? • How are long-term changes of our planet monitored? • What has been learned from recent advances in remote sensing technology? • How does increasing population impact the landscape and natural resources of our planet?	• Investigate remote sensing imagery from various locations throughout the world. • Explain what Landsat imagery is, how it is collected, how to download it, and what it can be used for. • Describe change detection and how it affects the Earth. • Visualize land cover change over a certain time period. • Research specific locations on earth and their characteristics. • Demonstrate how to stimulate and train memory through pattern recognition. • Develop research skills. • Create a research poster including abstract, figures and cited sources.	• Complete Landsat imagery lab in Landsat viewer app • Discuss EarthShots gallery in classroom groups • Complete journal article for recent technology advances • Read Earth Observatory articles and discuss with a follow- up quiz • Submit research for change detection poster • Complete abstract for research poster • Submit 24 x 36-inch change detection research poster, with student topic of choice	**Career Ready Practices** CRP 2,4,5,6,9,11 **Cluster Standards** ST 2,4,6 **Pathway Standards** ST-SM 1,4 ST-ET 5,6	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-6, 7, 8 **HS-ESS2-4** **HS-ESS3-1** **HS-ESS3-3** **HS-ESS3-6**
Weeks 21-23 **Preparing for STARS (or other industry) Exam Review: Understanding Geospatial Data and ArcGIS Software**	• What are the basic data formats in geospatial technology and what do they represent? • What are the primary geospatial software techniques and how are they applied? • How is metadata used and why is it important?	• Distinguish the differences between raster and vector data. • Demonstrate use of ArcCatalog software. • Manage geospatial data. • Utilize metadata structures and formats. • Manage a data inventory.	• ArcMap software student exercise • ArcCatalog student exercise • Quiz: spatial data vocabulary; software tools functions; metadata • Performance task: navigating ArcMap and ArcCatalog software	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** ST 2,4 **Pathway Standards** ST-SM 2 ST-ET 5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-7,8

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 24-25 **Preparing for STARS (or other) Exam Review: GIS Tools and Processes**	• When should geospatial data be processed and/or manipulated and how is it done? • How is geocoding important to spatial data analysis?	• Use the processing tools Joins/Relates, Buffer, Clip, Dissolve and Intersect in ArcMap software to edit/create new datasets. • Geocode address information and edit/create geospatial data layers.	• Complete a geocoding performance task exercise • Complete a heads-up digitizing exercise • Performance task quiz: Geoprocessing Tools	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** ST-SM 2 ST-ET 5 **Pathway Standards** ST-SM 2 ST-ET 5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-7,8
Weeks 26-27 **Preparing for STARS (or other) Exam Review: Georeferencing, Map Projections and Reprojecting**	• What is the importance of having a spatial reference for data layers? • How is a reference for layers created when one does not exist? • Why is a correct map projection important?	• Create a spatial reference for an image file in ArcMap software using control points. • Explain and demonstrate the residual error and total error by using the root mean square method. • Describe the most commonly used map projections and explain the needs they address.	• Performance task quiz: georeference an aerial photograph in ArcMap • Quiz: map projections and their uses	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** ST 2,4 **Pathway Standards** ST-SM 2 ST-ET 5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-7,8 **HS-ETS1-4**
Weeks 28-30 **Preparing for STARS Exam Review: Symbology and Classification**	• How can changing symbology emphasize different results of an analysis? • How can different symbology influence an audiences' interpretation of the data? • What are the responsibilities of a good cartographer?	• Read and summarize an article such as 'How to Lie with Maps'. • Articulate how presentation can influence interpretation. • Apply symbology methods appropriate to the task. • Explain ethical mapping.	• Essay: How to Lie with Maps • Quiz: Symbology map types and uses	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** ST 2,4 **Pathway Standards** ST-SM 2 ST-ET 5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSS-7,**8**
Week 31-38 **STARS Certification Exam** **Collaborative Mapping Geospatial Project in Conjunction**	• What does it take to be successful in college and the workplace? • How do I link academic knowledge to everyday practice?	Demonstrate and apply the following skills to collaborative project: • Communication skills. • Interpersonal skills. • Problem solving skills.	• STARS (or other industry) Final Certification Exam • Community project/internship/work study completion	**Career Ready Practices** CRP 1,2,4,5,6,7,8,9,10, 11,12 **Cluster Standards** ST 1,2,3,6 **Pathway Standards**	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
with Drone Technology/RPAS Program using ArcGIS Pro	● How can geospatial technology and drone technology work together to complete a real-world project? ● How is collaboration over a long-term project different from working independently? ● What types of problems can be addressed using these related technologies?	● Team work skills. ● Analytical skills. ● Strong work ethic. ● Organizational skills. ● Leadership skills. ● Initiative.	● Work study/internship may run concurrently with capstone project, depending on selected activities	ST-SM 1,2,4 ST-ET 1,2,3,5,6	**Science** NGSS-1, 3, 4, 7, 8 HS-ESS2-2 HS-ESS2-5 HS-ESS3-1 HS-ESS3-3 HS-ESS3-6
Weeks 39-40 **College Planning, Research and Preparedness**	● What are my plans for after graduation? ● What career pathways am I interested in? ● Which colleges have the programs I want? ● How do I use my past surveys and goals to develop awareness of my strengths, values and interests to better enable future direction?	● Research colleges and college programs. ● Determine individual strengths, weaknesses, likes and dislikes as related to jobs and careers. ● Research the different types of education opportunities. ● Develop a plan for senior year that aligns with their post-high school goals.	● Completed college research assignment ● Completed career interest survey and employability profile ● Revised SMART goals ● Completed post-high school plan	**Career Ready Practices** CRP 2,4,6,7,8,10,11 **Cluster Standards** ST 1,2,3,6 **Pathway Standards** ST-SM 1,2,4 ST-ET 1,2,3,5,6	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science**

Syracuse City School District
Career and Technical Education Program
Course Syllabus
GIT400: Geospatial Technology 400

Program Overview

At the completion of this program, students will understand and be able to apply the fundamentals of geospatial technology, geographic information science, remote sensing, global positioning systems (GPS) and spatial data analysis. Students will complete hands-on, real-world projects, develop critical thinking, analysis and problem-solving skills. This course will contribute to the preparation of students for post-secondary education and a wide range of careers using GIS, GPS, spatial analyses, remote sensing, and digital mapping. Students will also have the opportunity to receive integrated academic and college credits.

Course Description

This course will complete the Geospatial Technology sequence. Students will complete an approved project, including all project aspects, from project planning to implementation and presentation of results. Students will review Geospatial software skills and knowledge to prepare for the STARS (or other industry) Certification. Students will have the opportunity to take the STARS (or other) Certification exam at the end of the year. The STARS Exam covers material from all previous Geospatial Technology courses, and prepares students for either an entry-level Geospatial Technician position or college.

Work-Based Learning

Students will be connected with professionals in the geospatial technology field through field trips, job shadowing and career coaching, leading to opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their experiences to document the development of their skills, including a professional resume.

Pre-Requisites

GIT 100: Geospatial Technology 100
GIT 200: Geospatial Technology 200
GIT 300: Geospatial Technology 300

Course Objectives

By the end of this course, students will be able to:

- Analyze and debate the future of geospatial technologies, ethical questions related to the field, and societal implications.
- Research college and career pathway choices, apply for college, write a college essay, and identify career outlooks and opportunities.
- Create a financial budget and demonstrate financial awareness for post-high school planning.
- Understand the project planning process, from defining a problem statement through project implementation and results reporting.
- Develop research papers, essays or project reports using an approved college format style.
- Pass the STARS (or other industry) Project and Certification Exam.
- Explain the importance of a resume and cover letter, and demonstrate how to write them.
- Explain the job application process and how to apply for jobs, internships and scholarships.
- Develop a professional CTE portfolio.

Integrated Academics

1. Integrated CTE ELA Credit – Students will earn one English 12 credit after completion of their GIT 400 course.

2. Integrated CTE Science Credit – Students will earn one Science credit after completion of their GIT 300 course.

Dual Enrollment College Credit

Successful completion of the 4-course CTE Geospatial Technology sequence will provide students an opportunity to earn up to nine (9) SUNY college credits in Geospatial studies from Mohawk Valley Community College (MVCC).

Equipment and Supplies

- **School will provide:** All necessary lab and classroom equipment.
- **Student will provide:** A notebook for taking and saving notes, pen/pencils, USB thumb drive to save/transfer data.

Textbook

N/A

Grading

20% Class attendance/ Participation
10% Oral Presentation
30% Assignments
20% Mid-Term Exam (Practical)
20% Final Exam (Practical)

Additional Course Policies

- Students are required to follow all classroom professionalism and safety procedures. Please review specific classroom policies.
- All work is due at the time and day specified when the assignment is given. Submission details for work to be graded will be given at the time the work is assigned.

Course Calendar

Quarter	Units of Study

1	● SMART Goals Review
	● Geospatial Technology Skills Review
	● Planning for the Future, College Preparedness and Application
	  o Financial Planning
	  o College Preparedness and Exploration
	  o College Essay Writing and Review
	  o College Application Process

2	● Geospatial Certification Review ● Project Management Overview and Planning ● Project Implementation ● Project Results and Reporting

3	● Preparing for Certification Exam:
	  o Geospatial Data and ArcGIS Software Review
	  o GIS Tools and Processes Review
	  o Georeferencing, Map Projections and Reprojecting Review
	  o Symbology and Classification Review

4	● Industry Certification Exam ● CTE Portfolio Development and Wrap-Up ● Social Media Footprint and Networking

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
GIT400: Geospatial Technology 400

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 1-3 **SMART Goals Review** **Geospatial Technology Skills Review**	• SMART Goals – How should they be refined for the senior year? • What are the key vocabulary terms and concepts used in geospatial technology? • What skillsets are used in ArcGIS to perform spatial analysis? • Why is geospatial technology important and how is it used in our everyday lives? • How do we apply geospatial technology to solve problems and inform decision-making processes?	• Understand a variety of disciplines and career pathways that geospatial technology skills can be applied to. • Describe how geospatial technology is used to: analyze data, perform spatial analyses, visualize information, and answer questions. • Define key geospatial terms and concepts, and understand how they are related. • Perform basic and some advanced geospatial analyses using ESRI ArcGIS software.	• SMART Goals poster and plan • Current events article summary from ArcNews, ArcUser or similar trade journal • Vocabulary exam • Key concept exam • Computer application performance task: quiz for key ArcMap functions/tools	**Career Ready Practices** CRP 1,2,4,7,11 **Cluster Standards** ST 2,5 IT 11 **Pathway Standards** ST-SM 3 ST-ET 2	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-4,8 HS-ESS3-6
Weeks 4-10 **Planning for the Future, College Preparedness and Application:** **Financial Planning** **College Preparedness and Exploration** **College Essay Writing and Review**	• How do I build a successful life after high school? • What do I want my future to look like? • What college or career am I interested in? • How do I apply for college? • How do I write a college essay? • What is financial stability and why is it important to have a real-life budget?	• Identify research and apply to at least four colleges of choice. • Understand the FAFSA application process. • Demonstrate financial knowledge about after-school budgets, including rent, auto costs, food, etc. • Write a college essay for submission. • Request letters of recommendation. • Understand the job application process. • Find job boards and postings related to their area of interest.	• College essay submittal • College research assignment • Job posting assignment • Real-world budget in MS Excel that includes post-high school estimates • Virtual job shadow assignments • Post high school plan	**Career Ready Practices** CRP 1,2,3,4,5,7,8,10 **Cluster Standards** ST 1,2,3,6 **Pathway Standards** ST-SM 1,2,4 ST-ET 1,2,3,5,6	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
College Application Process		• Create a realistic budget that can be used post-high school. • Use NYS and IRS tax table information.			
Week 11 **Geospatial Certification Review**	• What is the Geospatial Certification Program and why is it beneficial? • What is the Geospatial Project Management Model? • What is the process for becoming certified? • What is URISA and the code of ethics for GIS professionals?	• Understand the certification process. • Explain the prerequisites. • Discuss the benefits of STARS certification. • Understand the assessment and points system for evaluation. • Identify and describe the files and reports required for submission. • Understand the procedure and schedule for filing an application. • Examine the GIS professional code of ethics.	• Signature of acceptance to acknowledge certification requirements • Quiz on certification procedures	**Career Ready Practices** CRP 2,10,11 **Cluster Standards** ST 4 **Pathway Standards** ST-SM 3	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science**
Weeks 12-15 **Project Management Overview and Planning**	• What are the different components of a complete project plan • How do the project plan components relate to each other? • Why is each one critical to the overall project?	• Understand what a good project plan looks like (objective, problem statement. • Apply common project management terminology. • Identify a problem and explain the process to answer or address it. • Outline the functional requirements of a project plan. • Examine the importance of project planning. • Define the objective. • Define the problem statement. • Design a feasible study project.	• Project planning vocabulary quiz • Project planning worksheets: pre-problem brainstorming, problem identification, stakeholder, project objective, project title, project feasibility, functional requirements • Completed project plan including: title; problem statement; project objective; stakeholder review; area of interest; projected feasibility; functional requirements; summary and schedule	**Career Ready Practices** CRP 1,2,4,7,9 **Cluster Standards** ST 1,6 **Pathway Standards** ST-SM 2 ST-ET 1,2	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-1

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
		Identify stakeholders and their function.			
Weeks 16-17 **Project Implementation**	• How is a project started? • What are the steps in implementing a successful project? • How do we acquire data and resources for a project? • What is metadata and how do we document it? • Which data processing and spatial analyses tools will be used for the project? • How should the data be presented in a layout? • How can symbology be utilized to represent data results? What deliverables are necessary to complete the project?	• Describe steps for successful project completion. • Acquire and coordinate project resources. • Identify, research, find and acquire data and shapefile. • Format, manipulate, and/or reproject datasets. • Validate and catalog metadata. • Collect data manually, as necessary. • Process and analyze data. Create map layouts, visualizations and other deliverables that inform the project purpose and results.	• Project implementation – metadata exercise • Layout assessment worksheet • Metadata catalog • Map layouts • Project deliverables and/or visualizations • Self-assessment checklist Schedule assessment	**Career Ready Practices** CRP 1,5,6,7,8,11 **Cluster Standards** ST 2,6 **Pathway Standards** ST-SM 1,2 ST-ET 2,4,5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-2,3,4,5 HS-ESS2-2 HS-ESS3-3
Weeks 18-20 **Project Results and Reporting**	How do we document spatial analysis steps, results and conclusions?	• Develop a written report that covers the entire project management process, including map layouts, figures and conclusions. • Develop an oral presentation explaining results and map layouts. Format a proper presentation with all components, including title page, table of contents, planning process steps, implementation process, results and appendices.	• Completed project written report including all elements • Completed oral presentation including all elements Submission and grading conducted by nationally-recognized STARS certification team	**Career Ready Practices** CRP 2,4,5,6,9,11 **Cluster Standards** ST 2,4,6 **Pathway Standards** ST-SM 1,4 ST-ET 5,6	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-6,7,8 HS-ESS3-4 HS-ESS3-6
Weeks 21-23				**Career Ready Practices** CRP 2,4,8,11	**ELA** 11-12R 1,2,4,7,8,9

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Preparing for Certification Exam: Geospatial Data and ArcGIS Software Review	• What are the basic data formats in geospatial technology and what do they represent? • What are the primary geospatial software techniques and how are they applied? • How do we use metadata and why is it important?	• Distinguish the differences between raster and vector data. • Demonstrate use of ArcCatalog software. • Demonstrate management of geospatial data. • Explain metadata structures and formats. • Manage a data inventory.	• ArcMap software student exercise • ArcCatalog student exercise • Quiz: spatial data vocabulary; software tools functions; metadata • Performance task: navigating ArcMap and ArcCatalog software	**Cluster Standards** ST 2,4 **Pathway Standards** ST-SM 2 ST-ET 5	11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-7,8
Weeks 24-25 **Preparing for Certification Exam: GIS Tools and Processes Review**	• When should we process and/or manipulate geospatial data and how do we do it? • How is geocoding important to spatial data analysis?	• Use the processing tools Joins/Relates, Buffer, Clip, Dissolve and Intersect in ArcMap software to edit/create new datasets. • Geocode to address information and edit/create geospatial data layers.	• Geocoding performance task exercise • Heads-up digitizing exercise • Performance task quiz: geoprocessing tools	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** ST 2,4 **Pathway Standards** ST-SM 2 ST-ET 5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-7,8
Weeks 26-27 **Preparing for Certification Exam: Georeferencing, Map Projections and Reprojecting**	• What is the importance of having a spatial reference for data layers, and how do we create a reference for layers without an existing one? • Why is a correct map projection important?	• Create a spatial reference for an image file in ArcMap software using control points. • Understand the residual error and total error by using the root mean square method. • Discuss the most commonly used map projections and the needs they address.	• Performance task quiz: georeference an aerial photograph in ArcMap • Quiz: map projections and their uses	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** ST 2,4 **Pathway Standards** ST-SM 2 ST-ET 5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-7,8
Weeks 28-30 **Preparing for Certification Exam: Symbology and Classification Review**	• How can changing symbology emphasize different results of an analysis? • How can different symbology influence an audience's interpretation of the data?	• Summarize professional article • Recognize how the use of symbology influences interpretation. • Articulate which symbology methods to apply.	• Summary of how presentation influences interpretation • Quiz: symbology map types and uses	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** ST 2,4 **Pathway Standards** ST-SM 2	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	• What are the responsibilities of a good cartographer?	• Understand ethical mapping.		ST-ET 5	**Science** NGSSP-7,8
Weeks 31 - 40 **Industry Certification Exam** **CTE Portfolio Development and Wrap Up** **Social Media Footprint and Networking**	• What does it take to be successful in college and the workplace? • How do I write a professional resume and why is it important? • What is a cover letter and when do I use it? • What is a professional portfolio? • How do I complete a college-level project report? • How do I practice for college and/or job interviews? • What is networking and where do I start? • Why is my social media presence important, how do employers/colleges access it, and how can I make sure it represents me in a positive light?	Students will demonstrate: • Communication skills. • Interpersonal skills. • Oral presentation skills. • Professional writing skills. • Research skills. • The ability to analyze and, if necessary, 'clean' their social media footprint.	• Final certification exam • Professional cover letter • Project report with complete table of contents • Analysis of social media footprint and plan to 'clean' it, if necessary • Student achievements and awards list • Employability profile • References • LinkedIn account • CTE portfolio	**Career Ready Practices** CRP 1,2,4,5,6,7,8,9,10,11,12 **Cluster Standards** ST 1,2,3,6 **Pathway Standards** ST-SM 1,2,4 ST-ET 1,2,3,5,6	**ELA** 11-12R 1,2,4,7,8,9 11-12W 2,4,5,6 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,4,6,7,8,9 11-12WHST 2,4,5,6,7 **Math** **Science** NGSSP-3,4,7,8

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B. Teacher Certification

> *The self-study team reviews the teacher certification and training of the school or BOCES' instructional, paraprofessional, and support staff who deliver services within the CTE program seeking approval. New York State teacher certification review should include both CTE teachers and teachers of academic content within the proposed program.*

Process

- Reviewers confirm that all CTE teachers hold appropriate New York State teacher certification for the program in which they will teach.
- Reviewers confirm that all teachers of academic content hold appropriate New York State teacher certification for the program in which they will teach.
- Reviewers confirm the appropriate NCLB highly-qualified status for the CTE teachers in programs offering academic credit.
- Reviewers confirm that staff delivering instruction in programs where certification, licensure, or registration by an external entity have acquired the necessary credentials.
- Reviewers confirm that professional development opportunities exist within the school district or BOCES for instructional, paraprofessional, and support staff to acquire and improve skills and knowledge related to instructional enhancement of the CTE program.

Documentation

Recommendations from the review of teacher certification should be included in the self-study report and reviewed by the external committee. A list of all teachers for the program and the New York State teacher certification(s) held by each must be attached to the Application for Career and Technical Education Program Approval.

Resources

New York State Office of Teaching Initiatives
http://www.highered.nysed.gov/tcert/certificate/certprocess.htm

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
◉	JESSICA	TEIFKE		PHOENIX	NY	N/A

Certificate Information for New York State Teaching Certificate Holder

Certificate Title	Issue / Effective Date	Expiration Date	Status
Geospatial Intelligence / Geographic Information Systems 7-12 Transitional A Certificate	08/29/2017	08/31/2023	Issued

Certified by the State of New York solely for purposes of employment by the City School District of the City of New York and the operation of the School District.

Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
◉	JOSEPH	SMITH		MANLIUS	NY	Registered Active

Certificate Information for New York State Teaching Certificate Holder

Certificate Title	Issue / Effective Date	Expiration Date	Status
Biology 7-12 Transitional B Certificate	07/02/2014	05/22/2015	Expired
Biology (Grades 5-9) Transitional B Certificate	02/01/2014	05/22/2015	Expired
Biology 7-12 Initial Certificate	05/27/2015	01/31/2021	Expired
Chemistry 7-12 Initial Certificate	09/27/2017	01/31/2023	Issued
Biology 7-12 Professional Certificate	11/30/2019		Issued
Chemistry 7-12 Professional Certificate	03/29/2019		Issued

Certified by the State of New York solely for purposes of employment by the City School District of the City of New York and the operation of the School District.

Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
◉	ERIC	MANGOLD	G	JAMESVILLE	NY	Registered Active

View Detail

Certificate Information for New York State Teaching Certificate Holder

Certificate Title	Issue / Effective Date	Expiration Date	Status
English Language Arts 7-12 Initial Certificate	02/01/2008	01/31/2013	Expired
English Language Arts 7-12 Professional Certificate	02/01/2013		Issued

Certified by the State of New York solely for purposes of employment by the City School District of the City of New York and the operation of the School District.

Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
◉	MATTHEW	CARON	C	MARCELLUS	NY	Registered Active

View Detail

Certificate Information for New York State Teaching Certificate Holder

Certificate Title	Issue / Effective Date	Expiration Date	Status
Special Education Permanent Certificate	02/01/2002		Issued
Coordinator of Work-Based Learning Programs for Career Awareness Extension Permanent Extension	11/28/2018		Issued
Special Education Provisional Certificate	02/01/2001	01/31/2006	Expired

Certified by the State of New York solely for purposes of employment by the City School District of the City of New York and the operation of the School District.

C. Technical Assessments Based on Industry Standards

> *The self-study team reviews the selection of a technical assessment for the program seeking approval. The selected technical assessment must be nationally-recognized and based on industry standards. It must be available to students enrolled in the approved program and must consist of three parts: written, student demonstration, and student project. Successful completion of the technical assessment is not a requirement for high school graduation, but is required for a student to earn a technical endorsement on the high school diploma*
>
> *The New York State Education Department does not approve, endorse, or certify any technical assessment.*

Process

- The school district or BOCES selects an appropriate industry standard technical assessment to measure student proficiency in the technical field for the program. The school district or BOCES may select a New York State licensing examination as the technical assessment.
- The school district or BOCES determines the scheduling and administration of technical assessments. It is not required that the technical assessment be administered at the conclusion of the program. Parts may be administered throughout a student's learning experience.
- The school district or BOCES determines the number of times a student may take a particular technical assessment.
- The school district or BOCES must comply with existing laws and regulations related to administration of technical assessments to students with disabling conditions and provide appropriate testing modifications. Restrictions on student eligibility for testing are the responsibility of the test producer.
- In the absence of an appropriate nationally-recognized industry standard based assessment, a consortium of local, regional, state, business and industry representatives may be formed to produce such an instrument.
    - Technical assessments must meet generally recognized psychometric criteria. Therefore, the consortium approach may be expensive because of the many steps required to insure assessment validity, reliability, and security.
    - An existing CTE advisory committee or craft committee is not a technical assessment consortium. The school district or BOCES must ensure that the assessment consortium adequately represents current business and industry standards for the specific career area for the program.
- Where an appropriate technical assessment exists, but consists of only one or two parts, a consortium must be formed to develop the missing part(s).
- The school district or BOCES must develop a system to collect student-level and program-level data on performance on the technical assessment.

Documentation

Recommendations on the technical assessment selection should be included in the self-study report and reviewed by the external committee.

Resources

New York State graduation requirements: http://www.emsc.nysed.gov/part100/pages/1005.html

Information on the Technical Endorsement: http://www.emsc.nysed.gov/cte/ctepolicy/endorsement.html

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

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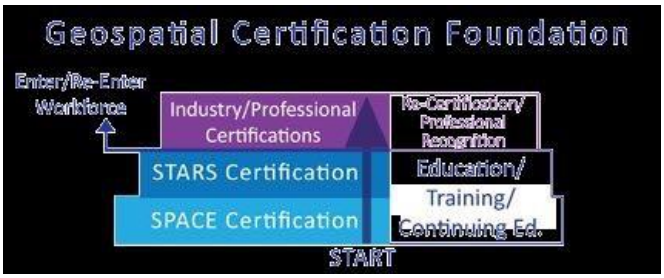
All About Geospatial Certification

Certification Main | SPACE Certification | STARS Certification | Beyond SPACE and STARS

Certification Main

Certifications are an important part of any technology. They let prospective employers know your students were motivated to begin and successfully complete a process to show their value and strengths. The STARS and SPACE Certifications provide this opportunity for the geospatial industry. Our focus on process as well as skills give your students the foundation for a great career and put students on a path to future certifications to continually redefine themselves.

We believe education is a journey from early education to retirement, so we strive to put students on a path with a strong foundation and knowledge of best practices. Start here and Start now. A career that can reward your students for a lifetime begins with us!



Why You Need Certification...

Using our certifications gives your students a means to show potential employers a measured, standardized set of skills. This is a great asset for your program to attract potential students by providing a nationally competitive standard. Organizations can use this as a starting point or as a compliment to existing programs of study/certificate programs.

Certification vs. Certificate

Measures Application of Experience Via Assessment	Recognizes Completion of an Education Process
Awarded by Independent Professional Organization	Awarded by Educational Institution
Competencies Defined by Needs Industry-Wide	Based on Content Defined Locally/Organizationally
Demonstrates Applied Set of Skills and Knowledge	Demonstrates Completion of Course of Study

Behind The Certification

Certifications are created with industry needs in mind. This leads to two crucial components for certification success: Standards Mapped to Industry Needs and Industry Backing. The STARS and SPACE certifications call upon a variety of sources to make sure they have the most complete requirements.

Certification standards play a crucial role in the SPACE and STARS Certification. STARS was developed in 2003 with standards in mind and mapped to the Geospatial Technology Competency Model, the base for the DOL commissioned Geospatial Technology Apprenticeship model. As standards were developed STARS was a source for the new Geospatial Technology Competency Model released in 2010 and meets the core geospatial skills as well as addressing many of the non-geospatial skills. The new SPACE Certification follows these same traditions.

On the industry side, STARS is sponsored by the Mississippi Enterprise for Technology (MsET), a Center of Excellence in Geospatial Technology at NASA's John C. Stennis Space Center, www.mset.org. MsET member companies consist of some of the best and brightest innovators in the geospatial technology field.

All About Geospatial Certification

The SPACE Certification

The SPACE Certification is based on assessing an individual's user-level geospatial foundation. Geospatial technology is spread throughout many industries and high-growth job categories - becoming an essential skillset in many industries. The SPACE certification is a means to qualify student proficiency in geospatial skills and application of those skills to a particular career path. This certification bridges the gap between students looking towards a bright future in a particular career pathway and established professionals who need to add geospatial skills.

National, Industry Backed

The SPACE certifications are independently backed by the Enterprise for Geospatial Solutions (EIGS), Mississippi Enterprise for Technology (MsET), and the Magnolia Business Alliance (MBA). These organizations include some of the most innovative and influential companies in the geospatial industry.

Scalable And Modular Solutions

We believe in providing total solutions that allow room for expansion and are easily adapted to a school's unique needs. The curriculum mapped to this certification fits multiple career pathways. If your school is looking for a new technology that is cross curricular and relevant to much of the student body, the SPACE certification is available for up to eight different career pathways. If your school needs to enhance or expand an existing career pathway, SPACE can provide a relevant, unique, and measurable alternative.

Curriculum leading to the SPACE certification is also the same as the first 180 hrs of the STARS Certification. Students can gain valuable experience on the way to SPACE at which point schools have the option to offer an additional 180 hrs to reach STARS.

Details By Career Focus:

Ag, Food, & Natural Resources
Architecture, Engineering, & Construction (A/E/C)
Green & Sustainability
Health Science
Homeland Security
Law & Public Safety
Marketing
STEM
Transportation & Logistics

Ag, Food, & Natural Resources

Time to Certification:
180 Hrs

Pre-Requisites:
None

Certifying Body:
Enterprise for Innovative Geospatial Solutions (EIGS)

Additional Recognizing Organizations
Mississippi Enterprise for Technology (MsET); Magnolia Business Alliance (MBA)

Classroom Support Materials:
Each of our course are delivered as turn-

Requirements for Certification:
Two Components

1. Practical evaluation of map layouts created throughout Courseware.

2. Examination Assessment consisting of questions regarding career path and geospatial capabilities.

Courseware Titles*:
aGIS in Ag, Food, & Natural Resources
Introduction to GIS/RS Concepts
Intro to GIS Tools & Processes
Advanced Tools in GIS
Extended Tools in Surface Analysis

key solution with Lesson Plans, PowerPoint, Presentation Notes, Assessments, and Technical Support. For more information on what teachers can expect Click Here

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Geospatial Core & Career Specific Topics:
Basic to intermediate skills and processes essential to Geographic Information Systems, Remote Sensing, and GPS technologies. Process and Project Management essential to geospatial technologies and the larger information technology industry. Specific activities related to Ag, Food, & Natural Resources: Food, Products, & Processing Systems (Analyze poultry supply chain); Plant Systems (Monitoring Chemical usage on vegetation); Environmental Service Systems (Analyze natural barrier effectiveness in waste management); Animal Systems (Manage Virtual Fencing Technology; Natural Resource Systems (Identifying Suitable Wetland locations); Agribusiness (Mapping area businesses); Biotechnology (Crop management in multicrop field); Power, Structure, & Technical Systems (Assessing benefits of precision agriculture)

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*For detailed information, table of contents, lesson samples, and system requirements for each title Click Here

For more information on aGIS, SPACE, or STARS Curriculum view the overviews of each series from the Geospatial Curriculum Serie Section on the main page. Click Here

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Digital Quest

Creating Teacher Friendly Curriculum for Rapid Prototyping and the Geospatial Industry

All About Geospatial Certification

The STARS Certification

STARS is both the name of an industry standard Geospatial Certification and also the name of a series of courses that prepare the student to take the GIS certification test. STARS is the first and only competency based, industry recognized (www.MSET.org), entry-level, geospatial certification! The certification program establishes minimum standards for entering the geospatial technology field and affords professional recognition for geospatial information personnel.

How Do Your Students Become STARS Certified?

The STARS Geospatial Certification process consists of two parts. The first part is a project that is designed to demonstrate project mangement and utilize geospatial skills required for employment. The second part is a written exam requiring the student to demonstrate that they have the necessary depth of knowledge to be employed in the geospatial industry.

Pathway To STARS

The courses delivered in the STARS curriculum series are designed to both teach and assess a student's level of competence in geospatial skills and project management. This 4 semester series of courses provides students with the skills to be an entry level geospatial technician. The introductory series covers topics from basic concepts in Project Management to GIS, GPS, and Remote Sensing. It is in this course where students learn about history of mapping, projections, coordinate systems, scale, multispectral imagery, and various other concepts that are essential to being effective in GIS/RS. The advanced series (Series Two and Three) will discuss the uses and applications of ArcGIS software and its extensions including: Spatial Analyst, 3D Analyst, Network Analyst, and ERDAS's Image Analysis extension for ArcGIS.

The fourth series is a capstone project. This project allows students to show application of geospatial skills and concepts learned in previous coursework and experiences. Upon completion this project is submitted to the STARS Certification Committee for review.

STARS Pathways In Detail

- STARS via SPACE
- STARS without SPACE
- Extending STARS

STARS Cert Continuing From SPACE

Time to Certification:
360 Hrs

Pre-Requisites:
None

Certifying Body:
Mississippi Enterprise for Technology (MsET)

Additional Recognizing Organizations
Enterprise for Innovative Geospatial Solutions (EIGS); Magnolia Business Alliance (MBA)

Classroom Support Materials:
Each of our course are delivered as turn-

Courseware Titles*:
Course Titles included in at least one SPACE Pathway

Extended Tools in Remote Sensing
Extended Tools in 3D Visualization
Extended Tools in Routing Analysis
Geospatial Applications Project (CAPSTONE)

Geospatial Core & Career Specific Topics:
In addition to completed SPACE Topics:

Remote Sensing (Image Processing; Orthorectification; Feature Extraction;

key solution with Lesson Plans, PowerPoint, Presentation Notes, Assessments, and Technical Support. For more information on what teachers can expect Click Here

Requirements for Certification:
Two Components

1. Successful Completion of Capstone Project.

2. Examination Assessment consisting of questions regarding career path and geospatial capabilities.

Image Classification; Vegetative Analysis; ImageEnhancement).

3D Analysis (Displaying 3D Data; Downloading and Processing 3D Data; Converting 2D Features to 3D; Creating a landscape; Aspect; Line of Sight; ArcGlobe; Animation).

Routing Analysis(Data Preparation; Creating a Network Dataset; Finding Best Route; Determining Closest Facility; Service Area Analysis; Multimodal Networks).

Project Management Skills integrated throughout course(Project Planning; Problem Identification; Stakeholder Analysis; Functional Requirements; Feasibility Analysis; Project Design; Project Implementation; Project Presentation; Written Reporting; Oral Reporting)

Capstone Detail:
The STARS Applications of Geospatial Project Management course is a road map for the capstone application component of the STARS Certification. This books leads potential STARS certified technicians through the Project Management Model to produce a complete geospatial project from planning to implementation to presentation. Completion of this project calls upon all of a geospatial student's project management and geospatial skills. Time to completion for the capstone is ~90hrs.

Approved project descriptions offer students three options for project focus. First, a fire study description details a requirements to produce a fire study plan using geospatial technologies to determine harzadous materials and escape plans for a specified location. A tree study description allows students to assess the uses and value of trees in an area and present those findings using GIS. The third option, a site suitability description, details methods students can use to locate the best location for a garden in a specified area.

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*For detailed information, table of contents, lesson samples, and system requirements for each title Click Here

For more information on aGIS, SPACE, or STARS Curriculum view the overviews of each series from the Geospatial Curriculum Serie Section on the main page. Click Here

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Digital Quest

Creating Teacher Friendly Curriculum for Rapid Prototyping and the Geospatial Industry

All About Geospatial Certification

Beyond SPACE And STARS

Foundations are set and you are now prepared to enter the workforce or pursue advanced academic paths. With any career students will be most valuable if they continue to refine their skills and redefine themselves. Technology will develop throughout your student's professional career, and once established we want them to take time to make sure they stay that way. Further industry, manufacturer, and academic certifications are a great way for professionals to show they have kept up with the latest industry trends and advancements.

Beyond STARS and SPACE students will find multiple tracts for advancement through professional and manufacturer certifications. The well-defined geospatial worker will consider all of these options. Each one has a distinct purpose and utilizing all of these will provide you with opportunities throughout your career.

Certifications Beyond SPACE and STARS

Sponsor		
ESRI Environmental Systems Research Institute	**GISCI** GIS Certification Institute	**ASPRS** American Society for Photogrammetry and Remote Sensing
Certifications		
-ArcGIS Desktop Associate -ArcGIS Desktop Professional -ArcGIS Desktop Developer Associate -ArcGIS Desktop Developer Professional -Web Application Developer Associate -Web Application Developer Professional -Mobile Developer Associate -Mobile Developer Professional -Enterprise Geodata Management Associate -Enterprise Geodata Management Professional -Enterprise System Design Associate -Enterprise Administration Associate -Enterprise System Design Professional	-GISP (GIS Professional) "A GISP is a certified geographic information systems (GIS) Professional who has met the minimum standards for ethical conduct and professional practice as established by the GIS Certification Institute (GISCI)"	-Certified Photogrammetrist -Certified Mapping Scientist-Remote Sensing -Certified Mapping Scientist-GIS/LIS -Certified Photogrammetric Technologist -Certified Remote Sensing Technologist -Certified GIS/LIS Technologist
Website/More Info		
ESRI Certifications Website http://training.esri.com/certification/tracks.cfm	GISCI Website http://www.gisci.org/	ASPRS Certification Website http://www.asprs.org/membership/certification/index.html

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SCSD CTE Student Portfolio

Definition: Student portfolios are a collection of personal documents, which showcase an individual's learning experiences, goals and achievements. Student portfolios are created and controlled by the student, facilitated by the instructor, and evaluated by outside entities.

Purpose: Students should be able to leave a program with as many tools in their toolbox as possible. Student portfolios are a way to assist students in marketing themselves in future interviews, by using the portfolio to illustrate his or her skills and/or talents.

SCSD CTE Student Portfolio Requirements

☐	**Table of Contents:**	This should list each section and piece of the portfolio in the order it appears
☐	**Cover letter**	A cover letter introducing the student to a potential employer about a specific job in his or her chosen pathway. Should focus on why the student is the best candidate for the job. It should compliment the resume, not repeat it.
☐	**Resume**	Should be professionally formatted. Usually a one-page document listing the student's name, personal information (address, phone, and email), an objective, work history or extracurricular/community involvement, education, certifications/credentials, personal skills/interests, and references.
☐	**Letters of Recommendation**	Students must include at least two (2) reference letters, provided by people outside the school who are familiar with his or her work or character. The reference letters can be employment-related, personal, or they can attest to the character of the student.
☐	**Certifications/Credentials**	Students should include copies of any credentials and/or certifications they have earned as a result of their program.
☐	**Transcript**	Student provides a copy of his or her full academic transcript.
☐	**Employability Profile**	Per NYSED: The work skills employability profile is intended to document student attainment of technical knowledge and work-related skills. Documents to validate skills reported on the profile could include, but are not limited to, an employer/teacher review of student work based on learning standards and expectations in the workplace, performance evaluations and observations. Students must have at least one employability profile completed within one year prior to school exit. If a student is involved in a number of work-based learning experiences and/or is employed part time, he/she may also have additional employability profiles as completed by others knowledgeable about his or her skills (e.g.,

	employer and/or job coach).
☐ **College Research**	A written research assignment focusing on three colleges offering programs in the student's chosen career pathway.
☐ **Career Plan**	Per NYSED: "Career Plans are an important mechanism to add relevance and meaning to learning experiences across subject areas. The career development model used to create the Career Plan aligns with the CDOS standards." A Career Plan document can be found here: http://www.p12.nysed.gov/cte/careerplan/docs/SecondaryCommencLvl.pdf
☐ **Student Awards**	This section is completely open ended. Students should use this section to illustrate any awards, projects, exemplars, service learning, or scholarships, they participated or earned during their high school years. They can show evidence through pictures, project documentation, news articles, program agendas, meeting minutes, videos, etc.
☐ **Work Samples**	Examples highlighting ***only the student's best work***, demonstrating the skills and competencies he or she has mastered. These should be presented professionally and be clearly captioned. ***Should not be thought as a scrapbook.*** Potential employers are only interested in the very best examples.

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D. Postsecondary Articulation

> *The self-study team reviews the postsecondary articulation agreement for the program seeking approval. Postsecondary articulation agreements help students prepare for the transition from high school to advanced study in a particular career area. Articulation agreements provide direct benefits to students such as dual credits, college credits, advanced standing, or reduced tuition at a postsecondary institution. Articulation agreements may include several school districts and/or BOCES and multiple postsecondary institutions. The school district or BOCES may enter into multiple articulation agreements for a program seeking approval.*

Process

- Reviewers confirm that the postsecondary articulation agreement is designed to prepare students for the transition from high school study to postsecondary study in the career area of the program seeking approval.
- Reviewers confirm that a postsecondary articulation agreement has been obtained that offers direct benefits to students in the program seeking approval.
- Reviewers confirm that the postsecondary articulation agreement includes the
    - prerequisite skills, knowledge, or coursework required of students to participate in the agreement
    - roles and responsibilities of each institution
    - duration of the agreement
    - endorsement by officials of each institution
- Signed articulation agreements must be on file within the school district or BOCES.

Documentation

Documentation of the postsecondary articulation agreement is maintained by the school district or BOCES and updated whenever modifications are made. Recommendations on the technical assessment selection should be included in the self-study report and reviewed by the external committee. A copy of the signed postsecondary articulation agreement must be attached to the Application for Career and Technical Education Program Approval.

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

MOHAWK VALLEY COMMUNITY COLLEGE
UTICA-ROME, NY 13501
AND
SYRACUSE CITY SCHOOL DISTRICT
725 HARRISON STREET, SYRACUSE NY 13210

ARTICULATION AGREEMENT

The purpose of this articulation agreement is to develop an ongoing relationship between Mohawk Valley Community College (MVCC) and Syracuse City School District (SCSD), enabling each of these institutions to better serve their communal students. The relevant faculties of MVCC and SCSD subscribe to the following memorandum of understanding based on their mutual concern for providing applied programs that will build upon past student experiences and eliminate unnecessary duplication of instruction.

It is agreed, subject to the following conditions, that MVCC will grant 9-college credit hours for CT265-Introduction to Geographic Information Systems, CT267-Advanced Geographic Information Systems, and CT266-Capstone Geographic Information Systems" for all students who complete SCSD's Geospatial Technology CTE program *(Note: This agreement is valid for up to 1-year post SCSD graduation).*

To receive college credit for CT265, CT267, and CT266, SCSD Geospatial Technology CTE graduates must meet the following criteria:

1. Achieved a minimum cumulative average of 85 during their SCSD secondary school experience.
2. Completed the SCSD Geospatial Technology CTE pathway.

Process for granting credit owed:

1. Students will arrange a meeting with the Assistant Vice President (AVP), Academic Affairs or designee by calling 315-792-5446 upon entrance into MVCC. At the meeting, students will provide documentation supporting their attainment of the above criteria #1-2.
2. The AVP or designee will verify that the student meets criteria #1-2 identified above.
3. Upon verification of the student's fulfillment of criteria #1-2, the AVP or designee will communicate with MVCC's Registrar to authorize the granting of transfer credit for CT265, CT267, and CT266.

This agreement is effective for 5-years subsequent the completion of the signing process unless either party has significant changes in the program. SCSD may terminate the Agreement upon thirty (30) days written notice to the College. The College reserves the right to make final determination concerning all college credit awarded. This Agreement incorporates all provisions of the Data Privacy Plan and Parents' Bill Of Rights For Data Security And Privacy executed by MVCC.

Syracuse City School District

Geospatial Technology Instructor	Date
Director of Career Technical Education	Date 3/11/22
Superintendent	Date 3/9/22

Mohawk Valley Community College

Dean, School of STEM-Career	Date 3/14/22
V.P. for Learning & Academic Affairs	Date 3/23/22
President	Date 3/31/22

Mohawk Valley Community College does not discriminate on the basis of age, race, creed, color, sex, sexual orientation, national origin, disability, veteran status, gender identity, pregnancy, religion, predisposing genetic characteristics, marital status or domestic violence victim status in admissions, employment, and treatment of students and employees or in any aspect of the business of the College.

Articulation Agreement
between
Syracuse City School District (SCSD)
725 Harrison St, Syracuse, NY
and
Onondaga Community College
4585 West Seneca Turnpike, Syracuse, NY

The signatories of this articulation agreement, Syracuse City School District (SCSD) and Onondaga Community College (OCC), declare their intention to participate in a partnership for the purpose of delivering educational instruction to eligible students. The parties to this agreement have reached the following understanding:

1. **Term**
   The term of this agreement shall be for four years from July 1, 2022-June 30, 2026 and subject to the following conditions:

   - Both parties have the option to extend this Agreement for one (1) additional four year period giving written notice to the College no later than ninety (90) days prior to the expiration date.

2. **Modification and Waiver**
   No waiver or modifications shall be valid unless it is in writing and signed by OCC and SCSD.

3. **Curriculum and Courses**
   - Students who have enrolled in the Geospatial Technology program at Syracuse City School District will be eligible to enroll in and earn credit for:
     - ENG 103 and ENG 104: Freshman Composition and Literature I and II, subject to an annual Memorandum of Understanding and the identification of an OCC faculty member to teach the course on-premises at the Public Service Leadership Academy at Fowler High School; and;
     - GST-100, Introduction to Geospatial Technologies and UAVs, through the Onondaga Community College, College Credit Now Program.
   - The above course offered through the OCC College Credit Now Program is required for the Geospatial Science &Technology, A.A.S. degree at OCC.
   - Tuition for concurrent enrollment courses will be incurred according to all applicable requirements in place by the State University of New York. For courses taught by Onondaga Community College faculty, the Syracuse City School District will additionally incur the cost set by annual Memorandum of Understanding between SCSD and OCC.
   - Students will be assisted in the course registration process by OCC. Students will also be supported in the admission process to Onondaga Community College through a specialized workshop and the Office of Student Recruitment.

4. **Students**
   Each student must enroll and remit payment as required by SUNY for the course(s) with OCC through the College Credit Now registration process as

directed by the Director of Concurrent Enrollment and Secondary School Programs.

5. **Entire Agreement**
This Agreement Constitutes the entire Agreement between the College and SCSD with respect to the subject matter hereof. This Agreement supersedes any and all other agreements, whether oral or in writing, between parties with respect to the subject matter hereof.

Casey Crabill, Ed.D. President Onondaga Community College	Jaime Alicea Superintendent Syracuse City School District
April 11, 2022 Date	4/18/22 Date

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E. Work-based Learning

> *Work-based learning (WBL) is the "umbrella" term used to identify activities which collaboratively engage employers and schools in providing structured learning experiences for students. These experiences focus on assisting students to develop broad, transferable skills for postsecondary education and the workplace. A quality WBL experience can make school-based learning more relevant by providing students with the opportunity to apply knowledge and skills learned in the classroom to real world situations.*
>
> *Time requirements that students in an approved program may devote to work-based learning experiences are set by administrators of the approved program. This time should be an outcome of the self-study report and external review phases of the approval process. Work-based learning experiences must be sufficient in length and rigor to contribute to student achievement of the State learning standards as well as specific technical competencies.*

Process

- The school district/BOCES and the employer cooperatively plan all work experiences.
- The school district/BOCES set up a formal procedure for the supervision/coordination of all work-based learning experiences and must ensure that work-based learning coordinators are appropriately certified.
- The school district/BOCES provide work-based learning experiences for students with disabilities
- The school district/BOCES and employer must ensure compliance with federal and state labor laws, and the State Department of Labor regulations and guidelines.
- The school district/BOCES must explore and develop work-based learning experiences in settings that are relevant to the program.
- The school district/BOCES must comply with Commissioner's Regulations and Department policy where credit towards graduation is being awarded.

Documentation

Recommendations for work-based learning should be included in the self-study report and reviewed by the external committee.

Resources

New York State Education Department Work Experience Manual **http://www.emsc.nysed.gov/cte/wbl/**

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

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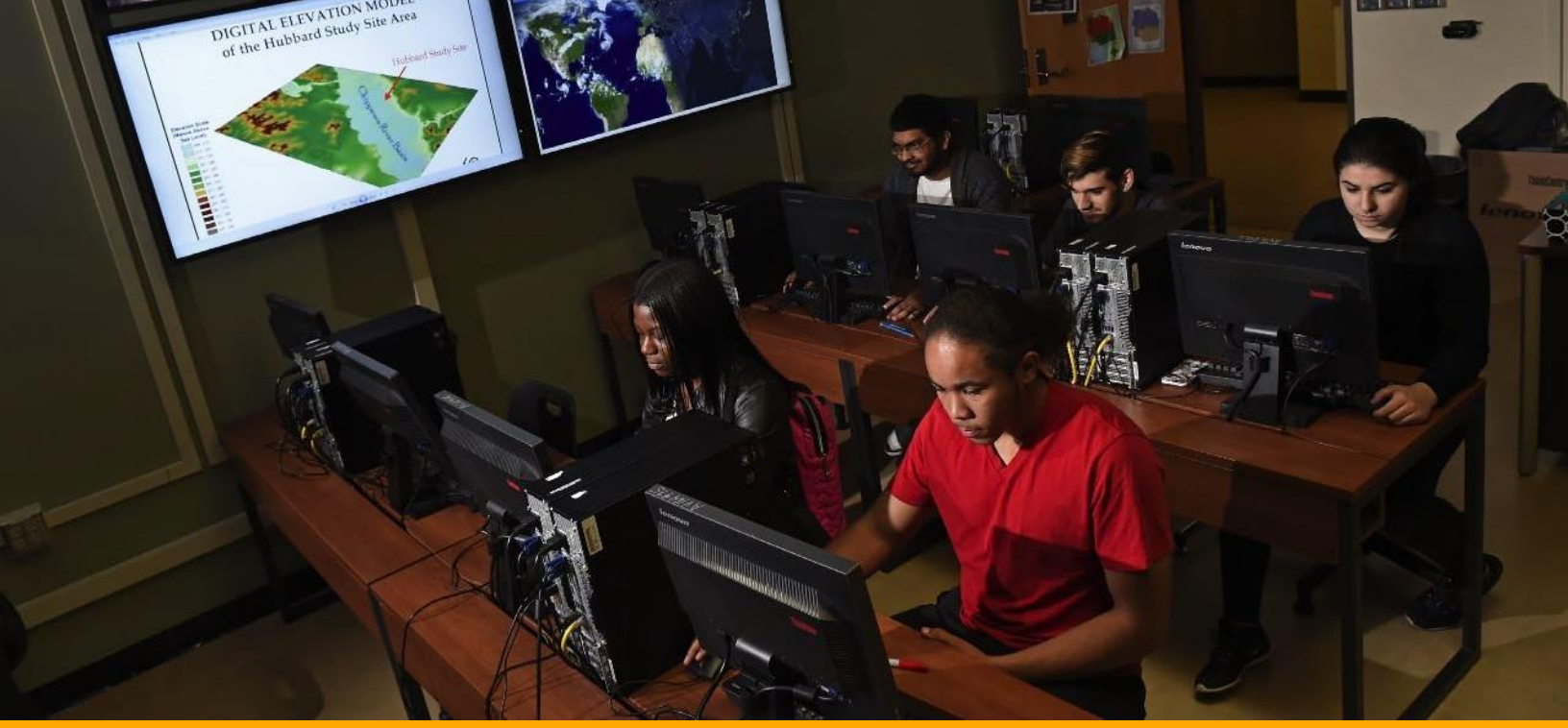


SYRACUSE CITY SCHOOL DISTRICT

Career and Technical Education

CTE

Internship Handbook

Preparing today's students for tomorrow's careers.

Table of Contents

Syracuse City School District

Career and Technical Education Internship

Forms are available on SCSD CTE website www.syracusecityschools.com/cte

Introduction

Syracuse City School District Career and Technical Education Work Based Learning

Learning in the workplace is not a new concept. Informal, on-the-job training is an integral part of all workforce development. Work based learning (WBL) provides structured learning experiences for students through exposure to a range of occupations. The Harvard Universityreport, Pathways to Prosperity (February, 2011) suggested that "Work-linked learning should play an especially important role in the new American system of pathways
to prosperity. There is mounting evidence that this would be an effective strategy for encouraging young adults to complete both high school and post-secondary degrees. Co-operative education is a tested model that provides students with extensive work experience that is monitoredby the school."

Learning in the workplace is connected to and supports learning in the classroom. Work based learning also helps students achieve established academic standards. Properly developed and supported, work based learning provides a practical context for school subject matter and enhances thetraditional classroom learning. Work based learning activitiespromote the development of broad, transferable skills and are a key element of a rigorous and relevant education for students. It enables students to acquire the attitudes, skills and knowledge needed to succeed in today's workplace.

Employer partners can develop and support work based learning experiences that promote the attainment of workplace knowledge and skills. In doing so, they can support academic achievement and personal growth by designing, structuring, supporting and connecting work based learning experiences. Work based learning also supports professional, technical, and work-readiness skillsdevelopment. Quality work based learning should:

- Be designed to enhance the learning of skills and workplace knowledge in all aspects of the industry
- Be structured to be safe, legal and measurable
- Be developmentally appropriate
- Have identified learning objectives and assessstudent performance
- Develop career ready practices and provideopportunities for reflection
- Be supported and documented by appropriateplanning and training; and
- Comply with State and Federal labor laws

Syracuse City School District Career and Technical Education Internship

A Career and Technical Education Internship provides an important link between the classroom and the workplace for students age 16 and older. It is a structured, time- limited, career preparation activity in which students are assigned to a workplace for a defined period of time to participate in and observe firsthand within a given industry.The internship enhances and adds relevance to classroom learning. The internship may provide the opportunity to work in teams, rotate through a number of departments and job functions, or work on a project of interest to the student. It is essentially a partnership that links school, community, and business/industry to provide a real-world environment in which students are given the opportunity
to apply, and thereby enhance, the knowledge and skills obtained in the classroom. The internship is related to the student's CTE program of study, with the primary goals ofpromoting:

- The exploration of and experience in a field ofinterest
- Exposure to a wide range of careers and jobs within anindustry
- Opportunities to develop, practice and demonstratenew skills
- The acquisition of occupational knowledge and awareness of the skills and education needed to besuccessful in the industry

CTE Teacher

Career & Technical Program/Teacher Guidelines

Legal Requirements of SCSD CTE Internship Program

All Career and Technical Education Internship Programshave the common objective of providing opportunities for students to develop and demonstrate job skills at a supervised worksite. They are supported by training plans developed cooperatively by the employer, instructor, and student. There should be ongoing communication between the job mentors and the CTE teacher or work based learning coordinator concerning students' performance andneeds.

Each internship program needs to have the following:

- New York State Education Department (NYSED)approval of the CTE program
- The employer understands that the student placement is governed by NYSED, New York State Workers' Compensation Board (NYSWCB), New York State Department of Labor (NYSDOL), and United States Department of Labor (USDOL) laborlaws and regulations
- Employer is provided a Certificate of Insurance fromschool where school liability insurance protects the employer from any damage student may do in the workplace
- Students are given written notification that this program is unpaid and they are not due any wages perNYSDOL regulations
- Per NYS, students are required to receive coverage under the employer's Workers' Compensation Insurance if student is interning for a for-profit company. If student is interning at a non-profit entity,the student is required to be covered by the employer'svisitors or volunteer insurance.
- Worksite must be in compliance with OccupationalSafety and Health Administration (OSHA) regulations. Health and safety instruction/trainingappropriate for the job is provided by the SCSD and employer specific training is provided by the employer on the worksite.
- Memorandum of Agreement is in effect between the cooperating business and the education agency and outlines the responsibilities of the student, employer, parent/guardian, and school/coordinator, all of whom must sign to confirm their support of the agreement.
- Students complete an Internship Application indicating their understanding of, and agreement to,all rules and regulations of the program.
- Students receive instruction embedded within their CTE curriculum relating to the technical and career ready practices.
- An Internship Training Plan (ITP) is developed and used for each participating student. The plan identifiesthe general and specific job tasks the student will perform on the job, the desired learning outcomes of the experience, and the time frame the student will spend at each task. The training plan should be designed to ensure that the student will have a progressive learning experience.
- All participating students are meeting, or have met, academic requirements of their CTE programs and academic subjects. No students on academic probationwill participate in the internship.
- Employment Certificate (Working Papers) for students provide verification that a student under age18 is eligible for employment. The student, employer,and school must complete the form. Employment certificates are obtained at the high school – typicallythe main office, health office, or guidance office.
- Time Log/Record of Attendance provides an official record of the weekly and cumulative hours the student has worked during the experience. It must bemaintained for each student.
- An intern evaluation will be done by the CTE teacher before the internship, at the midpoint of the internshipand at the end of the internship. This same form will be completed by the on-site supervisor in the midpointand at the end of the internship.

SCSD CTE Internship Program Checklist
(To be completed by CTE teacher or WBL coordinator)

- ☐ NYSED has approved the CTE program
- ☐ The employer understands that the student placement is governed by NYSED, NYSWCB, NYSDOL, and USDOL labor laws and regulations
- ☐ NYSED Application for Employment certificate (working papers, usually available in school counseling office) has been verified (NYSED form attached)
- ☐ Employer is provided with a Certificate of Insurance from school to cover liability (sample attached)
- ☐ A written Memorandum of Agreement is in effect between the cooperating business and the education agency (**Form #1**)
- ☐ Students complete an Internship Application indicating their understanding of, and adherence to all rules and regulations set forth by the program. (**Form #2**)
- ☐ Students receive instruction embedded within their CTE curriculum relating to the technical and Career Ready Practices. The CTE teacher and the student have completed the SCSD CTE Internship Ready to Work Assessment (**Form #3**)
- ☐ An Internship Training Plan (ITP) is developed and used for each participating student (**Form #4**)
- ☐ Students are given written notification that this program will be unpaid and they are not due any wages per NYS DOL regulations (**Form #5**)
- ☐ All SCSD internship candidates have received appropriate safety certification for the industry provided by the school before internship and employer specific training and orientation is provided by the employer on the worksite (**Form #6 & Form #7**)
- ☐ All participating students are meeting, or have met, academic requirements of their CTE programs and academic subjects
- ☐ Review Time Log/Record of Attendance which serves as an official record of the hours the student has worked during the experience (**Form #8**)

REQUIRED FORMS

NYSED Application for Employment Certificate

Certificate of Insurance

SCSD Memorandum of Agreement (Form #1)

SCSD Internship Program Application (Form #2)

SCSD Internship Ready to Work Assessment (Form #3)

SCSD Internship Training Plan (Form #4)

SCSD Notification of unpaid internship (Form #5)

SCSD Internship Safety Certification (Form #6)

SCSD Worksite Orientation (Form #7)

SCSD Weekly Time Log/Record of Attendance (Form #8)

Forms are available online at the SCSD CTE website : www.syracusecityschools.com/cte

CTE Teacher/WBL Coordinator

Date

Employer Internship Partner Guidelines

SCSD CTE Internship Employer Requirements

Safety

At all times, both school personnel and the employment site personnel must take appropriate steps to ensure thatsafe practices are stressed and followed. However, it is impossible to guarantee that no injuries resulting in medicalexpenses and liability will occur. The following prudent steps are encouraged:

1. In-school course content must include training related to safety at the worksite. Appropriate safety certification should be offered if possible. SCSD internship candidates will have received appropriatesafety training before beginning their internship.
2. Any sites used for SCSD CTE internships will bereviewed by school personnel prior to placing a student at the worksite.
3. Employers must provide safety training information to interns as they would a new employee. Safety training must be provided if the employer engaged in a particularly hazardous occupation for minors asdefined by the USDOL.
4. Provisions for student safety must be included as partof the training agreement signed by the employer, student, parent, and school representative.

Types of Liability Insurance and Risk Management

Workers' Compensation and Employer Liability Insurance

All employers will have a policy that provides coverage for the Workers' Compensation statutory benefits as well as liability coverage for certain employment-related situations.Verification of employer's Workers Compensation insurance will be included in the Memorandum of Agreement. The SCSD will also have insurance that covers the student participating in a school-related internship experience.

SCSD CTE Internship Expectations & Responsibilities ofEmployer

Before

- Determine projects or activities that would beappropriate for your student intern
- Communicate with staff that an intern will be at theworkplace and identify mentors
- Designate one employee, the on-site supervisor, to work with coordinator/teacher to develop and definesuccessful student objectives and experiences and record on the student Internship Training Plan

During

- Provide student with a Work Site Orientation toorganization and any required training
- Train student intern for your work site, including allwork site safety training
- Maintain a quality, safe and legal learning experience;provide effective supervision
- Use the Internship Training Plan as a guide for the internship; hold intern to employee standards/ expectations; oversee, direct, and provide adequate tasking to maximize learning
- Meet with coordinator/teacher and student to decideon an ongoing communications strategy
- Evaluate intern work and provide constructivecriticism
- Assist student in working toward learning outcomes
- Coordinate student schedule, approve weeklytimesheets
- Communicate successes and opportunities at the workplace that the teacher can use to enhance the value of classroom connections
- Complete a student evaluation midway throughinternship and discuss with student

After

- Complete a final evaluation of the student
- Hold debriefing session and review performance withthe student and teacher
- Complete a Program Evaluation

Employer Internship Partner

SCSD CTE Internship Employer Internship Partner Checklist (To be completed by On-Site Supervisor/Mentor)

- ☐ Meet with coordinator/teacher and student to agree on ongoing communication strategy (e-mail, text, telephone, etc.)
- ☐ A written Memorandum of Agreement is in effect between the cooperating business and the education agency (**Form #1**)
- ☐ Work with coordinator/teacher to develop and define successful student objectives and experiences and record on the student Internship Training Plan (**Form #4**)
- ☐ Coordinate student schedule, approve weekly time log/record of attendance (**Form #8**)
- ☐ Communicate with staff that an intern will be at the workplace and identify on-site supervisor and/or mentor

  On-Site Supervisor _____

  Mentor Name _____
- ☐ Provide student with Work Site Orientation to organization and any required training (Form #7)
- ☐ Create and maintain a quality, safe and legal learning experience
- ☐ Hold intern to employee standards/expectation; provide student support and candid feedback
- ☐ Communicate successes and opportunities at the workplace that the teacher can use to enhance the value of classroom connections
- ☐ Complete an interim SCSD CTE Internship Ready to Work Assessment of student performance and discuss with student (**Form #3**)
- ☐ Provide effective supervision
- ☐ Complete a final assessment of the student (**Ready to Work Assessment, Form #3 and Student Training Plan, Form #4**)
- ☐ Complete a program evaluation (**Form #10**)

REQUIRED FORMS

SCSD Memorandum of Agreement (Form #1)

SCSD Internship Ready to Work Assessment (Form #3)

SCSD Internship Training Plan (Form #4)

SCSD Worksite Orientation (Form #7)

SCSD Weekly Time Log/Record of Attendance (Form #8)

SCSD Mentor Program Evaluation (Form #10)

Forms are available online at the SCSD CTE website : www.syracusecityschools.com/cte

_____ _____

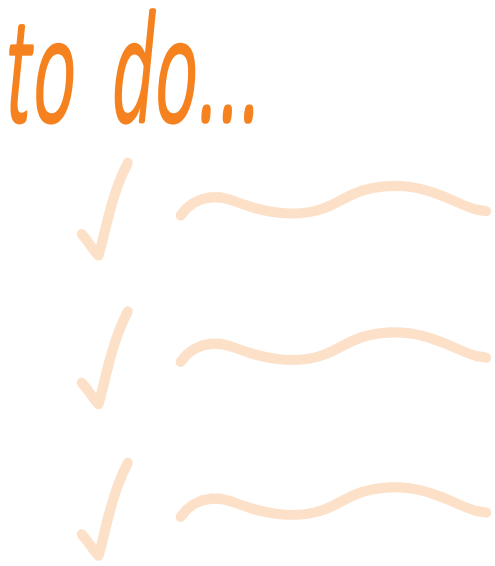
Employer/ Mentor Date

Student Intern Guidelines

Expectations and Responsibilities of Students

Before

- Obtain working papers (if under 18)
- Return Internship Application and all permissionslips with appropriate signatures
- Meet with your teacher/coordinator and worksite supervisor to finalize an Internship Training Plan



During

- Attend Orientation at the worksite
- Observe all workplace rules and regulations particularly those applicable to safety and securityconcerns
- Perform all duties, jobs and assigned tasks; treatinternship like a real job
- Maintain regular work schedule and notify supervisor in advance of any vacation/appointments
- Track you hours as instructed on Weekly Timesheet
- Develop skill specific learning outcomes with yourworksite supervisor
- Participate in ongoing reflection journal activitiesand skill building classroom assignments
- Communicate with your teacher/coordinator andworksite supervisor if issues arise
- Keep copies of all necessary paperwork (work journal, training plan, Weekly Time Log/Record ofAttendance, and evaluations)

After

- Participate in self-evaluation and reflection activities
- Update your resume based upon new skills andexperiences gained
- Send thank you note to employer

Student Intern

SCSD CTE Internship Student Checklist (To be completed by student)

- ☐ Obtain NYSED Application for Employment Certificate (usuallyavailable in school counseling office, application attached)
- ☐ A written Memorandum of Agreement is in effect between thecooperating business, the education agency, and signed by student and parents (**Form #1**)
- ☐ Return Internship Application (**Form #2**) and all permission slipswith appropriate signatures
- ☐ Develop skill specific learning outcomes with your worksitesupervisor
- ☐ Meet with your teacher/coordinator and worksite supervisor tofinalize an Internship Training Plan for the internship (**Form #4**)
- ☐ Attend orientation at the worksite (**Form #7**)
- ☐ Observe all workplace rules and regulations particularly thoseapplicable to safety and security concerns
- ☐ Perform all duties, jobs and assigned tasks; treat internship like areal job
- ☐ Maintain regular work schedule and notify supervisor in advanceof any vacation/appointments
- ☐ Track you hours as instructed on time log/record of attendance(**Form #8**)
- ☐ Participate in ongoing reflection activities and skill buildingclassroom assignments
- ☐ Communicate with your teacher/coordinator and worksite supervisor, if issues arise and keep copies of all necessary paperwork (work journal, training plan, Weekly Time Log/Recordof Attendance, and evaluations)
- ☐ Participate in self-evaluation and reflection activities (**Forms #3 & #9**)
- ☐ Update your resume based on new skills and experiences gained
- ☐ Send thank you note to employer

REQUIRED FORMS

SCSD Memorandum of Agreement
(Form #1)

SCSD Internship Program Application
(Form #2)

SCSD Internship Ready to Work Assessment
(Form #3)

SCSD Internship Training Plan
(Form #4)

SCSD Worksite Orientation
(Form #7)

SCSD Weekly Time Log/Record of Attendance
(Form #8)

SCSD Student Evaluation
(Form #9)

Forms are available online at the SCSD CTE website : www.syracusecityschools.com/cte

Student _____ Date _____

SCSD CTE Internship Forms

NYSED Application for Employment Certificate

SCSD Certificate of Insurance to Cover Student Liability

(Sample) Form #1 SCSD Memorandum of Agreement

Form #2 SCSD Internship Program Application

Form #3 SCSD Internship Ready to Work Assessment

Form #4 SCSD Internship Training Plan

Form #5 SCSD Notification of unpaid internship

Form #6 SCSD Internship Safety Certification

Form #7 SCSD Worksite Orientation

Form #8 SCSD Weekly Time Log/Record of Attendance

Form #9 SCSD Student Evaluation

Form #10 SCSD Mentor Program Evaluation

Forms are available on SCSD CTE website at www.syracusecityschools.com/cte

AT-17
Rev. 5/10

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
ALBANY, NY 12234

APPLICATION FOR EMPLOYMENT CERTIFICATE

See reverse side of this form for information concerning employment of minors.

All signatures must be handwritten in ink, and applicant must appear in person before the certifying official.

THIS APPLICATION DOES NOT AUTHORIZE EMPLOYMENT

PART I – Parental Consent – (To be completed by applicant and parent or guardian)

Parent or guardian must appear at the school or issuing center to sign the application for the first certificate for full-time employment, unless the minor is a graduate of a four-year high school and presents evidence thereof. For all other certificates, the parent or guardian must sign the application, but need not appear in person to do so.

Date……

I, …… Age ……..…
[Applicant]

Home Address ……....., apply for a certificate as checked below
[Full Home Address including Zip Code]

- ☐ Nonfactory Employment Certificate – Valid for lawful employment of a minor 14 or 15 years of age enrolled in day school when attendance is not required.
- ☐ Student General Employment Certificate – Valid for lawful employment of a minor 16 or 17 years of age enrolled in day school when attendance is not required.
- ☐ Full-Time Employment Certificate – Valid for lawful employment of a minor 16 or 17 years of age who is not attending day school.

I hereby consent to the required examination and employment certification as indicated above.

……
[Signature of Parent or Guardian]

PART II – Evidence of Age – (To be completed by issuing official only)

……. – Check evidence of age accepted – Document # (if any) ……..
[Date of Birth]

Birth Certificate State Issued Photo I.D Driver's License Schooling Record Other……
[Specify]

PART III – Certificate of Physical Fitness

Applicant shall present documentation of physical exam from a school or private physician, physician's assistant or nurse practitioner licensed to practice within New York State. Said examination must have been given within 12 months prior to issuance of the employment certificate. Date of physical exam on file with school …… If physical exam is over 12 months, provide student with certificate of physical fitness to be completed by school medical director or private health care provider.

If the physical exam or Certificate of Physical Fitness is limited with regards to allowed work/activity, the issuing official shall issue a Limited Employment Certificate (valid for a period not to exceed 6 months unless the limitation noted by the physician is permanent, then the certificate will remain valid until the minor changes jobs. Enter the limitation on the employment certificate. THE PHYSICIAN'S CERTIFICATION SHOULD BE RETURNED TO THE APPLICANT.

PART IV – Pledge of Employment – (To be completed by prospective employer)

Part IV must be completed only for: (a) a minor with a medical limitation; and (b) for a minor 16 years of age or legally able to withdraw from school, according to Section 3205 of the Education Law, and must show proof of having a job.

The undersigned will employ …… residing at ……
[Applicant]

as …… at ……
[Description of Applicant's Work] **[Job Location]**

for …… days per week …….. hours per day, beginning …… a.m. ……..…… p.m.

…… Factory ending…….. a.m. ……p.m.
[Name of Firm]

Nonfactory ……..
[Address of Firm]

…… Starting date …….. ……..
[Telephone Number] **[Signature of Employer]**

PART V – Schooling Record – (To be completed by school official)

Part V must be completed only for a minor 16 years of age who is leaving school and resides in a district (New York City and Buffalo) which require a minor 16 years of age to attend school, according to Section 3205 of the Education Law.

I certify that the records of …… ……
[Name of School] **[Address]**

Show that …….. whose date of birth is ……
[Name of Applicant]

Is in grade…… ……
[Signature of Principal or Designee]

PART VI – Employment Certification – (To be completed by issuing official only)

Certificate Number ……..... Date Issued ……

…….. …….. ……..
[School or Issuing Center] **[Address]** **[Signature of Issuing Officer]**

GENERAL INFORMATION

An employment Certificate (Student Nonfactory, Student General, or Full Time) may be used for an unlimited number of successive job placements in lawful employment permitted by the particular type of certificate.

A Nonfactory Employment Certificate is valid for 2 years from the date of issuance or until the student turns 16 years old, with the exception of a Limited Employment Certificate. A Limited Employment Certificate is valid for a maximum of 6 months unless the limitation noted by the physician is permanent, then the certificate will remain valid until the minor changes job. It may be accepted only by the employer indicated on the certificate.

A new Certificate of Physical Fitness is required when applying for a different type of employment certificate, if more than 12 months have elapsed since the previous physical for employment.

An employer shall retain the certificate on file for the duration of the minor's employment. Upon termination of employment, or expiration of the employment certificate's period of validity, the certificate shall be returned to the minor. A certificate may be revoked by school district authorities for cause.

A minor employed as a Newspaper Carrier, Street Trades Worker, Farmworker, or Child Model, must obtain the Special Occupational Permit required.

A minor 14 years of age and over may be employed as a caddy, babysitter, or in casual employment consisting of yard work and household chores when not required to attend school. Employment certification for such employment is not mandatory.

An employer of a minor in an occupation which does not require employment certification should request a Certificate of Age.

PROHIBITED EMPLOYMENT

Minors 14 and 15 years may not be employed in, or in connection with a factory (except in delivery and clerical employment in an enclosed office thereof), or in certain hazardous occupations such as: construction work; helper on a motor vehicle; operation of washing, grinding, cutting, slicing, pressing or mixing machinery in any establishment; painting or exterior cleaning in connection with the maintenance of a building or structure; and others listed in Section 133 of the New York State Labor Law.

Minors 16 and 17 years of age may not be employed in certain hazardous occupations such as: construction worker; helper on a motor vehicle, the operation of various kinds of power-driver machinery; and others listed in Section 133 of the New York State Labor Law.

HOURS OF EMPLOYMENT

Minors may not be employed during the hours they are required to attend school.

Minors 14 and 15 years of age may not be employed in any occupation (except farmwork and delivering, or selling and delivering newspapers):

When school is in session:

- more than 3 hours on any school day, more than 8 hours on a nonschool day, more than 6 days in any week, for a maximum of 18 hours per week, or a maximum of 23 hours per week if enrolled in a supervised work study program approved by the Commissioner.
- after 7 p.m. or before 7 a.m.

When school is not in session:

- more than 8 hours on any day, 6 days in any week, for a maximum of 40 hours per week.
- after 9 p.m. or before 7 a.m.

This certificate is not valid for work associated with newspaper carrier, agriculture or modeling.

Minors 16 and 17 years of age may not be employed: --

When school is in session:

- more than 4 hours on days preceding school days; more than 8 hours on days not preceding school days (Friday, Saturday, Sunday and holidays), 6 days in any week, for a maximum of 28 hours per week.
- between 10 p.m. and 12 midnight <u>on days followed by a school day</u> without written consent of parent of guardian <u>and</u> a certificate of satisfactory academic standing from the minor's school (to be validated at the end of each marking period).
- between 10 p.m. and 12 midnight <u>on days not followed by a school day</u> without written consent of parent or guardian.

When school is not in session:

- more than 8 hours on any day, 6 days in any week, for a maximum of 48 hours per week.

EDUCATION LAW, SECTION 3233

"Any person who knowingly makes a false statement in or in relation to any application made for an employment certificate or permit as to any matter by this chapter to appear in any affidavit, record, transcript, certificate or permit therein provided for, is guilty of a misdemeanor."

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURED	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	**GENERAL LIABILITY**						EACH OCCURRENCE	$
	☐ COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
	☐ CLAIMS-MADE ☐ OCCUR						MED EXP (Any one person)	$
	500,000 Retained						PERSONAL & ADV INJURY	$
							GENERAL AGGREGATE	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$
	☐ POLICY ☐ PRO-JECT ☐ LOC							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	☐ HIRED AUTOS ☐ NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
	☐ **UMBRELLA LIAB** ☐ OCCUR						EACH OCCURRENCE	$
	☐ **EXCESS LIAB** ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						☐ WC STATU-TORY LIMITS ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ **(Mandatory in NH)**	N / A					E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER	CANCELLATION
	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

Memorandum of Agreement

(Form #1)

Teacher
Employer
Student

Type of Work Based Learning Experience: Non-Paid Internship

This Work Based Learning Experience Agreement is entered into by and between the Syracuse City School District (SCSD) _____ (Student), his/her Parents/Guardian, _____ (Parent/Guardian), and his/her Work Experience Employer,_____(Employer), on the date indicated below, whereby the Student will participate in a CTE Internship (Program at the Employer's place of business located at_____, on_____, during the hours of _____.

THE STUDENT UNDERSTANDS THAT HIS/HER CONDUCT IS A REFLECTION UPON THE SCHOOL NAME AND AGREES THAT HE/SHE WILL:

1. Provide his/her own transportation to and from the Employer's place of business (the SCHOOL, the Student's home school, the SCHOOL and the Employer are in no way responsible for providing the Student with transportation to and/or from the Employer's place of business at any time or for any incidents or accidents which may occur while the Student is on route to or from the Employer's place of business)
2. Demonstrate a conscientious attitude and be honest, punctual, cooperative, courteous and willing to learn while at the Employer's place of business.
3. Keep regular attendance as agreed upon with the Employer, excluding Employer-observed holidays, days on which the Employer's place of business is closed or other legal absences and understands that his/her attendance will be taken from his/her weekly attendance reports.
4. Keep regular attendance at his/her home school.
5. Give the Employer as much advance notice as possible if unable to report for work or to do so in a timely manner and contact the CTE teacher at (315)_____.
6. Report to SCHOOL if the Internship location is closed for any reason during at time in which the student is scheduled to be at the Internship location and SCHOOL is in session.
7. Complete weekly time log/record of attendance (Form # 8) reports as required by SCHOOL.
8. Engage in only those work based learning experiences approved by the supervisor at the work-site.

THE EMPLOYER AGREES THAT IT WILL:

1. Not permit the Student to replace any paid employee (in the case of an Internship).
2. Advise the Student of all company rules, regulations and policies which relate to the Student.
3. Explain to the Student the responsibilities and duties of his/her internship and shall correlate on-the-job training with safety instructions given by the SCHOOL.
4. The work of the Student in occupations declared particularly hazardous by the U.S. Department of Labor shall be (i) incidental to the Student's training; (ii) intermittent and for short periods of time; and (iii) under the direct and close supervision of a qualified and experienced person.
5. Provide direct supervision by an authorized employee to the Student as needed.
6. Complete an accident report form and return to SCHOOL in the event of an accident.
7. Review the Student's performance with him/her on a weekly basis and sign a weekly time sheet, complete an evaluation of the Student on forms provided by the SCHOOL.
8. Inform the SCHOOL Instructor/Coordinator when the Student is absent or not performing adequately by calling (315)_____.

9. Observe any and all laws that may relate to the Student's work experience.

THE SCHOOL AGREES THAT IT WILL:

1. Carry the insurance listed for students during class activities including internships, job experiences and work placement.
2. Accident Insurance: SCHOOL carries tertiary accident insurance to cover medical expenses as a result of an accident. The parent's health insurance is primary and the home school district would be secondary. General Liability Insurance: SCHOOL carries general liability insurance to cover up to one million dollars for a single event. As added protection, a ten million dollar umbrella policy is also in effect.
3. Assist the Student in securing internship placement regardless of his/her sex, race, color, national origin or disability (all inquiries and/or complaints regarding discrimination should be directed to the compliance officer, Patty Clark, SCSD Central Office, 725 Harrison Street, Syracuse, New York 13210. Telephone: (315) 435-4131.
4. Provide the STUDENT with safety instructions correlated by the EMPLOYER with on-the-job training.
5. Review with the Student and the Employer their respective responsibilities and obligations while participating in the Program.

The parties/signatories hereby agree that good communication and understanding between them is vital if the objectives of this Program are to be met and that joint conferences between the Student, Employer, Parent/Guardian, Instructor, and others may be scheduled from time to time in order to discuss:

1. the student's progress
2. any misunderstandings
3. the reason for termination of the Agreement

This Agreement is not in effect until signed by all parties. This Agreement may be terminated at any time by any party upon written notice to the other parties.

We the undersigned, have reviewed and agreed to the terms and conditions set forth herein.

Date	___/___/___	_____	Student
Date	___/___/___	_____	Parent/ Guardian
Date	___/___/___	_____	Daytime Phone
		_____	Evening Phone
Date	___/___/___	_____	Employer/ Supervisor
Date	___/___/___	_____	CTE Teacher
Date	___/___/___	_____	Home School Principal

The Syracuse City School District hereby advises students, parents, employees and the general public that it is committed to providing equal access to all categories of employment, programs and educational opportunities, including career and technical education opportunities, regardless of actual or perceived race, color, national origin, Native American ancestry/ethnicity, creed or religion, marital status, sex, sexual orientation, age, gender identity or expression, disability or any other legally protected category under federal, state or local law.
Inquiries regarding the District's non-discrimination policies should be directed to:
Executive Director of Student Support Services, Civil Rights Compliance Officer, Syracuse City School District, 725 Harrison Street • Syracuse, NY 13210
(315) 435-4131, Email: CivilRightsCompliance@scsd.us

Teacher

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Program Application Form

(Form #2)

Personal Information

Last Name	First Name	Age	Date of Birth
Street		Home Telephone Number	Cell Phone Number
City, State, Zip		Emergency Contact Name	Telephone Number
Email Address		Relationship to Emergency Contact	
Primary Parent/ Guardian Name		Parent/ Guardian's Telephone Number	
Primary Parent/ Guardian Email		Home Cell	
Secondary Parent/ Guardian Name		Secondary Parent/ Guardian's Telephone Number	
Secondary Parent/ Guardian Email		Home Cell	
Working Papers Certificate Number		SCSD Student schedule should be attached to this form School Counselor	

School Year Training/ Work Schedule Availability

Please list the hours you can work during a typical weekly schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Please check applicable box: Fixed Schedule ☐ Schedule will vary ☐

Sports, Clubs, and Other Activities

Transportation

Please check the appropriate response

Do you have a license? ☐ Yes ☐ No	If YES, which license do you have? ☐ Full License ☐ Junior License
Do you drive to school? ☐ Yes ☐ No	License Number:

If you do not have a license, how do you plan on getting to and from your internship?

☐ Public Transportation ☐ Other

Teacher

Student

(Form #2 Continued)

INSURANCE COVERAGE IN CASE OF INJURIES TO STUDENT AT INTERNSHIP:

EMPLOYER'S WORKER'S COMPENSATION MUST COVER THE STUDENT IN CASE OF INJURIES AT TRAINING SITE.

PROGRAM AWARENESS STATEMENT TO BE CHECKED BY STUDENTS:

- ☐ In order to receive credit for my work-based learning experience, I must be training at a legal site approved by theschool's CTE Teacher or work-based learning coordinator.
- ☐ I must notify my CTE teacher or work-based learning coordinator immediately if there is a change of work schedule orduties at the training site.
- ☐ Failure to report any disciplinary action, termination, or proper documentation of hours may result in the student notearning school credit.
- ☐ Students must present all daily attendance records to CTE teacher or work-based learning coordinator weekly andcomplete all assignments related to the program.
- ☐ I must immediately notify my work-based learning coordinator if I have or develop any medical condition(s) whichaffects my ability to participate in training, such as allergies, lifting heavy items, movement, standing, sitting, migraine headaches, etc. If there are any current conditions, please state them below. The presence of such a condition will not necessarily preclude me from participating in the internship and accommodations may be provided.

PARENTAL/GUARDIAN PERMISSION AND PICTURE/NEWS STORY RELEASE:

I give my child, _____ permission to participate in the work-based learninginternship at the Syracuse City School District. By signing the parental permission form, it is understood that:

- All the information is accurate.
- In order to receive credit, students must work a minimum of 150 hours during the school year.
- All students must report to CTE teacher or work-based learning coordinator in the case of any change in employment.
- Failure to report any disciplinary action, termination, or proper documentation may result in the student not earning schoolcredit.
- Students must present all daily attendance records to CTE teacher or work-based learning coordinator weekly and complete allassignments related to the program.
- A student with a junior license must only drive to school if they go directly to work following the school day and they must carrywith them the proper paperwork as directed by the work-based learning coordinator.

In addition to agreeing with the above statements, please check off one:

- ☐ I give permission for my child's photograph or name to be used to promote the Work Experience Program.
- ☐ I do not want my child's photograph or name to be used to promote the Work Experience Program.

Parent/ Guardian's Name	Parent/ Guardian's Signature	Date / /
Relationship to Student		
Student's Name	Student's Signature	Date / /

The Syracuse City School District hereby advises students, parents, employees and the general public that it is committed to providing equal access to all categories of employment, programs and educational opportunities, including career and technical education opportunities, regardless of actual or perceived race, color, national origin, Native American ancestry/ethnicity, creed or religion, marital status, sex, sexual orientation, age, gender identity or expression, disability or any other legally protected category under federal, state or local law. Inquiries regarding the District's non-discrimination policies should be directed to: Executive Director of Student Support Services, Civil Rights Compliance Officer, Syracuse City School District, 725 Harrison Street • Syracuse, NY 13210/ (315) 435-4131, Email: CivilRightsCompliance@scsd.us

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Ready to Work Assessment

(Form #3)

Teacher | Employer | Student

Name _____ Program _____ Date ____/____/____

Scale

1 = Seldom. 2 = Occasionally. 3 = Usually. 4 =

		Student	Teacher	On Site Supervisor
1	Actively participates			
2	Shows enthusiasm			
3	Invigorates others			
GRIT				
4	Finishes whatever he or she begins			
5	Tries very hard even after experiencing failure			
6	Works independently with focus			
SELF CONTROL SCHOOL WORK				
7	Comes to class prepared			
8	Pays attention and resists distractions			
9	Remembers and follows directions			
10	Gets to work right away rather than procrastinating			
SELF-CONTROL INTERPERSONAL				
11	Remains calm even when criticized or otherwise provoked			
12	Allows others to speak without interruption			
13	Is polite to adults and peers			
14	Keeps his/her temper in check			

		Student	Teacher	On Site Supervisor
OPTIMISM				
15	Gets over frustrations and setbacks quickly			
16	Believes that effort will improve his or her future			
GRATITUDE				
17	Recognizes and shows appreciation for others			
18	Recognizes and shows appreciation for his/her opportunities			
SOCIAL INTELLIGENCE				
19	Is able to find solutions during conflicts with others			
20	Demonstrates respect for feelings of others			
21	Knows when and how to include others			
CURIOSITY				
22	Is eager to explore new things			
23	Asks and answers questions to deepen understanding			
24	Actively listens to others.			
ACADEMIC PERFORMANCE				
25	Completes all assignments with quality and timeliness			
26	Uses tools appropriately and safely			
COMMITMENT				
27	Attends class with one or less absences per quarter			
28	Demonstrates loyalty and appreciation to the program			

Teacher

Employer

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Training Plan

(Form #4)

Student's Name	Email	
Student's Address	Telephone	Date of Birth
CTE Program Career Cluster	Working Papers Certificate #	
School Coordinator		
Phone Number		
Fax Number		
Email		
Employer		
Phone Number		
Fax Number		
Email		
Immediate Job Supervisor		
Phone Number		
Email		
Corporate Address		

Training Schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Insurance Coverage

- ☐ Student is a non-paid intern – Worker's Compensation
- ☐ Student is a non-paid observer – Worker's Compensation

Transportation Provided by

- ☐ Student/parent will provide own transportation
- ☐ School district will provide transportation during school hours

Goals for this Work-Based Learning Student:

1. To explore, learn and develop the skills necessary for this career.
2. To develop the Career Ready Practices necessary for success in the global, competitive world.
3. To be trained in the safe operations of this job title.

4. To be able to demonstrate positive behavior and appropriate dress.

(Form #4 Continued)

JOB TASKS AND LEARNING OUTCOMES (Determined by the Employer and Coordinator)	ACHIEVEMENT LEVEL AND COMMENTS 1. Mastered skill 2. Needs more training at the work site. 3. Needs more training at school. 4. Has not reached this training area.
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

CAREER READY PRACTICES	Always	Frequently	Occasionally	Rarely
1. Student works cooperatively as a team member?	☐	☐	☐	☐
2. Student is able to read instructions for information and application.	☐	☐	☐	☐
3. Student can calculate and measure for information and application.	☐	☐	☐	☐
4. Student can behave in a responsible manner without supervision.	☐	☐	☐	☐
5. Student can communicate verbally and in writing to evoke clear understanding.	☐	☐	☐	☐
6. Student demonstrates good listening and follow through skills.	☐	☐	☐	☐
7. Student demonstrates critical thinking and problem solving skills.	☐	☐	☐	☐
8. Student can locate and manage resources for problem solving.	☐	☐	☐	☐
9. Student demonstrates a positive work ethic.	☐	☐	☐	☐
10. Student demonstrates computer literacy.	☐	☐	☐	☐

(Form #4 Continued)

SAFETY TRAINING	DATE OF SAFETY TRAINING	ACHIEVEMENT LEVEL AND COMMENTS 1. Mastered safety training instruction. 2. Needs more safety training at work site. 3. Needs more safety training at school. 4. Has not reached this training area.
1. Safety precautions related to stairs, floors, office equipment and furniture.		
2. Safety precaution related to proper dress apparel, shoes, gloves, head, eye and ear protection.		
3. Safety precaution related to use of tools, machines, and chemicals.		
4. Safety precautions related to fire, weather and other natural disasters.		
5. Safety precautions related to sexual harassment and workplace violence.		

DRESS AND BEHAVIOR CODE FOR POSITION	ACHIEVEMENT LEVEL AND COMMENTS 1. Dresses/behaves appropriately 2. Needs to modify dress/behavior. 3. Needs personal consultation.

Employer Name	Employer Signature	Date / /
Work-based Learning Coordinator Name Coordinator	Work Based Learning Signature	Date / /
Parent/ Guardian Name	Parent/Guardian Signature	Date / /
Student Name	Student Signature	Date / /

If you have any questions please do not hesitate to contact me at (315) 435- .

Thank you for your cooperation!_____, CTE Teacher

(315) 435-4131, Email: CivilRightsCompliance@scsd.us

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship Notification of Unpaid Internship

(Form #5)

This form serves as notification that the Syracuse City School District CTE Internship is an unpaid internship and studentsare not due any wages per New York State Department of Labor.

_____	_____ / /
Student	Date
_____	_____ / /
CTE Teacher/ WBL Coordinator	Date
_____	_____ / /
Worksite Representative/ Mentor	Date

Teacher

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD Internship Safety Certification

(Form #6)

_____ ____/____/____

Student Date

_____ _____

Mentor or Supervisor CTE/ WBL Teacher

Student CTE Program SCSD Career and Technical Program:

_____

OSHA 10	☐	/ /
Safe Serv	☐	/ /
First Aid	☐	/ /
CPR	☐	/ /
Other	☐	/ /

Teacher

Employer

Student

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD Internship Worksite Orientation

(Form #7)

_____ _____

Student Date (/ /)

_____ _____

Mentor or Supervisor CTE/ WBL Teacher

Company Orientation

Directions: Be sure that your student employee obtains information about the factors listed below. Check the information on each item as it is completed. Return the completed form to the CTE Teacher or Work Based Learning Coordinator.

Tour of Workplace

- ☐ A tour of the workplace
- ☐ An overview of the company safety
- ☐ plan Introductions to co-workers

Tour of Employee Facilities

- ☐ Rest rooms
- ☐ Lunch room
- ☐ Where to store personal belongings

Other _____

Safety Plan

- ☐ Safety plan
- ☐ Stairwell/fire exits
- ☐ Fire Extinguishers
- ☐ Special hazards
- ☐ Accident prevention
- ☐ Safety Training Log, updated as needed

About the Company

- ☐ Discuss company organizational structure
- ☐ Review type of business, products, services
- ☐ Overview of who the customers are

Other _____

Department/Position Specifics

- Explanation of work schedule
- ☐ Review of dress and conduct code
- ☐ Review of hours, breaks and lunch
- ☐ policies Location of time clock or sign-in
- ☐ Attendance requirements, including procedures for calling in when absent
- ☐ Relationship to working with other departments or co-workers

Job Specific

- ☐ How to use the phones and office equipment Supplies, paper, pens, etc.
- ☐ Job description, Work-Based Learning Plan and evaluation process

Supervisors Expectations

- ☐ Dress code including clothing, hair and jewelry
- ☐ Work performance including productivity and work habits
- ☐ Company culture

Materials provided to intern

- ☐ Copy of personnel handbook Organizational charts Telephone directory
- ☐ Security procedures

_____	____/____/____
Employer/training sponsor	Date
_____	_____
	____/____/____
Student	Date
_____	_____
	____/____/____
CTE Teacher/WBL Coordinator	Date

Teacher

Employer

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

Weekly Time Log/Record of Attendance

(Form #8)

Student _____ Training Title _____

Worksite Supervisor _____

Time Log for the Week of: ____/____/____

	Date	Start Time	End Time	Hours Worked
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				

Total Weekly Hours: _____

Student please list any new tasks performed this week: _____

_____

By signing this timesheet, you are certifying that it is correct and truthful.

_____ ____/____/____

Student's Signature Date

_____ _____ ____/____/____

Supervisor Name Phone Date

_____

Supervisor's Signature

Attention Worksite Supervisor:

If you have any questions or concerns, please contact:

CTE Teacher _____ Phone _____

The Syracuse City School District hereby advises students, parents, employees and the general public that it is committed to providing equal access to all categories of employment, programs and educational opportunities, including career and technical education opportunities, regardless of actual or perceived race, color, national origin, Native American ancestry/ethnicity, creed or religion, marital status, sex, sexual orientation, age, gender identity or expression, disability or any other legally protected category under federal, state or local law. Inquiries regarding the District's non- discrimination policies should be directed to: Executive Director of Student Support Services, Civil Rights Compliance Officer, Syracuse City School District, 725 Harrison Street • Syracuse, NY 13210/
(315) 435-4131, Email: CivilRightsCompliance@scsd.us

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship Student Evaluation (Form #9)

Name _____ CTE Program _____

_____/_____/_____ — _____/_____ /Dates of Internship

_____ Year to Graduate

Please complete this form upon completion of your internship.

	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree
Overall, I had a great experience	☐	☐	☐	☐	☐
I was actively involved in the team meetings and felt free to express my thoughts and opinions	☐	☐	☐	☐	☐
My mentors encouraged and responded to my questions	☐	☐	☐	☐	☐
I have an increased appreciation for teamwork	☐	☐	☐	☐	☐
I have a greater ability to ask good questions and synthesize information	☐	☐	☐	☐	☐
I was presented with opportunities to learn by doing	☐	☐	☐	☐	☐
I gained factual knowledge about careers throughout the internship	☐	☐	☐	☐	☐
I would recommend this opportunity to others	☐	☐	☐	☐	☐
My time was well spent	☐	☐	☐	☐	☐
I would consider this employer as a future employer	☐	☐	☐	☐	☐
My co-workers are generally positive about work	☐	☐	☐	☐	☐

The best thing about my experience was… _____

_____

The worst thing about my experience was… _____

_____

Any suggestions on how we could improve the intern experience? _____

_____

Other comments… _____

Employer

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship Mentor Program Evaluation (Form #10)

Student Name

SCSD School

Interning Location

Supervisor/ Mentor Name

Date

/ /

Internship Preparation

- ☐ Exceptiona
- ☐ IAdequate
- ☐ Inadequate

Modes of Communication with SCSD Personnel

- In-Person
- ☐ Email
- ☐ Phone
- ☐

Amount of Communication with SCSD Personnel

- ☐ Exceptionally
- ☐ Appropriate
- ☐ Too Much
- ☐ Too Little

Suggestions for improvement:

Additional comments:

Return to CTE teacher

BOARD OF EDUCATION

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NOTICE OF NON-DISCRIMINATION

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Inquiries regarding the District's non-discrimination policies should be directed to:

Assistant Superintendent for Student Support Services, Civil Rights Compliance Officer
Syracuse City School District
725 Harrison Street • Syracuse, NY 13210
(315) 435-4131

Email: CivilRightsCompliance@scsd.us

Return to TOC

F. Employability Profile

> *The employability profile is a record of student achievement. That may include documentation of the student's attainment of technical knowledge and work-related skills, endorsements, licenses, clinical experience, work experience, performance on core academic Regent's examinations, performance on industry based assessments, attendance, student leadership honors and achievements and other honors or accolades of student success.*

Process

- An employability profile model is developed for the program
- A profile of student achievement is developed for each student in the program and is maintained in accordance with records and retention policies of the school district/BOCES.
- The profile of student achievement is reviewed and updated on a continuous basis by the student and the appropriate program/guidance personnel.
- The work skills to be mastered by students with disabilities should be aligned with the student's Individualized Education Program (IEP).

Documentation

Recommendations for the employability profile model should be included in the self-study report and reviewed by the external committee.

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

EMPLOYABILITY PROFILE

Geospatial Technology

Industry Based Skill Standards

Proficiency Definitions

NA = Not Applicable **1 = Introduced** **2 = Trained** **3 = Trained/Skilled** **4 =Industry Level Certification/ Mastery**

	9th	10th	11th	12th
History of Maps				
Knowledgeable of the history, societal implications, and industry applications of GIS.				
Map Types				
Understands map types, puposes, and information they depict.				
Principles of Geographic Information Systems				
Understands the basic concepts of geospatial technology, including coordinate systems, rasters, vectors, scale and topography.				
Cartography & Map Layouts				
Create, change and manipulate data used to create a map; label, layout and print adding all map elements.				
Symbology & Classification				
Customize the display of geospatial data and understand the various types of symbology and how they are applied.				
Map Projections				
Demonstrate an understanding of coordinate systems, data frames, map projections, map scale and datums.				
Information Fundamentals				
Ability to manage, query, archive and manipulate geospatial data and understand various file structures and naming conventions.				

	9th	10th	11th	12th
Geoprocessing Tools				
Demonstrate ability to apply geoprocessing tools, such as merge, append, edit, buffer, intersect, dissolve, project and various others, to geospatial data.				
Basic Principles of Remote Sensing				
Knowledgeable in remote sensing techniques, applications, methods and the resultant imagery types, including satellite imagery and aerial photography.				
Digitizing & Geocoding				
Demonstrates the ability to digitize and manipulate points, lines and polygons and create new features and data.				
Geodatabase Functions				
Understands the process and applications of joining and relating geospatial data and relationship classes.				
Geospatial Modeling				
Identify the steps in creating a geospatial model and developing an efficient workflow.				
Global Positioning Systems (GPS)				
Demonstrate knowledge of the Global Positioning System and ability to use various handheld GPS devices. Manipulate GPS data and integrate into geopsatial analyses.				
Geospatial Career Opportunities				
Identify careers that use geospatial technology and develop a career plan to transition from high school to higher education and/or career path.				

Industry Certifications Attained	**Yes**
STARS Certification	

College Credits Attained		Yes
CCC Intro to GIS	TBD	
MVCC Intro to CCC	TBD	
Total		

Internships	Hours
Agency	
Agency	
Agency	

GEOSPATIAL TECHNOLOGY

EMPLOYABILITY PROFILE

Student Name: _____ School Year: _____ Absences: _____

ID Number: _____ Teacher: _____ Final Grade: _____

Career Ready Practices / Career Development Standards

STANDARDS DEFINITIONS

NA = Not Applicable 1 = Developing 2 = Basic 3 = Proficient 4 = Mastery

	9th	10th	11th	12th
Acts as a responsible citizen/employee				
Is on time and prepared, follows workplace policies, demonstrates reliability and dependability, is polite and courteous to adults and peers, demonstrates appreciation, and is reliable and consistent in their actions				
Applies appropriate academic and technical skills				
Demonstrates an understanding of the academic knowledge and skills associated with their trade. Technical skills are developed with academic competencies including English language arts and science that are integrated within the CTE program.				
Attends to personal health and financial well-being				
Recognizes the benefits of physical, mental, social, and financial well-being to the importance of that success in their career. Accepts criticism and works towards self-improvement targets on a consistent basis.				
Communicates clearly, effectively, and with reason.				
Is able to communicate both verbally and in writing to express ideas and obtain information. Uses appropriate vocabulary to share information both verbally and in writing as well. Demonstrates active listening skills and verbal communication.				
Makes appropriate decisions				
Considers the environmental, social, and economic impacts of their decisions. Understands that their actions and decisions will impact other people directly. Works independently and responds positively to new ideas and suggestions.				
Demonstrates creativity and innovative thought				
Demonstrates creativity and new thinking to solve workplace problems as encountered. Is creative, innovative, and is eager to explore new ways of addressing issues and challenges that are encountered.				
Employs valid and reliable research strategies				
Seeks information to develop a deeper understanding of issues encountered. Uses technology as a tool to research, organize, and evaluate information critically incompetently. Interprets information and draws conclusions based on best analysis.				
Uses critical thinking skills and demonstrates perseverance				
Demonstrates problem-solving skills through the use of creative thinking, decision-making, and adaptability. Effectively reasons through difficult situations, and makes decisions even when faced with complex or challenging problems.				

	9th	10th	11th	12th
Models integrity, ethical behavior, and leadership				
Is accountable and transparent in all of their work and assignments. Consistently exhibits ethical behavior, and commitment to completing tasks as assigned. Develops and demonstrates leadership skills, assuming responsibility readily.				
Develops and implements a Career Plan				
Develops a career plan based on understanding of their personal goals and the career pathways that aligns to them. Develops resumes, cover letters, and examples of best work to aid in the job seeking process and/or entrepreneurial goals.				
Uses technology to enhance productivity				
Demonstrates an understanding of the use of technology related to their career pathway. Continually develops their ability to adapt to changing work environments using technology, including new tools and their associated applications.				
Works as a productive and respectful team member				
Actively participates as a member of a team recognizing and appreciating others skills and abilities. Adds to the collective value of the team, and invigorates others to add to the collective efforts and goals.				
Demonstrates reliability and dependability				
Regardless of tasks given, demonstrates reliable and dependable behaviors to meet the expectations as defined. Attendance and levels of participation meet expectations consistently. Take on additional responsibilities without prompting.				
Arrives on time and is prepared to work				
Consistently demonstrates promptness, reliability, and commitment to reporting for classes, work site experiences, and other assignments as defined. Reports prepared for work or education as requirements dictate, meets attendance requirements.				
Demonstrates safe working habits				
When engaging in worksite situations or learning labs, uses tools and equipment safely, observes general safety guidelines for material handling, and meets the expectations of maintaining a safe work environment for others.				
Demonstrates problem solving skills				
Addresses problems encountered using effective problem-solving strategies. Works to define potential solutions to problems, identifies and implements the best solution based on the information gathered and their skill and knowledge.				

Earned Technical Endorsement on Diploma **YES** ☐ NO

Industry Credential(s) Awarded See Reverse Side

Special Recognitions or Scholarships _____

Student Leadership Organization _____

Return to TOC