

**St. Lawrence-Lewis BOCES
Board of Education Presentation
40 W. Main Street, Canton
May 10, 2012 -- 6:00 p.m.**

Programs approved in 2010-2011:

- Cosmetology (NWT, SATC, SWT)
- Early Childhood Education (NWT, SATC, SWT)

Program Re-Approval 2011-2012

A. Program Information

NYSED approval of two CTE programs; **Automotive Technology, Building Trades and Graphic Communications** will expire on June 30, 2012.

Program of Study	Credits Approved	Yr. Approved Re-approved	Program Review	Re-approval Date
Automotive Technology CIP #47.0604 Non-trad -Female	1 Unit Integrated Math 1 Unit Integrated Science	2007-2008	3/15/2012	9/2012
Building Trades CIP #46.999 Non-trad - Female	1 Unit Integrated Math 1 Unit Integrated Science	2007-2008	3/15/2012	9/2012
Graphic Communications CIP #10.0399 Non-trad - Female	1 Unit Integrated Math 1 Unit Integrated Science	2007-2008	3/15/2012	9/2012

They must be re-approved by NYSED this spring in order to be offered to our students as approved programs in September 2012. Approval by New York State Education Department allows students to receive Technical Endorsement.

The programs are offered in all three CTE Centers.

B. Achievements

Program Achievements Since 2007-2008				
CTE Program of Study	Students Completing since 2007-2008	Students Completing with Special Education Services	Students receiving Technical Endorsement	Percentage of students receiving Technical Endorsement
Automotive Technology	108	47	67	62%
Building Trades	110	38	80	73%
Graphic Communications	31	13	23	75%

C. Program Content

Curricular changes have been communicated to the component districts through:

- Superintendents CTE Sub Committee
- Secondary Principal Meetings hosted in districts throughout the BOCES
- Guidance Counselor meetings
- Math and Science teachers from the component districts received curriculum materials in advance of the external review meeting held at Northwest Tech on March 15. The teachers attended the External Review meeting, spoke with students, and concluded their day with a meeting with the CTE Math and Science Consultant teachers.
- Math and Science Integration Support Document Review Meetings included certified Science and Math teachers from component districts; Morristown, Hammond, Lisbon, Hermon-DeKalb, and Ogdensburg City School Districts.

D. Work-Based Learning

All students completing the programs since approval have participated in work-based learning.

- On-Site projects
- Career Exploration Internship Program (CEIP)

E. Employability Profile

- Employability Skills are the generic work based learning skills, attitudes, and behaviors that employers look for in new employees:
 - Academic Skills
 - Thinking Skills
 - Personal Management Skills
 - Resource Management Skills
 - Interpersonal Skills
 - Technology Skills
- Course Competencies are specific to each program of study and have been updated along with the curriculum.

F. Technical Assessment (three parts)

- **Written and Practical** National Occupational Competency Testing Institute (NOCTI):
 - #4109 – Automotive Technology Core
 - #4015 - Carpentry
 - #2425 – Visual Communications and Multimedia Design
- **Senior Project** – Designed by instructors with students and assessed by instructors through the use of a rubric

G. Articulated Credit and Dual Enrollment Agreements:

Students benefit with college credit and advanced standing at post-secondary institutions:

▪ Automotive Technology

- **SUNY Canton College of Technology***
- SUNY Morrisville
- Nashville Auto-Diesel College
- Alfred State College
- Monroe Community College
- Fulton-Montgomery College

***Dual Enrollment and Articulation**

▪ Building Trades

- SUNY Canton College of Technology
- Alfred State College
- Fulton-Montgomery Community College

▪ Graphic Communications

- The Art Institute of Pittsburgh
- Mohawk Valley Community College
- Fulton-Montgomery Community College
- **SUNY Canton College of Technology***
- North Country Community College (Dual Enrollment – 3 credits)

***Dual Enrollment and Articulation**

H. Faculty and External Review Committee

- Mid and End of the Year Evaluation Meetings
- Program Indicators
- Self-study meetings conducted
- Advisory Committee Meetings for all programs
- External Review Meeting – March 15, 2012

I. Teacher Certification

Staffs are highly qualified according to NCLB standards in the subject(s) for which academic credit is being requested

J. Staff Development (2011-2012)

- Effective Teaching
- Priority Literacy Training
- Technology In-Service (Peer Presented-ongoing)
- Regional Visitations/Networking – program specific
- Introduction to the NYS Common Core Standards Grades 7-12 Math
- NYS APPR for CTE Instructors

Request for Board Approval

Programs scheduled for 2012-2013 Reapproval Process:

- Culinary Arts (NWT, SATC, SWT)
- Environmental Technology (NWT, SATC, SWT)
- HVAC/R (SATC)
- Metalworking (NWT, SATC, SWT)

Year Highlights:

- Technology Centers That Work:
 - Parent Involvement
 - Literacy
 - Home School/CTE Center Connections

- Gateways: 1,110 students participated

St. Lawrence-Lewis BOCES TECH Centers

Teacher Michael Ells; Kelly Tiernan; Pat Mullaney **Course** Automotive Technology-Year One

Building Seaway Area Tech; Northwest Tech; Southwest Tech

Unit of Study	Hours for Each Unit of Study	Hours of Study Devoted to Math	Hours of Study Devoted to Science
1. Introduction to Automotive Technology	80 (Decrease in hours)	21.5	7.5
2. Introduction to Engines (Moved from Year 2 Curriculum)	75	17.5	16
3. Brake Fundamentals	96	14.5	13
4. Steering and Suspension	93 (Decrease in hours)	6	8
5. Drive Train and Axles	81	18.5	2
6. Career Planning	25	4	1
TOTAL	450	82	47.5

St. Lawrence-Lewis BOCES TECH Centers

Teacher Michael Ells; Kelly Tiernan; Pat Mullaney **Course** Automotive Technology-Year Two

Building Seaway Area Tech; Northwest Tech; Southwest Tech

Unit of Study	Hours for Each Unit of Study	Hours of Study Devoted to Math	Hours of Study Devoted to Science
1. Introduction to Automotive Technology-Review	43 (Increase in hours)	2	1
2. New York State Inspection (Moved from Year 1 Curriculum)	25		2
3. Automotive Electrical	150	6.5	33.5
4. Engine Performance, Fuel and Emissions	125 (Increase in hours)	17.5	19.5
5. Automotive Air Conditioning (Moved from Year 1 Curriculum)	32	5	3.5
6. Career Planning	25		4
7. Internship	50		
TOTAL	450	31	63.5

Certificates and Career and Technical Education Assessments

YEAR TWO:

National Occupation Competency Testing Institute (NOCTI) – Automotive Technician Core National Assessment

St. Lawrence-Lewis BOCES CTE Centers

Teacher: Glen Perry; Jeff Swift; Bob Niederer

Course: Building Trades-Year One

Building: Seaway Tech; Northwest Tech; Southwest Tech

Unit of Study		Hours of Each Unit of Study	Hours of Study Devoted to Science	Hours of Study Devoted to Math
I.	Introduction			
	A. Orientation	8		
	B. Safety	20	10	3
II.	Integrated Skills			
	A. Building Materials	25	10	8
	B. Hand Tools	25	3	3
	C. Power Tools	25	3	2
	D. Stationary Power Tools	25	3	2
	E. Ladder and Scaffolding Safety	7	1	1
	F. Plans/Specifications and Codes	20	2	7
	G. Site Layout	20	1	4
	H. Foundations	30	8	3
	I. Floor Framing	30	5	8
	J. Wall Framing	30	2	8
	K. Roof Framing	30	2	8
	L. Roofing	10	5	4
	M. Window Installation (Moved Door Installation to Year Two)	5	2	
	N. Exterior Finish	45	2	1
	O. Insulation	30	6	6
	P. Interior Finish	25	4	3
	Q. Interior Trim and Millwork	40		2

Unit of Study		Hours of Each Unit of Study	Hours of Study Devoted to Science	Hours of Study Devoted to Math
III.	Career Planning	Integrated		
	Total Hours	450	69	73

St. Lawrence-Lewis BOCES CTE Centers

Teacher: Glen Perry; Jeff Swift; Bob Niederer

Course: Building Trades-Year Two

Building: Seaway Tech; Northwest Tech; Southwest Tech

Unit of Study		Hours of Each Unit of Study	Hours of Study Devoted to Science	Hours of Study Devoted to Math
I.	Introduction – Review Year One	(Changed Unit name to include –Review of Year 1)		
	A. Orientation	2		
	B. Safety	10	2	1
II.	Integrated Skills			
	A. Power Tools	10	3	
	B. Stationary Power Tools	5		
	C. Ladder and Scaffolding Safety	3		
	D. Plans/Specifications and Codes	10	1.5	1
	E. Site Layout	10	5	5
	F. Floor Framing	25	1	8
	G. Wall Framing	25	1	8
	H. Roof Framing	25		12
	I. Roofing	15		3
	J. Door Installation (Window Installation in Year One)	10		2
	K. Exterior Finish	10		3
	L. Interior Finish	30 (Increase in hours)	2	4
	M. Interior Trim and Millwork	40 (Increase in hours)		2
	N. Stairs	15	.5	5
	O. Cabinets	20		1
	P. Plumbing	35	6	3
	Q. Residential Wiring	100	31	3

Unit of Study		Hours of Each Unit of Study	Hours of Study Devoted to Science	Hours of Study Devoted to Math
III.	Internship	50		
IV.	Career Planning	Integrated		3
	Total Hours	450	53	64

Ceramic Tile was removed from the Year Two curriculum.

Certificates and Career and Technical Education Assessments

YEAR TWO:

National Occupation Competency Testing Institute (NOCTI) – Carpentry National Assessment

St. Lawrence-Lewis BOCES CTE Centers

Teacher: Ronald Shirtz

Course: Graphic Communications I

Building: Northwest CTE Center

Unit of Study	Hours for Each Unit of Study	Hours of Study Devoted to Math	Hours of Study Devoted to Science
1. Orientation and Classroom Safety	8	1	5
2. Preparing to Enter the World of Work	7.5	2	
3. Communication Concepts	5	1	3
4. Evolution of Communication Media	10		8
5. Basic Computer Operations, Trouble-Shooting, and the Network Server	5	2	
6. Electronic Spectrum and Telecommunications	16 (Increase in an hour)	3	13
7. Basic Word Processing with Microsoft Word	5 (Decrease in hours)		
8. Creating Presentations in Microsoft PowerPoint	50	2	8
9. Introduction to the Internet and Web Page Design	50 (Decrease in hours)		
10. Video Production Theory	23.5		4
11. Digital Video Production with Adobe Premiere	70 (Increase in hours)	2	5
12. 2D Animations Flash (Added "Flash" to Unit Name)	70 (Increase in hours)	9	5
13. 3D Animation	70 (Increase in hours)	22	8
14. Introduction to Desktop Publishing	50 (Decrease in hours)	1	5
15. Career Planning	10	3	
TOTAL HOURS	450	48	64

St. Lawrence-Lewis BOCES CTE Centers

Teacher: Ronald Shirtz

Course: Graphic Communications II

Building: Northwest CTE Center

Unit of Study	Hours for Each Unit of Study	Hours of Study Devoted to Math	Hours of Study Devoted to Science
1. Orientation and Classroom Safety	8	1	4
2. The Network Server	2.5	2	
3. History and Evolution of Printing	3.5		2
4. Printing Cycle and Printing Processes	2.5		2
5. Printing Services	2.5	1	1
6. Print Shop Organization	6.5		3
7. Printing Customs	5	1	
8. Copyright	2.5		
9. Cost Estimation	7.5	6	
10. Design Principles	8	4	
11. Typography	15	1	
12. Color Theory	17	1	7.5
13. Digital Imaging Basics	9	3	
14. Digital Photography	37	3	20.5
15. Desktop Publishing (Removed "INDESIGN" from Unit Title)	180 (Increase in hours)	30	3
16. Photoshop/Image Editing	76.5	7	2.5
17. Offset Lithography	12		10
18. Internship/Work Shadowing	25 (Decrease in hours)		
19. Career Planning	30 (Increase in hours)	3	
TOTAL HOURS	450	63	55.5

Certificates and Career and Technical Education Assessments

Year Two: National Occupation Competency Testing Institute (NOCTI) - Visual Communications and Multi-Media Design National Assessment

Re-Approval Application 2012 Automotive Technology

C 7. Has the curriculum of this program undergone any significant changes since the program was originally approved?

Yes.

The St. Lawrence-Lewis BOCES Automotive Technology program was approved in May 2003 and was re-approved July 2007 (#47.0604). Since the initial approval and re-approval, the curriculum has gone through a very thorough review of all components including a cross-walk with the CCSS for ELA and Math. This has resulted in further development of the integrated science and math support documents. Through the self-study process and in-depth work in both math and science; math and science consultants, CTE Instructors and component district, teachers feel that both math and science are integral components of a successful Automotive Technology program. We have worked closely with our nearest post-secondary institution(s) Automotive Technology industries, and local advisory board this year as we reviewed the curriculums.

We have made some shifts in the order of the curriculum across the two years. For example:

- Aligned the curriculum to classroom instruction by moving:
 - Automotive Electrical and Engine Performance Fuel and Emissions from Year One to Year Two
 - Steering and Suspension and Drive Train and Axles from Year Two to Year One
- All units were reviewed and the units were further developed to reflect key components of Automotive Technology Year One which are reviewed as part of Year Two curriculum
- Science and Math integration was aligned for both Year One and Year Two of the curriculum as well as development of new lesson plans for Science and CCSS in Math
- ELA CCSS have been integrated into the updated curriculum

Request: Integrated Math – One Unit
 Integrated Science – One Unit

Re-Approval Application 2012 Building Trades

C 7. Has the curriculum of this program undergone any significant changes since the program was originally approved?

Yes.

The St. Lawrence-Lewis BOCES Building Trades program was approved in May 2003 and was re-approved July 2007 (#46.9999). Since the initial approval and re-approval, the curriculum has gone through a very thorough review of all components including a cross-walk with the CCSS for ELA and Math. This has resulted in further development of the integrated science and math support documents. Through the self-study process and in-depth work in both math and science; math and science consultants, CTE Instructors and component district, teachers feel that both math and science are integral components of a successful Building Trades program. We have worked closely with our Building Trades industries and local advisory board this year as we reviewed the curriculums.

We have made some shifts in the order of the curriculum across the two years. For example:

- Door and Window Installation were separated. Door Installation was moved to Year Two in order to align the curriculum with the classroom instruction. Window Installation remains in Year One.
- Ceramic Tile was removed from the Year Two curriculum.
- An emphasis was placed on exterior framing, exterior finish, and some interior framing for Year One with the focus of Year Two being interior finish work.
- Year Two curriculum that is reviewed from Year One was raised to a mastery level.
- Science and Math integration was aligned for both Year One and Year Two of the curriculum as well as development of new lesson plans to meet these standards.
- All standards for ELA have been reviewed and are aligned to the NYS P-12 Common Core Learning Standards for ELA and Literacy.

Request: Integrated Math – One Unit
 Integrated Science – One Unit

Re-Approval Application 2012 Graphic Communications

C 7. Has the curriculum of this program undergone any significant changes since the program was originally approved?

Yes.

The St. Lawrence-Lewis BOCES Graphic Communications program was approved in May 2003 and was re-approved July 2007 (#50.0401). We requested, and received, approval to change our CIP Code for Graphic Communications to 10.0399 in May 2008. Since the initial approval and re-approval, the curriculum has gone through a very thorough review of all components including a cross-walk with the CCSS for ELA and Math. This has resulted in further development of the integrated science and math support documents. Through the self-study process and in-depth work in both math and science; math and science consultants, CTE Instructors and component district, teachers feel that both math and science are integral components of a successful Building Trades program. We have worked closely with our Graphic Communications industries and local advisory board this year as we reviewed the curriculums.

Graphic Communications instructor has developed the course to meet requirements for dual enrollment for North Country Community College. The instructor has been approved as a SUNY Canton adjunct, as well, and conversations continue.

To better prepare students for life after high school, students access the Moodle site and work with the teacher face to face as well as through the electronic platform for lessons, materials, activities, and resources.

- Year Two curriculum that is reviewed from Year One was raised to a mastery level.
- Science and Math integration was aligned for both Year One and Year Two of the curriculum as well as development of new lesson plans to meet these standards.
- All standards for ELA have been reviewed and are aligned to the NYS P-12 Common Core Learning Standards for ELA and Literacy.

Request: Integrated Math – One Unit
Integrated Science – One Unit

**ST. LAWRENCE-LEWIS BOCES
CAREER AND TECHNICAL EDUCATION
PROGRAM RE-APPROVAL TIMELINE**

Program of Study CIP Code	Credits Approved	Year Last Reapproved	Program Review Year	Re-approval Date
Automotive Technologies 47.0604 Non-Trad. Female	1 Unit Integrated Math 1 Unit Integrated Science	2007-2008	2011-2012	9/2012
Building Trades 46.9999 Non-Trad. Female	1 Unit Integrated Math 1 Unit Integrated Science	2007-2008	2011-2012	9/2012
Computer and Business Technology 11.0101 Non-Trad. Female	1 Unit Specialized Math 1 Unit Specialized Science	2009-2010	2013-2014	9/2014
Cosmetology 12.0401 Non-Trad. Male	1 Unit Specialized Math 1 Unit Integrated Science	2011-2012	2015-2016	9/2016
Criminal Justice 43.0104 Non-Trad. Female	1 Unit Integrated Math 1 Unit Integrated Science	2009-2010	2013-2014	9/2014
Culinary Arts 12.0500 Non-Trad. Female	1 Unit Specialized Math 1 Unit Integrated Science	2008-2009	2012-2013	9/2013
Early Childhood Education 19.0709 (00195A) Non-Trad. Male	1 Unit Specialized Math 1 Unit Specialized Science	2011-2012	2014-2015	9/2016
Electronics 47.0101 Non-Trad. Female	1 Unit Integrated Math 1 Unit Integrated Science	2010-2011	2014-2015	9/2015
Environmental Technology 15.0507 Non-Trad. Female	1 Unit Specialized Math 1 Unit Integrated Science (1 Unit Integrated ELA)	2008-2009	2012-2013	9/2013
Graphic Communications 10.0399 Non-Trad. Female	1 Unit Integrated Math 1 Unit Integrated Science	2007-2008	2011-2012	9/2012
HVAC/R (Heating, Ventilation & Air Conditioning) 47.0201 Non-Trad. Female	1 Unit Integrated Math 1 Unit Integrated Science	2008-2009	2012-2013	9/2013
Health Careers 51.1614 Non-Trad. Male	1 Unit Specialized Math 1 Unit Integrated Science	2010-2011	2014-2015	9/2015
Metalworking Technology 48.0508 Non-Trad. Female	1 Unit Integrated Math 1 Unit Integrated Science	2008-2009	2012-2013	9/2013
Allied Health (1 yr) 51.0899 Non-Trad. Male	Not Applicable	Not Applicable	2009-2010	Not Applicable
Multi Occupations 48.9999	Not Applicable	Not Eligible	2005-2006	Not Applicable
Pre-Engineering (1 or 2 yr) 15.0000	Not Applicable	Not Applicable	2011-2012	Not Applicable