

**APPROVED**

**AUGUST 10, 2021**

Item #C-1  
August 10, 2021

**NEW UNITS OF INSTRUCTION AT PUBLIC COMMUNITY COLLEGES**

**Submitted for:** Action.

**Summary:** This item requests approval of seven new associate degree programs to be offered at five community colleges.

**Action Requested:** That the Illinois Board of Higher Education approves the following programs at the colleges indicated:

Elgin Community College

- Associate of Applied Science in Ophthalmic Technician

Frontier Community College

- Associate of Applied Science in Coal Mining Technology

John Wood Community College

- Associate of Applied Science in Web Development

Joliet Junior College

- Associate of Applied Science in Respiratory Care Therapy

Richard J. Daley College

- Associate of Applied Science in Computer-Aided Design Engineering Technology
- Associate of Applied Science in Computerized Numerical Control Engineering Technology
- Associate of Applied Science in Welding Engineering Technology



STATE OF ILLINOIS  
BOARD OF HIGHER EDUCATION

**NEW UNITS OF INSTRUCTION AT PUBLIC COMMUNITY COLLEGES**

By statute, the Illinois Board of Higher Education (IBHE) is responsible for approving new associate degree programs proposed by public community colleges. The Board's approval criteria, defined in administrative rules, address relevance to college mission, academic control, faculty and staff, support services, financial resources, student demand, employer demand, curriculum, and congruence with IBHE policies and priorities. Before a recommendation for approval of an associate degree program is submitted to the IBHE for approval, staff of the IBHE and the Illinois Community College Board review the proposal. Once agreement is reached on a proposal having met the approval criteria, a recommendation for approval is presented to each board.

**Executive Summary**

Elgin Community College

- Associate of Applied Science in Ophthalmic Technician

Elgin Community College is seeking approval for a 62.5-credit hour Associate of Applied Science in Ophthalmic Technician. The degree program requires 24 credit hours of general education coursework and 38.5 credit hours of required career and technical education coursework. This degree program was designed to provide knowledge and skills needed for entry-level employment as ophthalmic technicians skilled to work in a variety of optometric/ophthalmologic clinical healthcare settings. Graduates will be prepared to sit for the Certified Ophthalmic Technician (COT) exam offered through the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO). There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The College has sufficient library, technology, staff, and financial resources in place to support the proposed program.

Approval request summary, including staff conclusion, follows in Attachment A.

Frontier Community College

- Associate of Applied Science in Coal Mining Technology

Frontier Community College is seeking approval for a 60-credit hour Associate of Applied Science in Coal Mining Technology. The degree program requires 15 credit hours of general education coursework and 45 credit hours of required career and technical education coursework. This degree program was designed to provide knowledge and skills needed for entry-level employment in the mining industry. Graduates of the program will be prepared to work as maintenance supervisor, repair person, miner, and various mine technician positions. There are policies in place to ensure faculty members possess the training, credentials, and qualifications to

provide instruction in the proposed program. The College has sufficient library, technology, staff, and financial resources in place to support the proposed program.

Approval request summary, including staff conclusion, follows in Attachment B.

#### John Wood Community College

- Associate of Applied Science in Web Development

Joliet Junior College is seeking approval for a 64-credit hour Associate of Applied Science in Web Development. The degree program requires 15 credit hours of general education coursework and 49 credit hours of required career and technical education coursework. This degree program was designed to provide knowledge and skills needed for entry-level employment as a web developer. There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The College has sufficient library, technology, staff, and financial resources in place to support the proposed program.

Approval request summary, including staff conclusion, follows in Attachment C.

#### Joliet Junior College

- Associate of Applied Science in Respiratory Care Therapy

Joliet Junior College is seeking approval for a 70-credit hour Associate of Applied Science in Respiratory Care Therapy. The degree program requires 18 credit hours of general education coursework and 52 credit hours of required career and technical education coursework. This degree program was designed to provide knowledge and skills needed to become an advanced respiratory therapist. Graduates will be eligible to take the National Boards to become a Certified Respiratory Therapist at the entry level or a Registered Respiratory Therapist at the advanced level. There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The College has sufficient library, technology, staff, and financial resources in place to support the proposed program.

Approval request summary, including staff conclusion, follows in Attachment D.

#### Richard J. Daley College

- Associate of Applied Science in Computer-Aided Design (CAD) Engineering Technology

Richard J. Daley College is seeking approval for a 61-credit hour Associate of Applied Science in Computer-Aided Design (CAD) Engineering Technology. The degree program requires 16 credit hours of general education coursework and 45 credit hours of required career and technical education coursework. This degree program was designed to provide knowledge and skills needed for entry-level and advancement in employment in positions utilizing computer-assisted design skills in manufacturing technology application-environments. Graduates may continue to bachelor's degree programs such as Applied Engineering, Engineering Technology, and Industrial

Management; and transfer programs are available for those that are interested. There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The College has sufficient library, technology, staff, and financial resources in place to support the proposed program.

- Associate of Applied Science in Computerized Numerical Control Engineering Technology

Richard J. Daley College is seeking approval for a 61-credit hour Associate of Applied Science in Computerized Numerical Control (CNC) Engineering Technology. The degree program requires 16 credit hours of general education coursework and 45 credit hours of required career and technical education coursework. This degree program was designed to provide knowledge and skills needed for employment in advanced manufacturing. Graduates may progress onto bachelor's degree programs in CNC or related fields such as Industrial Management, Applied Engineering or Engineering Technology and transfer opportunities are available for those individuals interested. There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The College has sufficient library, technology, staff, and financial resources in place to support the proposed program.

- Associate of Applied Science in Welding Engineering Technology

Richard J. Daley College is seeking approval for a 61-credit hour Associate of Applied Science in Welding Engineering Technology. The degree program requires 16 credit hours of general education coursework and 45 credit hours of required career and technical education coursework. This degree program was designed to provide knowledge and skills needed for employment in the field of manufacturing welding and welding automation and automated fabrication. Graduates may pursue further studies in bachelor's degree programs in Welding or related fields such as Industrial Management, Applied Engineering, or Engineering Technology and transfer programs are available for students interested. There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The College has sufficient library, technology, staff, and financial resources in place to support the proposed program.

Approval request summary, including staff conclusion, follows in Attachment E.

The staff recommends adoption of the following resolutions:

*The Illinois Board of Higher Education hereby grants authority to Elgin Community College to offer the Associate of Applied Science in Ophthalmic Technician subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.*

*The Illinois Board of Higher Education hereby grants authority to the Frontier Community College to offer the Associate of Applied Science in Coal Mining Technology subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.*

*The Illinois Board of Higher Education hereby grants authority to the John Wood Community College to offer the Associate of Applied Science in Web Development subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.*

*The Illinois Board of Higher Education hereby grants authority to the Joliet Junior College to offer the Associate of Applied Science in Respiratory Care Therapy subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.*

*The Illinois Board of Higher Education hereby grants authority to the Richard J. Daley College to offer the Associate of Applied Science in Computer-Aided Design Engineering Technology, the Associate of Applied Science in Computerized Numerical Control Engineering Technology, and the Associate of Applied Science in Welding Engineering Technology subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.*

**Elgin Community College**  
**1700 Spartan Drive**  
**Elgin, IL 60123**  
**President: Dr. David Sam**

**Proposed Program Title:** Associate of Applied Science in Ophthalmic Technician (62.5 credit hours)

### **Program Purpose**

The program will prepare individuals for entry-level employment as ophthalmic technicians skilled to work in a variety of optometric/ophthalmologic clinical healthcare settings.

### **Catalog Description**

The Associate of Applied Science (AAS) in Ophthalmic Technician will prepare students with the knowledge and experience to perform as an ophthalmic technician in a clinical setting. An Ophthalmic Technician is rapidly expanding with a growing demand for qualified and responsible technicians. The functions of the ophthalmic technician are to assist the ophthalmologist by performing delegable tasks. These tasks may include collecting data, administering treatment, assisting in ophthalmic surgical procedures, and supervising patients as deemed appropriate according to training level.

### **Curricular Information**

The AAS in Ophthalmic Technician program requires 24 credit hours of general education coursework and 38.5 credit hours of required career and technical education coursework. General education coursework includes instruction in biology and introductory and advanced levels of human anatomy and physiology. The career and technical coursework include instruction in introductory ophthalmic technician, anatomy and conditions of the eye, medical ethics, patient education and services, ophthalmic counseling, introductory/intermediate/advanced levels of ophthalmic technology skills, and three different clinical experiences in ophthalmic technology. Graduates will be prepared to sit for the Certified Ophthalmic Technician (COT) exam offered through the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO). Assessment of student learning will be achieved through evaluation of the student's performance during the practical clinical learning experiences by program faculty.

### **Justification for Credit Hours Required for the Degree**

Coursework in both general education and career and technical education is aligned with accreditation standards and will prepare graduates for the COT exam offered through the JCAHPO. Clinical practical hours required meet the requirements for program accreditation and preparation for student credentialing.

### **Accrediting Information**

Elgin Community College (the College) is accredited by the Higher Learning Commission. The curriculum was designed in accordance with guidelines of the Joint Commission on Allied Health Personnel in Ophthalmology. The College plans to begin the program accreditation process once a full-time program director is hired.

## Supporting Labor Market Data (including employer partners)

Labor market information provided by the College supports the interest in and the need for a two-year degree program in this field of study. According to the Illinois Department of Employment Security, employment of opticians and ophthalmic technicians is expected to increase by 7.5 percent statewide through 2026. Currently, there are two existing programs at community colleges in Illinois at Triton College and College of DuPage.

Table 1: Employer Partners

Employers	Location
Wheaton Eye Clinic	Wheaton, IL

Table 2: Projected Enrollments

Ophthalmic Tech AAS	First Year	Second Year	Third Year
Full-Time Enrollments:	20	20	20
Part-Time Enrollments:	-	-	-
Completions:	-	20	20

## Financial / Budgetary Information

The program will require one new full-time and one new part-time faculty. Qualified teaching faculty will hold at least an associate in Ophthalmic Technology, current COT certification, have at least three years occupational experience in the field, and two years of teaching experience preferred. The program director must be a licensed ophthalmologist with IJCAHPO certification. The program will utilize educational funds to cover costs during the first three years and will otherwise be fiscally supported through student tuition and fees.

Table 3: Financial Information

	First Year	Second Year	Third Year
Faculty Costs	\$62,000	\$69,000	\$71,000
Administrator Costs	\$90,000	\$93,000	\$96,000
Other Personnel Costs	-	-	-
Equipment Costs	\$126,000	-	-
Library/LRC Costs	-	-	-
Facility Costs*	-	-	-
Other (accreditation)	\$2,000	\$2,000	\$5,000
<b>TOTAL NEW COSTS</b>	<b>\$16,100</b>	<b>\$16,200</b>	<b>\$3,600</b>

Table 4: Faculty Requirements

	First Year		Second Year		Third Year	
	Full-Time	Part-time	Full-Time	Part-time	Full-Time	Part-time
New Faculty	1	1	0	0	0	0
Existing Faculty	0	0	1	1	1	1

## **Staff Conclusion**

Elgin Community College and its proposed program meet the criteria to implement the Board of Higher Education Act (110 ILCS 205) as set forth in 23. Ill. Admin. Code 1050.30 and the Illinois Board of Higher Education policies pertaining to assessment and accreditation for licensure.



**Frontier Community College**  
**2 Frontier Drive**  
**Fairfield, IL 62837**  
**President: Dr. Gerald Edgren**

**Proposed Program Title:** Associate of Applied Science in Coal Mining Technology (60 credit hours)

### **Program Purpose**

The program will prepare individuals for entry-level employment and advancement opportunities within the mining industry.

### **Catalog Description**

The Associate of Applied Science (AAS) in Coal Mining Technology prepares the student for a rewarding career in the mining industry. The program is also offered through cooperative agreements at the following community colleges: Southwestern Illinois College, John A. Logan College, Kaskaskia Community College, Lake Land College, Lewis and Clark College, Lincoln Land Community College, and Southeastern Illinois College. The Illinois Department of Mines and Minerals, the U.S. Bureau of Mines, Mine Safety and Health Administration (MSHA), United Mine Workers of America, and various coal companies have worked closely in the development of the program. Job opportunities for graduates in the mining industry include maintenance supervisor, repair person, miner, and various mine technician positions. Machine repair, welding, hydraulics, and electrical skills achieved in this program are transferable to occupations outside the mining industry. The credits earned in the Coal Mining Technology program transfer into the Industrial Technology and Vocational Education Programs at Southern Illinois University Carbondale (SIUC). Graduates are eligible for capstone credit through SIUC.

### **Curricular Information**

The AAS in Coal Mining Technology requires 15 credit hours of general education coursework and 45 credit hours of required career and technical education coursework. The career and technical coursework include instruction in introductory coal mining technology, accident prevention, roof control, mining law, mine ventilation, first aid, introductory, intermediate, and advanced levels of mine machinery repair, introductory and advanced levels of mining hydraulics, and mine systems. Assessment of student learning will be achieved through evaluation of the student's performance during practical clinical learning experiences embedded within courses by program faculty. Course content was developed according to guidelines of the MSHA.

### **Accrediting Information**

Frontier Community College (the College) is accredited by the Higher Learning Commission. No specialized accreditation is required.

### **Supporting Labor Market Data (including employer partners)**

Labor market information provided by the College supports the interest in and the need for a two-year degree program in this field of study. According to the Illinois Department of Employment Security, employment of mining-related occupations is stagnant statewide through

2026, however Illinois Eastern Community College is the sole provider of mining education/training in the State. Local labor market data projects an increase in demand for related employment around 11 percent. Nationally, the U.S. Department of Labor projects an increase as well. This program is also currently offered at Wabash Valley College. Approval and statewide classification of this program is also being sought for Frontier Community College due to operations being moved to the FCC campus. The program is also currently offered through cooperative agreements at the following community colleges: Southwestern Illinois College, John A. Logan College, Kaskaskia Community College, Lake Land College, Lewis and Clark College, Lincoln Land Community College, and Southeastern Illinois College.

*Table 1: Employer Partners*

<b>Employers</b>	<b>Location</b>
Illinois Department of Natural Resources	Benton, IL
Mine Safety & Health Administration	Marion, IL
Knight Hawk Coal	Percy, IL
Peabody Gateway Mine	Coulterville, IL
Prairie State Generating Company	Venedy, IL
Deer Run/Patton Mining	Litchfield, IL
Viper Mine	Williamsville, IL
Foresight Mines	Thompsonville, IL
Hamilton County Coal	Macedonia, IL
Champion Laboratories	Albion, IL

*Table 2: Projected Enrollments*

<b>Coal Mining Tech AAS</b>	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Full-Time Enrollments:	0	0	0
Part-Time Enrollments:	10	12	15
Completions:	-	9	10

### **Financial / Budgetary Information**

The program will require eight existing full-time and 20 existing part-time faculty. Qualified teaching faculty will hold at least an associate degree in Mining Technology, current MSHA certification, have at least three years occupational experience in the field, and some teaching experience preferred. The program will utilize educational funds to cover costs during the first three years and will otherwise be fiscally supported through student tuition and fees.

*Table 3: Financial Information*

	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Faculty Costs	\$0	\$0	\$0
Administrator Costs	-	-	-
Other Personnel Costs	-	-	-
Equipment Costs	-	-	-
Library/LRC Costs	-	-	-
Facility Costs*	-	-	-
Other	-	-	-
<b>TOTAL NEW COSTS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Table 4: Faculty Requirements

	First Year		Second Year		Third Year	
	<u>Full-Time</u>	<u>Part-time</u>	<u>Full-Time</u>	<u>Part-time</u>	<u>Full-Time</u>	<u>Part-time</u>
New Faculty	0	0	0	0	0	0
Existing Faculty	8	20	8	20	8	20

**Staff Conclusion**

Frontier Community College and its proposed program meet the criteria to implement the Board of Higher Education Act (110 ILCS 205) as set forth in 23. Ill. Admin. Code 1050.30 and the Illinois Board of Higher Education policies pertaining to assessment and accreditation for licensure.

**John Wood Community College**  
**1301 South 48th Street**  
**Quincy, IL 62305**  
**President: Mr. Michael Elbe**

**Proposed Program Title:** Associate of Applied Science in Web Development (64 credit hours)

### **Program Purpose**

The program will prepare individuals for entry-level employment and advancement employment opportunities in web development.

### **Catalog Description**

The Associate of Applied Science (AAS) in Web Development is a course of study that introduces students to web design, development, and programming. The student will learn to write, design, and edit web page content, use authoring and scripting languages, and write supporting code for web applications. The degree includes courses that develop skills and experience necessary for a career in web development.

### **Curricular Information**

The AAS in Web Development requires 15 credit hours of general education coursework and 49 credit hours of career and technical education coursework. The career and technical coursework include instruction in computer programming logic, web programming I in HTML/CSS/Scripting, web scripting, web programming II in PHP and MySQL, web graphics and interactivity, graphic design, web programming III in Python and Ruby on Rails, database management, web programming IV, web server administration, content management, database core level (Access), computerized illustration, and eight credit hours or related technical electives. Assessment of student learning will be achieved through evaluation of the student's performance during practical clinical learning experiences embedded within courses by program faculty.

### **Justification for Credit Hours Required for the degree**

The proposed program meets the requirement for completion of an AAS at John Wood Community College (the College) and also includes the skills/content/coursework identified by local employers for graduates of the program to be successful in acquiring entry-level employment within the district.

### **Accrediting Information**

John Wood Community College is accredited by the Higher Learning Commission. No specialized accreditation is required.

### **Supporting Labor Market Data (including employer partners)**

Labor market information provided by the College supports the interest in and the need for a two-year degree program in this field of study. According to the Illinois Department of Employment Security, employment of web development-related occupations is projected to increase

between 15 to 28.4 percent statewide through 2026. The College currently offers a related Web Development Certificate program of which all 29 credit hours will stack towards the curriculum of the proposed AAS in Web Development.

*Table 1: Employer Partners*

<b>Employers</b>	<b>Location</b>
Electricoak	Quincy, IL
JT Creative Solutions	Quincy, IL
JK Creative	Quincy, IL
Poole Communications	Hannibal, MO
Quincy Media	Quincy, IL
Reed Promotional Media	Quincy, IL
Titan International	Quincy, IL

*Table 2: Projected Enrollments*

<b>Web Development AAS</b>	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Full-Time Enrollments:	3	5	8
Part-Time Enrollments:	1	2	3
Completions:	-	7	10

### **Financial / Budgetary Information**

The program will require two existing part-time faculty. Qualified teaching faculty will hold at least a master's degree in Management Information Systems, Computer Science, or closely related field, have at least one-year occupational experience in the field, and one year teaching experience preferred. The program will utilize educational funds to cover costs during the first three years and will otherwise be fiscally supported through student tuition and fees.

*Table 3: Financial Information*

	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Faculty Costs	\$12,000	\$0	\$0
Administrator Costs	-	-	-
Other Personnel Costs	-	-	-
Equipment Costs	-	-	-
Library/LRC Costs	-	-	-
Facility Costs*	-	-	-
Other	-	-	-
<b>TOTAL NEW COSTS</b>	<b>\$12,000</b>	<b>\$0</b>	<b>\$0</b>

*Table 4: Faculty Requirements*

	<b>First Year</b>		<b>Second Year</b>		<b>Third Year</b>	
	<u>Full-Time</u>	<u>Part-time</u>	<u>Full-Time</u>	<u>Part-time</u>	<u>Full-Time</u>	<u>Part-time</u>
New Faculty	0	0	0	0	0	0
Existing Faculty	0	2	0	2	0	2

## **Staff Conclusion**

John Wood Community College and its proposed program meet the criteria to implement the Board of Higher Education Act (110 ILCS 205) as set forth in 23. Ill. Admin. Code 1050.30 and the Illinois Board of Higher Education policies pertaining to assessment and accreditation for licensure.

**Joliet Junior College**  
**1215 Houbolt Road**  
**Joliet, IL 60431**  
**President: Dr. Judy Mitchell**

**Proposed Program Title:** Associate of Applied Science in Respiratory Care Therapy (70 credit hours)

### **Program Purpose**

The program will prepare individuals for entry-level employment as respiratory care therapy practitioners in both acute and long-term healthcare providers.

### **Catalog Description**

The Associate in Applied Science (AAS) in Respiratory Care Therapy will offer the study of theory and techniques instrumental in diagnosis, treatment, management, and preventive care of patients with cardiopulmonary problems. It will prepare the student to become a well-rounded professional and competent advanced respiratory therapist. The graduate will be eligible to take the National Boards to become either a Certified Respiratory Therapist at the entry level or Registered Respiratory Therapist at the advanced level. Successful completion of the program can lead to employment as a respiratory therapist in hospitals, clinics or home settings or branch off into research, sales, education, or other career opportunities.

### **Curricular Information**

The AAS in Respiratory Care Therapy requires 18 credit hours of general education coursework and 52 credit hours of career and technical education coursework. The career and technical coursework include instruction in foundations of respiratory care, cardiopulmonary anatomy and physiology, respiratory care pharmacology, introductory/intermediate levels of respiratory care lab, introductory/intermediate levels of mechanical ventilation, respiratory critical care, neonatal and pediatric respiratory care, patient assessment, special topics in respiratory care, and a required clinical practicum in respiratory care therapy. The program was designed according to competencies outlined by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) as identified by the Joint Review Committee on Education in Respiratory Care (JRC-RC) and will prepare graduates for the required credentialing through the National Board of Respiratory Care (NBRC) as a Certified Respiratory Therapist (CRT) or a Registered Respiratory Therapist (RRT), and licensure through the Illinois Department of Financial and Professional Regulation (IDFPR). Assessment of student learning will be achieved through evaluation of the student's performance during practical clinical learning experiences by program faculty.

### **Justification for Credit Hours Required for the Degree**

The proposed program meets the criteria for program accreditation through Commission on Accreditation of Allied Health Education Programs and will prepare individuals for required credentialing for entry-level employment.

## Accrediting Information

Joliet Junior College (the College) is accredited by the Higher Learning Commission. The College plans to begin the formal accreditation process for the proposed degree program through the CAAHEP beginning in Fall 2021. Final accreditation will be sought once the first class of students completes the program and the NBRC exam.

## Supporting Labor Market Data (including employer partners)

Labor market information provided by the College supports the interest in and the need for a two-year degree program in this field of study. According to the Illinois Department of Employment Security, employment of respiratory care therapists is projected to increase between 16.6 percent statewide through 2026. Currently, there are ten community colleges in Illinois who offer a degree program in respiratory care therapy.

Table 1: Employer Partners

Employers	Location
Amita Health-St. Joseph Medical Center	Joliet, IL
Silver Cross Hospital	New Lenox, IL
Morris Hospital and Health Care System	Morris, IL
RML Specialty Hospital	Burr Ridge, IL

Table 2: Projected Enrollments

Respiratory Care Therapy AAS	First Year	Second Year	Third Year
Full-Time Enrollments:	30	60	60
Part-Time Enrollments:	-	-	-
Completions:	-	30	30

## Financial / Budgetary Information

The program will require one new full-time and two existing part-time faculty. Qualified teaching faculty will hold at least a bachelor's degree in Respiratory Therapy, hold a current Registered Respiratory Therapist credential, have at least four years occupational experience in the field, and two years teaching experience. The program will utilize educational funds to cover costs during the first three years and will otherwise be fiscally supported through student tuition and fees.

Table 3: Financial Information

	First Year	Second Year	Third Year
Faculty Costs	\$78,240	\$78,240	\$78,240
Administrator Costs	\$12,500	\$3,350	\$3,350
Other Personnel Costs (Admissions Clerk)	\$4,100	\$1,00	\$1,300
Equipment Costs	\$200,000	\$40,000	\$40,000
Library/LRC Costs	\$6,000	\$3,000	\$2,000
Facility Costs*	\$500,000	\$5,000	\$5,000
Other (Small Equipment)	\$125,000	\$25,000	\$25,000
<b>TOTAL NEW COSTS</b>	<b>\$985,840</b>	<b>\$155,790</b>	<b>\$154,890</b>



Table 4: Faculty Requirements

	First Year		Second Year		Third Year	
	<u>Full-Time</u>	<u>Part-time</u>	<u>Full-Time</u>	<u>Part-time</u>	<u>Full-Time</u>	<u>Part-time</u>
New Faculty	1	0	1	0	0	1
Existing Faculty	0	2	1	2	2	2

**Staff Conclusion**

Joliet Junior College and its proposed program meet the criteria to implement the Board of Higher Education Act (110 ILCS 205) as set forth in 23. Ill. Admin. Code 1050.30 and the Illinois Board of Higher Education policies pertaining to assessment and accreditation for licensure.

**Richard J. Daley College**  
**7500 South Pulaski Road**  
**Chicago, IL 60652**  
**President: Dr. Janine E. Janosky**

**Proposed Program Title:** Associate of Applied Science in Computer Aided Drafting (CAD) Engineering Technology (61 credit hours)

### **Program Purpose**

This program will prepare individuals for entry-level and advancement in employment in positions utilizing computer-assisted design skills in manufacturing technology application-environments.

### **Catalog Description**

The Associate of Applied Science in Computer Aided Drafting (CAD) Engineering Technology builds on the Advanced Certificate in Computer Aided Drafting Engineering Technology and is designed to prepare students for careers in industrial drafting and design of industrial components. Companies that manufacture physical products and that have production process equipment need their products, facilities and equipment drawn, detailed, and designed prior to their manufacture or installation. Students build on their training in manufacturing processes and hands on lab classes in Computerized Numerical Control (CNC) machining, welding, and electrical controls as well as Computer Aided Drafting program training and conversion of 3D designs into CNC programs and rapid prototyping of designs. Students will take classes in materials and maintenance technologies to have a well- rounded background to base their drafting designs on utilizing their hands on experience with industrial equipment. Graduates may continue to bachelor's degree programs such as Applied Engineering, Engineering Technology, and Industrial Management; and transfer programs are available for those that are interested.

### **Curricular Information**

The AAS in CAD Engineering Technology includes 16 credit hours of required general education, and 45 credit hours of required career and technical education coursework. The career and technical coursework include instruction in introductory/intermediate/advanced levels of advanced manufacturing, robotics, manual machining, introductory/intermediate/advanced CNC operations, introductory/intermediate computer-assisted design, computer-aided manufacturing, Gas Metal Arc Welding skills, industrial electricity, maintenance technology, process technology, automated metrology/quality assurance, materials testing and analysis.

Assessment of student learning will be achieved through evaluation of the student's performance on a comprehensive lab project. The proposed program provides a continued educational ladder opportunity for students completing the College's recently approved Basic and Advanced Certificates in Manufacturing Technology and CNC Technology.

## Accrediting Information

Richard J. Daley College (the College) is accredited by the Higher Learning Commission. No specialized accreditation is required.

## Justification for Credit Hours Required

This program exceeds 60 credit hours in total due to a required math course totaling four credit hours.

## Supporting Labor Market Data (including employer partners)

Labor market information provided by the College supports the interest in and the need for programs in this field of study. According to the Illinois Department of Employment Security, employment growth in related computer-assisted design, CAD-engineering technology, and manufacturing technology occupations is expected to increase statewide between 4.4 to 6.0 percent through the year 2026.

Table 1: Employer Partners

Employer	Location
Illinois Manufacturers Association	Springfield, IL
Bedford Park-Clearing Industrial Association	Bedford Park, IL
National Coalition of Certification Centers (NC3)	Pleasant Prairie, WI
Calumet Area Industrial Commission	Calumet City, IL
German American Chamber of Commerce of the Midwest	Chicago, IL
American Gear Manufacturer Association	Alexandria, VA
Southern Illinois University	Carbondale, IL
Dearborn Tool & Manufacturing	Burr Ridge, IL
S&C Electric	Chicago, IL
TempelSteel	Chicago, IL
UPS	Hodgkins, IL
Skolnik Industries	Chicago, IL
Worlds Fines Chocolate	Chicago, IL
Ed Miniat Foods	South Holland, IL
Chunichi Precision Molding USA	Elmhurst, IL
AllCell Technologies	Chicago, IL
WaterSaver Faucet	Chicago, IL
ABET Industries	LaGrange Park, IL
Pipe Fitters Local 597	Mokena
I.B.WE.W. Local 134	Chicago, IL
Int. Assoc. of Machinists & Aerospace Workers	Hinsdale, IL
Dudek & Bock Spring MFG	Chicago, IL
Ferrara Candy Company	Bellwood, IL
ARYZTA	Cicero, IL
Freedman Seating	Chicago, IL

PEPSICO	Chicago, IL
Principal Manufacturing Corp.	Broadview
Focal Point Lighting	Chicago, IL
John Crane	Morton Grove, IL
Atlas Tool Works	Lyons, IL
Donson Machine Company	Alsip, IL
FANUC CNC	Hoffman Estates, IL
AIDEX Corp.	Rossville, IN
APT Manufacturing Solutions	Hicksville, OH
Carl Zeiss Microscopy, LLC	Thornwood, NY
Snap-On Tools	Kenosha, WI
Lincoln Electric	Cleveland, OH
Tower Automotive	Chicago, IL
Dart/Solo Cup Company	Chicago, IL
Chicago Cook Workforce Partnerships	Chicago, IL
A. Finkl & Sons Co.	Chicago, IL
Pactiv Corporation	Bedford Park, IL

Table 2: Projected Enrollments

<b>CAD Eng Tech AAS degree</b>	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Full-Time Enrollments:	5	10	15
Part-Time Enrollments:	10	20	30
Completions:	-	5	15

### Financial / Budgetary Information

The program will require three existing full-time and ten part-time faculty the first year. Qualified faculty will hold at least an associate degree in Manufacturing Technology or closely related field for manufacturing classes, and at least a bachelor's degree in Engineering for engineering-technology classes; at least one year work experience in manufacturing technology and one year of teaching experience is preferred. All facilities are in place to support the program and will share existing resources with the Manufacturing Technology programs currently being offered. The program will otherwise be supported fiscally through student tuition and fees.

Table 3: Financial Information

	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Faculty Costs	\$0	\$0	\$0
Administrator Costs	-	-	-
Other Personnel costs	-	-	-
Equipment Costs	-	-	-
Library/LRC Costs	-	-	-
Facility Costs*	-	-	-
Other	-	-	-
<b>TOTAL NEW COSTS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Table 4: Faculty Requirements

	<b>First Year</b>		<b>Second Year</b>		<b>Third Year</b>	
	Full-time	Part-time	Full-Time	Part-time	Full-Time	Part-time
New Faculty	0	0	0	0	0	0
Existing Faculty	3	10	3	10	3	10

**Proposed Program Title:** Associate of Applied Science in Computerized Numerical Control (CNC) Engineering Technology (61 credit hours)

### Program Purpose

This program will prepare individuals for entry-level and advancement in employment in positions within automated manufacturing environments.

### Catalog Description

The Associate of Applied Science (AAS) in CNC Engineering Technology builds on the AC in CNC Engineering Technology adding in the additional materials, Computer Aided Manufacturing (CAM) and Advanced Metrology skills such as Coordinate Measuring Machine programming and operation, optical and other automated measurement methods that students will need when pursuing careers in advanced manufacturing. Students in this program are looking to pursue careers leading teams and solving problems for manufacturing employers in the metal working industries that are increasingly becoming more automated and integrated with advanced technologies. Graduates may progress onto bachelor's degree programs in CNC or related fields such as Industrial Management, Applied Engineering or Engineering Technology and transfer opportunities are available for those individuals interested.

### Curricular Information

The AAS in CNC Engineering Technology requires 16 credit hours of required general education, and 45 credit hours of required career and technical education coursework. The career and technical component include instruction in introductory/intermediate/advanced levels of advanced manufacturing, robotics, manual machining, introductory/intermediate/advanced CNC operations, computer-assisted design, computer-aided manufacturing, Gas Metal Arc Welding skills, introductory automated fabrication, automated metrology/quality assurance, materials testing and analysis, and quality systems. The program will prepare individuals for optional industry credentialing through the National Institute of Metalworking Skills (NIMS).

Assessment of student learning will be achieved through evaluation of the student's performance on a comprehensive lab project. The proposed program provides a continued educational ladder opportunity for students completing the College's recently approved Basic and Advanced Certificates in Manufacturing Technology and CNC Technology.

### Accrediting Information

Richard J. Daley College (the College) is accredited by the Higher Learning Commission. No specialized accreditation is required.

## Justification for Credit Hours Required

This program exceeds 60 credit hours in total due to a required math course totaling four credit hours.

## Supporting Labor Market Data (including employer partners)

Labor market information provided by the college supports the interest in and the need for programs in this field of study. According to the Illinois Department of Employment Security, employment growth in related manufacturing technology, CNC technology, and engineering technology occupations is expected to increase statewide between 2.8 to 17.8 percent through the year 2026.

Table 1: Employer Partners

Employer	Location
Illinois Manufacturers Association	Springfield, IL
Bedford Park-Clearing Industrial Association	Bedford Park, IL
National Coalition of Certification Centers (NC3)	Pleasant Prairie, WI
Calumet Area Industrial Commission	Calumet City, IL
German American Chamber of Commerce of the Midwest	Chicago, IL
American Gear Manufacturer Association	Alexandria, VA
Southern Illinois University	Carbondale, IL
Dearborn Tool & Manufacturing	Burr Ridge, IL
S&C Electric	Chicago, IL
TempelSteel	Chicago, IL
UPS	Hodgkins, IL
Skolnik Industries	Chicago, IL
Worlds Fines Chocolate	Chicago, IL
Ed Miniat Foods	South Holland, IL
Chunichi Precision Molding USA	Elmhurst, IL
AllCell Technologies	Chicago, IL
WaterSaver Faucet	Chicago, IL
ABET Industries	LaGrange Park, IL
Pipe Fitters Local 597	Mokena
I.B.WE.W. Local 134	Chicago, IL
Int. Assoc. of Machinists & Aerospace Workers	Hinsdale, IL
Dudek & Bock Spring MFG	Chicago, IL
Ferrara Candy Company	Bellwood, IL
ARYZTA	Cicero, IL
Freedman Seating	Chicago, IL
PEPSICO	Chicago, IL
Principal Manufacturing Corp.	Broadview
Focal Point Lighting	Chicago, IL
John Crane	Morton Grove, IL
Atlas Tool Works	Lyons, IL

Donson Machine Company	Alsip, IL
FANUC CNC	Hoffman Estates, IL
AIDEX Corp.	Rossville, IN
APT Manufacturing Solutions	Hicksville, OH
Carl Zeiss Microscopy, LLC	Thornwood, NY
Snap-On Tools	Kenosha, WI
Lincoln Electric	Cleveland, OH
Tower Automotive	Chicago, IL
Dart/Solo Cup Company	Chicago, IL
Chicago Cook Workforce Partnerships	Chicago, IL
A. Finkl & Sons Co.	Chicago, IL
Pactiv Corporation	Bedford Park, IL

Table 2: Projected Enrollments

<b>CNC Eng Tech AAS degree</b>	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Full-Time Enrollments:	5	10	15
Part-Time Enrollments:	10	20	30
Completions:	-	5	15

### Financial / Budgetary Information

The program will require three existing full-time and ten part-time faculty the first year. Qualified faculty will hold at least an associate degree in Manufacturing Technology or closely related field for manufacturing classes, and at least a bachelor's degree in Engineering for engineering-technology classes; at least one year work experience in manufacturing technology and one year of teaching experience is preferred. All facilities are in place to support the program and will share existing resources with the Manufacturing Technology programs currently being offered. The program will otherwise be supported fiscally through student tuition and fees.

Table 3: Financial Information

	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Faculty Costs	\$0	\$0	\$0
Administrator Costs	-	-	-
Other Personnel costs	-	-	-
Equipment Costs	-	-	-
Library/LRC Costs	-	-	-
Facility Costs*	-	-	-
Other	-	-	-
<b>TOTAL NEW COSTS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Table 4: Faculty Requirements

	<b>First Year</b>		<b>Second Year</b>		<b>Third Year</b>	
	Full-time	Part-time	Full-Time	Part-time	Full-Time	Part-time
New Faculty	0	0	0	0	0	0
Existing Faculty	3	10	3	10	3	10

**Proposed Program Title:** Associate of Applied Science in Welding Engineering Technology (61 credit hours)

### **Program Purpose**

This program will prepare individuals for entry-level and advancement in employment in positions utilizing welding and metal fabrication skills.

### **Catalog Description**

The Associate of Applied Science (AAS) in Welding Engineering Technology builds on the welding knowledge gained in the AC in Welding Engineering Technology and is for students looking to work in the field of manufacturing welding and welding automation and automated fabrication in leadership roles related to this automated CNC equipment. Students will advance their welding skills in MIG, TIG, cutting and small machine operation related to welding in addition to weld inspection techniques and processes and automated and robotic techniques utilized in welding and fabrication. Automated fabrication equipment programming of a Turret Punch Press and a Brake Press commonly associated with welding fabrication equipment programming will also be introduced and utilized in projects. Students will learn about materials and their selection and processing related to automated welding and fabrication. Students will be performing more complex welding and fabrication projects, setting up equipment, and utilizing automation in projects. Graduates may pursue further studies in bachelor's degree programs in Welding or related fields such as Industrial Management, Applied Engineering or Engineering Technology and transfer programs are available for students interested.

### **Curricular Information**

The AAS in Welding Engineering Technology includes 16 credit hours of required general education, and 45 credit hours of required career and technical education coursework. The career and technical component include instruction in introductory/intermediate/advanced levels of advanced manufacturing, robotics, manual machining, CNC operations, Gas Metal Arc Welding skills, Gas Tungsten Arc Welding skills, advanced welding skills, industrial electricity, automated metrology/quality assurance, introductory/intermediate automated fabrication, materials testing and analysis, and welding inspection. This program will prepare individuals for optional industry credentialing. Lincoln Electric Certifications, through the National Coalition of Certification Centers (NC3), are available in Safety; Principles of Welding; Intro to MIG; Advanced Metal Inert Gas Welding; Intro to Tungsten Inert Gas Welding; Intro to Flux Core; Advanced Flux Core; Intro to Stick; and Advanced Stick. Coursework in the A.A.S. degree will also prepare individuals for optional National Institute of Metalworking Skills (NIMS) credentialing. Assessment of student learning will be achieved through evaluation of the student's performance on a comprehensive lab project. The proposed programs provide a continued educational ladder opportunity for students completing the College's recently approved Basic Certificates in Manufacturing Technology and CNC Technology.

### **Accrediting Information**

Richard J. Daley College (the College) is accredited by the Higher Learning Commission. No specialized accreditation is required.



## Justification for Credit Hours Required

This program exceeds 60 credit hours in total due to a required math course totaling four credit hours.

## Supporting Labor Market Data (including employer partners)

Labor market information provided by the college supports the interest in and the need for programs in this field of study. Qualified faculty will hold at least an associate degree in Manufacturing Technology or closely related field for manufacturing classes, and at least a bachelor's degree in Engineering for engineering-technology classes; at least one year work experience in manufacturing technology and one year of teaching experience is preferred. According to the Illinois Department of Employment Security, employment growth in related welding, manufacturing, and engineering technology occupations is expected to increase statewide around 4.8 percent through the year 2026.

*Table 1: Employer Partners*

<b>Employer</b>	<b>Location</b>
Illinois Manufacturers Association	Springfield, IL
Bedford Park-Clearing Industrial Association	Bedford Park, IL
National Coalition of Certification Centers (NC3)	Pleasant Prairie, WI
Calumet Area Industrial Commission	Calumet City, IL
German American Chamber of Commerce of the Midwest	Chicago, IL
American Gear Manufacturer Association	Alexandria, VA
Southern Illinois University	Carbondale, IL
Dearborn Tool & Manufacturing	Burr Ridge, IL
S&C Electric	Chicago, IL
TempelSteel	Chicago, IL
UPS	Hodgkins, IL
Skolnik Industries	Chicago, IL
Worlds Fines Chocolate	Chicago, IL
Ed Miniat Foods	South Holland, IL
Chunichi Precision Molding USA	Elmhurst, IL
AllCell Technologies	Chicago, IL
WaterSaver Faucet	Chicago, IL
ABET Industries	LaGrange Park, IL
Pipe Fitters Local 597	Mokena
I.B.WE.W. Local 134	Chicago, IL
Int. Assoc. of Machinists & Aerospace Workers	Hinsdale, IL
Dudek & Bock Spring MFG	Chicago, IL
Ferrara Candy Company	Bellwood, IL
ARYZTA	Cicero, IL
Freedman Seating	Chicago, IL
PEPSICO	Chicago, IL
Principal Manufacturing Corp.	Broadview

Focal Point Lighting	Chicago, IL
John Crane	Morton Grove, IL
Atlas Tool Works	Lyons, IL
Donson Machine Company	Alsip, IL
FANUC CNC	Hoffman Estates, IL
AIDEX Corp.	Rossville, IN
APT Manufacturing Solutions	Hicksville, OH
Carl Zeiss Microscopy, LLC	Thornwood, NY
Snap-On Tools	Kenosha, WI
Lincoln Electric	Cleveland, OH
Tower Automotive	Chicago, IL
Dart/Solo Cup Company	Chicago, IL
Chicago Cook Workforce Partnerships	Chicago, IL
A. Finkl & Sons Co.	Chicago, IL
Pactiv Corporation	Bedford Park, IL

Table 2: Projected Enrollments

Welding Eng Tech AAS degree	First Year	Second Year	Third Year
Full-Time Enrollments:	5	10	15
Part-Time Enrollments:	10	20	30
Completions:	-	5	15

### Financial / Budgetary Information

The program will require three existing full-time and ten part-time faculty the first year. All facilities are in place to support the program and will share existing resources with the Manufacturing Technology programs currently being offered. The program will otherwise be supported fiscally through student tuition and fees.

Table 3: Financial Information

	First Year	Second Year	Third Year
Faculty Costs	\$0	\$0	\$0
Administrator Costs	-	-	-
Other Personnel costs	-	-	-
Equipment Costs	-	-	-
Library/LRC Costs	-	-	-
Facility Costs*	-	-	-
Other	-	-	-
<b>TOTAL NEW COSTS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Table 4: Faculty Requirements

	First Year		Second Year		Third Year	
	Full-time	Part-time	Full-Time	Part-time	Full-Time	Part-time
New Faculty	0	0	0	0	0	0
Existing Faculty	3	10	3	10	3	10

## **Staff Conclusion**

Richard J. Daley College and its proposed programs meet the criteria to implement the Board of Higher Education Act (110 ILCS 205) as set forth in 23. Ill. Admin. Code 1050.30 and the Illinois Board of Higher Education policies pertaining to assessment and accreditation for licensure.